

Assessment Report

Educational Sciences

PhD studies
University of Tartu
Tallinn University

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Introduction

Quality assessment of a study programme group involves the assessment of the conformity of study programmes and the studies and development activities that take place on their basis to legislation, national and international standards and developmental directions with the purpose of providing recommendations to improve the quality of studies.

The goal of quality assessment of a study programme group is supporting the internal evaluation and self-development of the institution of higher education. Quality assessment of study programme groups is not followed by sanctions: expert assessments should be considered recommendations.

Quality assessment of a study programme group takes place at least once every 7 years based on the regulation approved by EKKA Quality Assessment Council for Higher Education *Quality Assessment of Study Programme Groups at the Level of Doctoral Studies*.

The aim of the assessment team was the evaluation of the Study Programme Group (SPG) of Teacher Training and Educational Sciences at the level of doctoral studies in two universities: University of Tartu (UT) and Tallinn University (TU).

The team was asked to assess the conformity of the study programmes belonging to the study programme group and the instruction provided on the basis thereof to legislation and to national and international standards and/or recommendations, including the assessment of the level of the corresponding theoretical and practical instruction, the research and pedagogical qualification of the teaching staff and research staff, and the sufficiency of resources for the provision of instruction.

The following persons formed the assessment team:

Pavel Zgaga (chairman)	Professor; University of Ljubljana; Slovenia
Raija Hämäläinen	Professor; University of Jyväskylä; Finland
Eleni Kyza	Associate Professor; Cyprus University of Technology; Cyprus
Tõnis Lukas	Director; Tartu Vocational Education Centre; Estonia
Joni Lämsä	PhD student; University of Jyväskylä; Finland
Peter van Petegem	Professor; University of Antwerp; Belgium
Rupert Wegerif	Professor; University of Cambridge; UK

The assessment process was coordinated by Hillar Bauman (EKKA).

After the preparation phase, the work of the assessment team in Estonia started on Monday, 26 November 2018, with an introduction to the Higher Education System as well as the assessment procedure by EKKA, the Estonian Quality assurance organization for higher and vocational education. The members of the team agreed the overall questions and areas to discuss with each group at the two institutions, who were part of the assessment process. The distribution of tasks between the members of the assessment team was organised and the detailed schedule of the site visits agreed.

During the following days, meetings were held with the representatives of the University of Tartu (Tuesday 27 November and Wednesday 28 November, 2018) and Tallinn University (Thursday 29 November and Friday 30 November, 2018). In all cases, the schedule for discussion on site for each of the various study programmes only allowed for short time slots to be available for team members to exchange information, discuss conclusions and implications for further questions.

On Saturday, December 1, 2018 the team held an all-day meeting, during which both the structure of the final report was agreed, and findings of team meetings were compiled in a first draft of the assessment report. This work was executed in a cooperative way and the members of the team intensively discussed their individual views on the relevant topics.

In the following two sections, the assessment team summarise their general findings, conclusions and recommendations which are relevant across the whole SPG. In so doing, the team provides an external and objective perspective on the programmes and the contexts within which they are delivered. Ultimately, the intention is to provide constructive comments and critique which may form the basis upon which improvements in the quality of the programmes may be achieved. In formulating its recommendations, however, the assessment team has not evaluated the financial feasibility associated with their implementation.

General findings and recommendations

Common strengths and areas of improvement

The Assessment Committee had at its disposal the University of Tartu and Tallinn University self-evaluation reports as well as several documents that provided members with a good insight into the status of doctoral studies at both universities. In addition, they appreciated open and fruitful discussions with doctoral students, staff, alumni and external stakeholders during their visits in Tartu and Tallinn. On these bases, the Committee formulated its opinion on specific aspects of the implementation of the doctoral study programmes. In general terms, it was unanimous that the implementation of these two programmes is being carried out in such a way that a high quality level is assured. Each of the two universities has its own distinctive strengths and is distinguished in different ways, which are commented on in the later chapters of this report. The Assessment Committee summarizes the common features with the following findings:

1. Strengths

- *High quality and relevant doctoral programmes*

The Assessment Committee confirms that there is strong evidence of the high quality of educational sciences doctoral programmes at UT and TU. The study programmes have been recently reformed and updated; they are well-designed and organised. They are also individualised and flexible and so fit well to the needs of doctoral students as well as to the needs of the Estonian society. It is very important that in recent years the doctoral students began to be more closely involved in organized research groups working within the relevant schools or departments at each university. It is possible to observe that there are strong efforts at both universities to ensure optimal resources within the limits of given options.

- *Efforts to support students to focus primarily on their studies*

The provision of a stipend from the government for doctoral students does not reach the average income of the country; it seems that this has been one of the key reasons for a rather high drop-out and slow completion of studies so far. It is therefore very important that both universities seriously addressed this problem: they both took decisions to provide doctoral students with an additional grant to raise their stipend up to the national average income level. This is very positive as it provides students with the freedom to focus primarily on their studies and not on care in terms of earning and maintaining the family. Different sources of funds have been used for this purpose at either university, including EU funds, which is, of course, understandable; however, it is necessary to find ways to make this solution sustainable.

- Inter-institutional and international cooperation

The Assessment Committee appreciates the obviously close and fruitful cooperation between UT and TU. The University of Helsinki from neighbouring Finland is also involved in this cooperation. Such tripartite cooperation increases the critical mass of doctoral studies, provides better quality and, if necessary, more specialized support for doctoral students (e.g. co-supervision; joint seminars, etc.). It is also an excellent starting point for strengthening international cooperation with other, especially European universities including the promotion of doctoral studies in the educational sciences for foreign students.

2. Areas of improvement and recommendations

- Further efforts to increase the effectiveness of studies

Data shows that in the past years many students dropped out in the final year or earlier. Obviously, a lot of effort has been recently made to prevent this, for example, improved progress review procedures, additional grants to students, the increased adoption of a project-based approach; however, this is an issue which still requires attention and action.

- *The challenge of building Doctoral Schools*

At both universities, efforts are being made to reorganize the doctoral studies in the direction of the so-called doctoral schools. The Assessment Committee received the impression that in practice this concept is currently being used in very different ways. To make the idea operational and effective, this concept needs a clear structure and formulation, first of all at the university level. In the process of integrating the so far relatively fragmented field of doctoral programmes (mainly in organisational aspect), the Committee recommends to "search for a golden mean". The Committee understood that further integration processes are taking place at the university level both in Tartu and Tallinn. This necessary and positive; however, the Committee notes that educational sciences (including science education at UT) is a broad interdisciplinary field and recommends that the identity of the educational sciences study programmes within the university structure remains preserved.

- *The need to diversify sources of research funding*

There is an obvious long-term risk of depending on EU funding. This could be addressed by diversifying sources of research funding, for instance exploring the possibilities of links with the commercial sector as well as more funding from the central government, its various agencies and NGOs.

1. Assessment report of SPG at the University of Tartu

1.1. Introduction

In 2017, the University of Tartu (hereafter also referred to as *the University* or *UT*) celebrated the 385th anniversary of its founding. According to the University of Tartu Act, adopted on 16 February 1995, the University of Tartu is the national university of the Republic of Estonia. Its mission is to advance science and culture, provide the possibilities for the acquisition of higher education based on the development of science and technology on the three levels of higher education in the fields of humanities, social, medical and natural sciences and to provide public services based on teaching, research and other creative activities.

The Faculty of Social Sciences as such at the University of Tartu came to be at the beginning of 2016 as the result of a structural reform which also saw the creation of three other faculties. The Faculty consists of four institutes, two schools and two colleges. Teaching and research in the fields of law, economics, business, educational science and educational management, psychology, sociology, politics, and media and communication studies is conducted in the faculty. The faculty's colleges in Narva and Pärnu are important regional higher education and research centres as well as development leaders in the regions.

All of the institutes and schools of the faculty (but not the colleges) have their own doctoral programmes. There are all together seven - economics and business administration, educational science, law, media and communication, political science, psychology and sociology.

In the study programme group of Teacher Training and Educational Science the only study programme is *Educational Science*. The last admission to the Science Education programme was in 2012/13, later the programmes were merged.

Table 1: Figures related to doctoral students (Source: UT SER)

	2012/13	2013/14	2014/15	2015/16	2016/17
No of doctoral students, UT total	1504	1457	1401	1348	1258
No of doctoral students, <i>Educational Science</i> +	34+13 (18+6)	32+13 (17+6)	35+12 (16+4)	37+9 (15+2)	35+6 (15+0)

<i>Science Education</i> (incl. those who work in the university)					
No of admissions, UT total (incl. those who directly enrolled from the 2nd cycle of studies of the same university)	190 (151)	179 (153)	168 (137)	171 (139)	177 (133)
No of admissions, <i>Educational Science + Science Education</i> (incl. those who directly enrolled from the 2nd cycle of studies)	3+2 (2+2)	4+0 (3+0)	5+0 (4+0)	5+0 (5+0)	5+0 (5+0)
No of dropouts, UT total (incl. voluntary withdrawals)	148 (55)	128 (42)	154 (40)	171 (48)	146 (48)
No of dropouts, <i>Educational Science + Science Education</i> (incl. voluntary withdrawals)	7+1 (5+1)	1+1 (1+0)	2+1 (2+1)	4+3 (2+0)	2+3 (1+1)
No of doctoral theses defended, UT (incl. the number of dissertations defended within the standard period +2y)	114 (57)	117 (62)	107 (45)	120 (75)	138 (65)
No of doctoral theses defended, <i>Educational Science + Science Education</i> (incl. the number of dissertations defended within the standard period+2)	0+1 (0+1)	1+0 (1+0)	2+1 (1+0)	4+1 (4+1)	1+0 (0+0)
No of students going abroad, Institute of Education (only long-term mobility)	4	1	1	0	1
Number of international students, UT total	122	129	139	143	158
Number of international students, <i>Educational Science + Science Education</i>	0+0	1+0	2+0	2+0	1+0

1.2. Strengths and areas for improvement of study programmes by assessment areas

1.2.1. Educational Science

Study programme

Standards

- ✓ The launch and development of the study programme are based on the Standard of Higher Education and other legislation, national strategies, university development plans, the effectiveness of research and development, various analyses (including labour market and feasibility analyses); striving for the best overall programme quality.
- ✓ Doctoral programmes contain at least 70% research, development or other creative work by doctoral students, making the results thereof public in international peer-reviewed research journals or in other ways that have international dimensions.
- ✓ Study programmes incorporate doctoral student participation in conferences and/or other professional activities, and are counted towards completion of the study programme.
- ✓ Doctoral programmes enable doctoral students to acquire leadership and teamwork skills, develop coaching and teaching skills as well as a proficiency in foreign languages at the level needed for successful participation in international working environments.
- ✓ Different components of a doctoral programme form a coherent whole supporting the personal development of each doctoral student.
- ✓ Study programme development takes into account feedback from doctoral students, supervisors, employers, alumni and other stakeholders.

The Assessment Committee agrees that the above criteria are generally fulfilled. Details are provided in the comments which follow.

Comments

The doctoral study programme Educational Science at the UT was restructured as from 2013-2014. The aim of this restructuring was to have a more coherent and integrated system of doctoral studies and doctoral schools. The Assessment Committee noted that the development process is still ongoing and aims primarily at improving comparable conditions for quality teaching and research across various programmes and at building strong links between disciplines. The merger of the Educational Science and Science Education programmes is an interesting and relevant move, in that sense, towards a bigger scale and it also provides relevant critical mass. If further integration movements take place at the university level, it is recommended that the identity of the educational science programme within the doctoral school stays secured. Due to this development, the concept "Doctoral School" is not always used in the same sense, both in the self-

evaluation report and during the site visit. Therefore, the Assessment Committee notes that a further clarification of the structure and the meaning of the concept would be desirable.

The collaboration with Tallinn University and the University of Helsinki is fruitful for a number of reasons, e.g. for the development of new courses, but also for providing co-supervisors. The doctoral school model and the programme have a strong focus on collaboration and networking, and this is a strong point, but at the same time a strengthening collaboration between university and the external environment (e.g. schools, other relevant institutions, economy) is necessary.

In the current system, both article-based theses and monographs are accepted as format for doctoral dissertation. Also, in the case of a monograph, one published article is required. There is discussion about the feasibility of having three accepted manuscripts as a benchmark for acceptance to the doctoral defence; this is a subject of agreement between Estonian universities. Active participation in international programmes and conferences is required for doctoral students along their publications. The interviews confirmed that students are quite active in international conferences but are less likely to use the possibility of longer term international mobility, meaning visits to other universities of 1 month or more.

The taught part of the programme currently consists of 60 ECTS with obligatory courses (including both quantitative and qualitative research methods) and also many electives which mainly enable deepening on an individual basis. There seem to be a good balance of obligatory courses and forms of flexibility in function of individual needs on the basis of electives and individual choices.

Part of the compulsory programme contains courses organized together with other programmes and schools at the University of Tartu. This way of organizing leads to higher critical mass and creates opportunities for students' community building which is a positive trend.

With respect to the content of the programme, the Assessment Committee appreciates that *University teaching practice* is also part of the curriculum (6 ECTS) in order to prepare doctoral students for academia. At the moment *Research ethics* is one of the electives in the programme but given its growing importance its position could be reconsidered in the near future (at least some of these contents could be included in a compulsory course).

The Assessment Committee supports the introduction of *Writing Camps* which is another strong point of the programme; an appreciation of this was also confirmed by the alumni. Also, the *Supervision Seminars* are seen as relevant by interviewees. The 60 ECTS part of the programme has not been presented as a hindrance for the completion of the doctoral programme. On the contrary, a conversation with students and alumni has shown that the taught part of the programme – especially since the last revision of the curriculum – is generally supportive of the individual PhD student's research work.

The remaining 180 ECTS part of the study programme contains individual research work which is organized in the context of the research projects of individual supervisors. This creates a strong research environment in which doctoral students can contribute with their own research to a larger research project, together with fellow-researchers. This also creates opportunities to establish a community feeling and get a sense of academic life. It fosters collaboration between students and promotes networking as a strong supporting structure, which might be a preventive approach for drop out. Project-based working also enables doctoral students to acquire teamwork skills. On the other hand, a challenge of this model of PhD studies, where integration of PhD work in research projects is a systemic characteristic, concerns students' perceived ownership of the research topic. Efforts need to be made to guarantee that students can identify their individual research with the project aims and approaches.

The Programme Committee is responsible for the doctoral programme as a whole. It consists of teaching staff and supervisors. Their work includes changes and amendments to the curriculum and providing progress review guidelines. Suggestions from doctoral students, alumni and employers are taken into account.

The progress review is introduced as an answer to tackle the high drop-out figures and the long duration to graduation. It allows closer monitoring of student progress and provides help on guidance in cases when needed. The approach used to be mainly summative (as a control mechanism) but is now meant to be more formative and supportive for the students. The Programme Committee should be aware that the current approach results in a rather fragile balance between summative and formative assessment and can still be emotionally distracting for students. Additional possibilities for formative assessment can be considered.

Strengths

- Well designed and organized taught courses (60 ECTS).
- Doctoral students are integrated into research projects / groups.
- Doctoral students are offered opportunities to attend conferences and participate in other academic and educational activities abroad.
- The progress reviews which allow closer monitoring of the students' progress and provides help on guidance in cases when needed.
- Opportunities for students to establish a community feeling and get a sense of academic life.
- Merger of Educational Science and Science Education study programmes into one doctoral study programme.
- Cooperation between Tartu, Tallinn and Helsinki universities.

Areas of improvement and recommendations

- Strengthening cooperation/collaboration between university and the external environment (e.g. schools, other institutions, economy).

- In integrating students in research projects efforts need to be made to guarantee that students can identify their individual research with the project aims and approaches.
- The current approach in the progress reviews results in a rather fragile balance between summative and formative assessment and can still be emotionally distracting for students; therefore, implementing additional elements for formative assessment is encouraged.

Resources

Standards

- ✓ In conducting doctoral study programmes, an adequate number of teaching staff and researchers participate, who hold the appropriate qualifications required to carry out doctoral studies and supervise doctoral theses in a given study programme.
- ✓ Universities shall ensure that sufficient funds are available to conduct doctoral studies, to provide development activities associated with doctoral studies and research, and to support the professional development of teaching staff and researchers.
- ✓ Resources (teaching, learning and research environments; libraries; resources required for teaching, learning and research) support the achievement of objectives set out in study programmes as well as the actual teaching, learning and research at the level of doctoral studies. Resource development is sustainable.
- ✓ Trends in the numbers of current learners, admitted learners and graduates (by study programme) in doctoral studies under the study programme group during the last five years indicate sustainability.

The Assessment Committee agrees that the above criteria are generally fulfilled. Details are provided in the comments which follow.

Comments

In terms of human resources, the doctoral programme has an adequate number of teaching staff with appropriate qualifications – though with a relatively modest share of full professors – to provide sufficient critical mass to run a quality programme. The number of doctoral students is relatively low but must be seen in the context of demographic trends in the country.

An important issue for the attractiveness of the doctoral programme in educational science is that teachers' salaries in primary and secondary education are generally higher than the stipend on offer to students. Employment as a teacher is also more secure and long-term than a doctoral studentship.

The current situation in Tartu is that students receive a 660 € stipend from the government and this is increased by 400 by the university to be in line with the average income of the country. This is very positive as it makes the position attractive and means that it is not necessary for students to take on other paid work. This recent initiative therefore addresses perhaps the major cause of slow completion and high drop-out rates. However, from 2019 the extra stipend from the university will be reduced and the financial contribution from each department will increase on an annual basis. The details of this situation will be decided in the next years. This might raise issues of sustainability. It might also put extra pressure on supervisors to find resources for their students with the possibility of increased competition between departments and supervisors for this extra money.

Financial resources are allocated to support the possibility of co-supervision of PhD theses by international researchers and international visiting professors. This supports the integration of research students into the international research community and promotes their future employability.

Adequate funds are available for mobility both for short term travel to conferences and summer schools and for longer term study stays abroad. The longer term (more than one month) opportunities are of great value for career development but are under-used mainly due to family and work commitments that make long term travel difficult for most students. The source of funding for mobility comes from temporary European structural funds which might be reduced in the near future. Plans need to be made to address this. Next, it is desirable to guarantee that the students have a good overview of the existing funding resources.

Space for work (desks) and access to IT resources including library facilities and software for data analysis appear to be adequate. By default, students provide their own computers unless project money can provide this. Each student negotiates their own working conditions and support with their supervisors and local departments. Although there were no complaints, this leaves open the possibility of unfair or unequal treatment. Some more central oversight and organisation in relation to the allocation of resources to students is recommended.

There are three categories of doctoral students, full-time, part-time and external students. The rights and access to resources of part-time students were similar to those of full-time but pro-rata. External students are more loosely connected to the University; they do not have access to stipends and other awards such as mobility.

The Assessment Committee observed that the staff are all committed to supporting students and serve as a human resource for information and support offering varied introductions into the academic world.

Interestingly there is no central IT system to support and monitor PhD progress. Given that there is an issue about the efficiency of the programme measured in terms of drop-out rates and the time to completion it might be worth considering implementing such a system. There are systems being used elsewhere that allow for an easy access overview

of the state of progress of each student including uploaded notes on each supervision, reminders of the need for supervision meetings, contracts, credit points, training experience and self-assessments, progress reviews and so on. This might be supportive for both students and supervisors but also provide awareness of possible problems at a larger system level. An IT support system for the doctoral programme in educational science could also serve to provide more social interaction, peer learning opportunities and community building for the doctoral student group. Currently the students themselves have created Facebook groups for mutual support. While this is very positive it might be good if such supports were provided in a more systematic and inclusive way.

Strengths

- The provision of a stipend up to the national average income level is very positive as it provides doctoral students with the freedom to focus only on their studies.
- The trend of inserting students into research projects (groups) is a strength with the caveat mentioned above. The availability of funds for international mobility of both doctoral students and staff.
- Financial resources are used to provide the possibility of co-supervision with international researchers and international visiting professors and to integrate doctoral students into the international research community.

Areas of improvement and recommendations

- The long-term risk of depending on EU funding. This could be addressed by diversifying sources of research funding for instance exploring the possibilities of links with the commercial sector as well as more funding from central government and NGOs.
- It might be desirable to have one administration role providing a person or office that all doctoral students can turn to for issues of working space, equipment and other related resource needs.
- It might be worth exploring the possibility of an IT system to support the doctoral programme and monitor progress more systematically, timely and continuously. This support could also be provided for supporting community building (including international community building) and peer learning opportunities amongst students.

Teaching, learning, research and/or creative activity

Standards

- ✓ Uniform principles, based on best international practices and agreed upon at the university level, shall be followed while implementing doctoral programmes and assuring the quality of the doctoral studies (including supervision of doctoral theses).
- ✓ Doctoral studies support students' personal and social development, including creating an environment which will prepare them to successfully participate in international working environments at research and development institutions, as well as in the business and public sectors.
- ✓ Supervision of doctoral theses; modern methodology used in teaching and research; organisation of studies; and doctoral students' professional research, development and/or other creative activities all support achievement of the objectives and learning outcomes of doctoral studies.
- ✓ Assessment of outcomes of the learning, research and creative work done by doctoral students is relevant, transparent and objective, and supports the development of doctoral students.
- ✓ Doctoral students are asked for feedback regarding supervision on a regular basis and the results of these surveys are taken into account for quality improvement activities.
- ✓ Effectiveness of the doctoral studies is analysed and such analyses serve as a basis for planning quality improvement activities.

The Assessment Committee agrees that the above criteria are generally fulfilled. Details are provided in the comments which follow.

Comments

The Assessment Committee noted that in the UT self-evaluation report, the data (faculty level) indicate that doctoral students expressed unhappiness and dissatisfaction with the supervision processes at the faculty level. However, interviews have shown that the data (which are critical of the effectiveness of studies) for the entire Faculty of Social Sciences are perhaps not a true indicator of the situation at the level of Educational Science. Actually, interviews with both the students and the staff highlighted improvement, and the revised programme with a project-based approach, where students are involved in research teams, seems to be working well.

The studies are sound at helping students to develop research skills and competences. The students have various opportunities to participate in national and international research environments. Furthermore, satisfactory efforts are made to support integration with the public sector. However, only very limited efforts have been made to prepare students to work in the business sector.

Article-based theses are strongly encouraged, and staying in academia is encouraged too. On a general level, the supervision of doctoral theses applies modern methodologies to support doctoral students in their studies. At the faculty level,

students are asked for feedback regarding supervision. However, this faculty-level feedback does not seem to correspond to the needs for developing specific programmes. The doctoral students that were interviewed reported satisfaction with the amount of input from their supervisors in support of their study progress. On the other hand, high pressure was raised as a concern with regard to the progress reviews.

When implementing doctoral studies, the work of students seems to be closely integrated with the research projects. On the one hand, this provides the students with opportunities to learn necessary skills (e.g. team work, writing research articles, etc.). On the other hand, there is a potential threat in that students' professional development is too heavily dependent on the success of the project and on their supervisors' interests. This may also be associated with dropout rates to some extent. As there are no clear procedures to solve conflict situations, the conflict management guidelines needs to be developed.

There seems to be a blurred line with regard to the workload between doctoral students and supervisors. For example, in the case of writing articles, it is not clear what should be done if there is a conflict of interest. Therefore, the Assessment Committee recommends that clear instructions for the course of action should be established (e.g. an external person could be named at the beginning of the studies for a student to contact in the case of a conflict of interest or other such issue).

The Assessment Committee recommends that a strategic plan is made for how to increase the number of professors to guarantee the distribution of responsibility among the faculty. high-level teaching and research (especially in the case of unexpected turn-ups in personnel).

Finally, there seems to be a lack of post-doc policies regarding attracting post-doctoral researchers. The career paths available should be better elaborated.

Strengths

- The supervision of doctoral theses employs appropriate methodologies, and much effort has been made to overcome the previous challenges.
- The studies help doctoral students develop and meet academic goals. In particular, international networking is well supported.
- Many of the students have more than one supervisor, and the students can flexibly negotiate the roles of the supervisors and/or ask to add new supervisors based on both student needs and supervisor expertise, with the aim of achieving academic goals and publishing in high-level international journals.
- Access to the programme (preparation/selection of candidates) is well conceived.
- Courses are well aligned with student needs in terms of general research support. Despite being a fairly small actor at the university (with only limited number of full professors), actions were taken to increase opportunities for the

students (e.g. cross-university compulsory classes, such as courses on methodology, are offered).

- Supervision is also conducted in small groups (e.g. seminars once a month with other doctoral students with linked projects).

Areas of improvement and recommendations

- Data show that in the past years many students dropped out in the final year or earlier. Obviously, a lot of effort has been recently made to prevent this, for example, the project-based approach, however, this is an issue which still requires attention and action.
- Insufficient funding for doctoral studies through the past period seems to be a major reason that students do additional work, which means their progress is slower or hampered. An additional 400 € grant has remarkably improved the situation and it is likely that the need for additional work will be decreasing; nevertheless, this is another issue which requires attention.
- The option of greater long-term mobility (1 month or more) has not been sufficiently utilized. It would be a good idea to consider alternatives ("mobility at home"; e-mobility) that would allow networking with students and institutions abroad.
- The process for garnering feedback from students and utilizing it in improvement activities is a bit unclear, e.g. how the doctoral students are asked for feedback regarding supervision and how the students' opinions are taken into account for quality improvement actions.
- More attention should be paid to the involvement and socialisation of international students and to their specific academic and personal needs.
- It seems that there are some not yet addressed concerns (e.g. power relations) in relation to potential ethical issues of supervision. The Assessment Committee recommends that clear procedures are developed to resolve potential conflicts of interest.
- The Assessment Committee recommends that a strategic plan is made for how to increase the number of professors to guarantee high-level teaching and research (especially in the case of unexpected turnover in personnel).
- Even though the article-based theses are seen as a strength, there is a concern that the options have narrowed toward article-based theses only. The Assessment Committee encourages the option to support students to defend their theses in the form of a monograph as well, in particular in those cases when this would be a better format (e.g. taking into account the completeness of for example the philosophical topic or its contribution to the national culture (e.g. historical topics specific to Estonian education)).

Teaching staff

Standards

- ✓ Teaching staff participate in research, development and/or creative activity at the level of and to the extent sufficient to conduct doctoral studies in the curriculum group and to supervise doctoral theses.
- ✓ Teaching staff develop their supervisory competences and share best practices with one other.
- ✓ Teaching staff collaborate in fields of teaching, research and creative work within the university and also with stakeholders outside the university (public sector organisations, enterprises, other research and development institutions).
- ✓ Teaching staff further their skills at foreign universities or other research institutions, participate in international research and creative projects, and present papers at high-level conferences.
- ✓ Qualified international and visiting teaching staff are involved in conducting doctoral studies, participating in doctoral thesis defence panels and/or reviewing doctoral theses.
- ✓ When assessing the work of teaching staff (including their evaluations), the effectiveness of their teaching as well as of their research, development and creative works is taken into account; including the effectiveness of their student supervision, development of their teaching and supervisory skills, and their international mobility.

The Assessment Committee agrees that the above criteria are generally fulfilled. Details are provided in the comments which follow.

Comments

The study programme is carried out by academic staff specialized in various subfields of educational sciences. The Head of the Institute of Education (IoE) who is also Director of the programme, the Institute's Vice-Director for Development, and several of the Institute's staff members are established researchers, who are well known internationally, and who are supported by a number of other well qualified active researchers and staff in a wide array of relevant areas.

The doctoral training supported by the study programme is diverse; in addition to faculty from the core areas of educational sciences, the programme also includes experts in the field of science education from the Faculty of Science and Technology. The diversity of the dissertation work completed in the past years is demonstrated by the wide scope of the thematic areas. However, the special education field appeared underrepresented. The Assessment Committee spoke with a special education faculty member, who recently joined the Institute and who now provides scholarship opportunities to include this thematic area in the overall study programme.

The UT rules require that the PhD supervisor has a doctorate and that s/he is an active researcher at UT. Often, PhD students may also have more than one supervisor; in this case, at least one of them has to meet the above criterion. The staff has opportunities to develop their teaching and supervising skills in occasionally organized seminars, mainly for junior supervisors, which can also be attended by colleagues from other programmes at UT.

In principle, each doctoral student should have two supervisors; according to interviewees, this principle is realized in approximately 80% of all cases. The supervisors are assigned based on an explanation of the nature of the complementary expertise. Young supervisors gain experience first in BA and MA programmes before being actively involved in supervision in the doctoral programme. The programme also opens the possibility for external (non-academic) experts to participate in (co-)supervision or advising of students.

The Assessment Committee believes that there might be opportunities, not yet fully used, to enhance further the collaboration between the university and employers / partners outside of the university (industry, public sectors, other stakeholders). Faculty from Tallinn University have an active role in the programme, either as teaching staff or as (co-)supervisors, and there are plans to gradually strengthen the involvement of faculty from abroad in the supervision of doctoral studies.

Strengths

- The IoE faculty includes several visiting professors.
- A productive collaboration between faculty at Tartu, Tallinn, and Helsinki universities in the context of the doctoral study programme has been reported.
- The IoE is moving towards a model where new doctoral students begin their studies by becoming associated with a research project. This is a positive move and it can contribute towards many of the goals of the doctoral programme such as: diminishing feelings of isolation during the PhD work; helping students develop collaboration and other advanced academic skills; providing financial support; and graduating on time.
- Despite the high rate of feelings of isolation reported in the self-evaluation report by students from the Faculty of Social Sciences (73% of the respondents suggested this), the students of the IoE reported that they are satisfied with the support of, and collaboration with, their supervisors.

Areas of improvement and recommendations

- Based on the data submitted for evaluation, and the interviews at UT, a small number of faculty seem to be responsible for a great number of activities conducted by the IoE. Increasing the number of professors at higher ranks (vs. lecturers or visiting professors) at the Institute might contribute to distributing

the responsibilities more evenly. As additional measure, visiting professors could be more often involved in the co-supervision of doctoral students.

- Creating a common supervisor culture seems to be a goal of the IoE but it still remains a challenge. Additional structured opportunities, or a revision of existing ones, to discuss student progress, exchange advice on how to support and mentor doctoral students, and also support each other's supervisor roles, might contribute towards the strengthening of a community in this respect. Regarding this point, the Assessment committee recommends the consideration of a mentoring system, in which less experienced supervisors have opportunities to act as co-supervisors, while a more experienced researcher serves as the main supervisor.
- Time spent to supervise students is not counted towards the supervisor's overall workload. Including this time in the regular workload estimation might help balance the different activities that each faculty member is being asked to contribute to.
- The resolution of potentially conflicting cases between students and supervisors is not (yet) regulated. The Assessment Committee recommends to articulate clear procedures on how to proceed in the case of such conflicts between a supervisor and a student.

Doctoral students

Standards

- ✓ When admitting students to doctoral study, their suitability for successful completion of their studies is assessed on the basis of transparent criteria.
- ✓ Doctoral students plan their studies as well as research and development activities in collaboration with their supervisor(s), setting out specific objectives for each year and taking responsibility for achieving these objectives.
- ✓ Evaluation of doctoral students is transparent and impartial. Its purpose is to support development of the doctoral students, provide an opinion regarding the effectiveness of their work to date, and assess their capabilities to complete their studies on time and successfully defend their doctoral theses.
- ✓ Universities offer doctoral students counselling on completing their studies and planning their further careers.
- ✓ Doctoral students' extracurricular teaching, research and/or creative activities or other work-related activities at the university support successful completion of their doctoral studies.
- ✓ Doctoral students participate in international mobility programmes or take advantage of other opportunities for learning or research at foreign universities and/or research and development institutions¹.
- ✓ Alumni are regularly asked for feedback on the quality of the doctoral study, and employers are asked for feedback on the preparation of the graduates.

The Assessment Committee agrees that the above criteria are generally fulfilled. Details are provided in the comments which follow.

Comments

Recent changes in doctoral programme recruitment mean that doctoral students are attracted to research projects developed by their future supervisors. This has the advantage of inserting students into research teams where they have expert support. On the other hand, it might mean that they are less likely to develop the kind of original and independent thinking required for a more individual PhD. This problem could be addressed by creating spaces within the doctoral programme where creativity and entrepreneurship are required.

Most employment of PhD graduates is in the university sector. Alumni, students and staff all commented that PhDs are not attractive to employers in industry in Estonia. By contrast one head teacher commented that she valued PhDs as they were more likely to question current practice and develop new approaches. The potential for entrepreneurship development of the doctoral programme could be emphasised more with courses on entrepreneurship and more support and guidance on how to turn the final doctoral project into a commercial start-up or social enterprise.

¹ In the context of this document, 'research and development institutions' denote both research institutions and research-intensive companies.

There is a high drop-out rate from the doctoral programme and also a high rate of delayed completion. This seems to be due mainly to conflicting demands on students' time from their responsibility to their families and the demands of their work. Some of these issues may have been addressed by the recent provision to all students of a stipend equivalent to the average salary in Estonia. However, there may also be other issues. Although no dissatisfaction was reported by the interviewed students it should be noted that surveys suggested a high rate of dissatisfaction with supervision and those who have dropped out or have interrupted are unlikely to be available for interview. One possible reason for dissatisfaction with supervision that was mentioned by the students that the Assessment Committee interviewed, asking them why they think that other students may have dropped out, was a possible lack of relevant expertise and support from supervisors. This issue has been addressed by the new approach to recruitment of students in which projects are proposed by supervisors and students have to choose a project which means that in future they will only be researching areas where there is expertise and support.

Progress reviews seem to be fairly conducted. However, educational sciences at Tartu is a small community. It might be worth considering setting clear completion targets and removing students who are not going to meet these at an early stage.

Students take advantage of short-term opportunities to travel abroad to go to conferences and summer schools but do not fully take up the opportunities for longer term stays.

Strengths

- The integration of doctoral students into research projects and teams has proven to be beneficial; it ensures team support, relevant expertise and employability skills.
- Steps have been taken to decrease the proportion of part-time and external students, in particular by paying all students an extra stipend.
- Initiatives have been made to attract students from abroad to apply for doctoral student positions.
- Recent changes in the doctoral programme are attracting candidates from other academic fields and from abroad (besides own former BA/MA students)
- Supportive and responsive supervision.
- The Educational Science doctoral students can begin their studies as external students, working with supervisors to develop proposals, before they move on as regular doctoral students.
- Students have the opportunity, and take advantage, of short-term international mobility opportunities (i.e. attending international conferences).

- Collaboration with other universities (Tallinn, Helsinki) has been identified as very positive by the students.

Areas of improvement and recommendations

- Even though initiatives have been taken to decrease dropout rates and to promote graduation (e.g. increase in funding, annual progress reviews, transferable skills -learning module), these issues still require attention. A more systematic pre-doctoral school practice could be a useful way to give a realistic picture of the requirements of doctoral studies as well as find out the motivation of the candidates.
- Despite the advantages of integrating doctoral students into research projects, special attention should be paid to guarantee autonomy to the students so that they can experience taking a lead in developing their own original ideas.
- The IoE should consider the format of progress reviews, as well as how they are communicated to the students, so that the students can benefit from these experiences to a greater extent. For instance, some students asked for a clearer roadmap of their individual doctoral studies programme.
- Long-term (more than a month) international mobility is still a challenge for many students. The IoE should consult students to see how they can be supported in taking advantage of the available funding for long-term mobility activities.
- International students have reported several problems; the Assessment Committee suggest that their needs are more clearly identified and addressed.
- The IoE could consider mechanisms for strengthening the feeling of belonging to a community of scholars between current doctoral students.
- Ensuring sustainable enrolment in the programme is a challenge that needs to be thought about since falling birth rates will lead to reduced applications in the foreseeable future.
- Employment outside the narrower academic space is a challenge. This could be addressed by more focus on employability skills particularly entrepreneurship.

2. Assessment report of SPG at Tallinn University

2.1. Introduction

Tallinn University (hereafter also referred to as *the University* or *TU*) is the third largest public university in Estonia and focuses primarily on the fields of social sciences, natural sciences, and humanities. TU is a result of the merger of several higher education institutions in Tallinn (Tallinn Pedagogical University, Academy Nord, Estonian Institute of Humanities, Institute of History of the Estonian Academy of Sciences, and the Academic Library of Estonia) into a single institution, which resulted in the founding of TU as a public university on 18 March 2005.

The largest constituent of TU was the former Tallinn Pedagogical University. Prior to the merger, Tallinn Pedagogical University carried on the traditions of Estonian teacher training that dated from 1919, when the first Teachers' Seminar was established in Tallinn.

In 2015, a significant structural and management reform took place whereby 26 existing units were merged into just nine: six academic units – Baltic Film, Media, Arts and Communication School; School of Digital Technologies; School of Educational Sciences; School of Governance, Law and Society; School of Humanities; School of Natural Sciences and Health; two regional colleges and the library. In addition, five centres of excellence, nine research centres and 15 support units were formed.

The Educational Sciences study programme (ES SP) is managed by the School of Educational Sciences (SES) and was first registered on 22.06.2006. There have been 24 graduates in the past five years.

Table 2: Figures related to doctoral students (Source: TU SER)

	2013	2014	2015	2016	2017
No of doctoral students, TU total (incl. those who work in the university)	370	378	386	363	333
No of doctoral students, <i>ES SP</i> (incl. those who work in the university)	68 (28)	72 (27)	72 (30)	61 (17)	55 (19)
State-commissioned education request for Doctoral student places	22	25	25	25	25

	2013	2014	2015	2016	2017
No of admissions, TU total (incl. those who directly enrolled from the 2nd cycle of studies of the same university)	44 (6)	46 (11)	42 (16)	50 (9)	41 (18)
No of admissions, <i>ES SP</i> (incl. those who directly enrolled from the 2nd cycle of studies)	6 (0)	7 (1)	7 (3)	9 (1)	5 (0)
No of dropouts, TU total (incl voluntary withdrawals)	31 (12)	23 (11)	23 (12)	53 (23)	45 (20)
No of dropouts, <i>ES SP</i> (incl voluntary withdrawals)	4 (1)	2 (0)	2 (1)	7 (3)	7 (4)
No of doctoral theses defended, TU (incl the number of dissertations defended within the standard period+2)	23 (13)	16 (6)	25 (9)	19 (10)	22 (8)
No of doctoral theses defended, <i>ES SP</i> (incl the number of dissertations defended within the standard period+2)	10 (2)	4 (1)	9 (1)	4 (1)	3 (1)
Proportion of TU students going abroad, doctoral level (only <i>long-term mobility</i>)	3.2%	9%	4.4%	2.8%	6.01%
No of students going abroad, <i>ES SP</i>	4.2%	4.2%	4.2%	3.27%	9.09%
Proportion of international students, TU	8.1%	10.9%	12.4%	13.2%	13.81%
Proportion of international students, <i>ES SP</i>	4.4%	4.2%	4.2%	4.9%	5.45 %

2.2. Strengths and areas for improvement of study programmes by assessment areas

2.2.1. Educational Sciences

Study programme

Standards

- ✓ The launch and development of the study programme are based on the Standard of Higher Education and other legislation, national strategies, university development plans, the effectiveness of research and development, various analyses (including labour market and feasibility analyses); striving for the best overall programme quality.
- ✓ Doctoral programmes contain at least 70% research, development or other creative work by doctoral students, making the results thereof public in international peer-reviewed research journals or in other ways that have international dimensions.
- ✓ Study programmes incorporate doctoral student participation in conferences and/or other professional activities, and are counted towards completion of the study programme.
- ✓ Doctoral programmes enable doctoral students to acquire leadership and teamwork skills, develop coaching and teaching skills as well as a proficiency in foreign languages at the level needed for successful participation in international working environments.
- ✓ Different components of a doctoral programme form a coherent whole supporting the personal development of each doctoral student.
- ✓ Study programme development takes into account feedback from doctoral students, supervisors, employers, alumni and other stakeholders.

The Assessment Committee agrees that the above criteria are generally fulfilled. Details are provided in the comments which follow.

Comments

The doctoral study programme Educational Sciences at the TU was restructured as from 2015-2016, in line with broader organizational changes at university level. At that time, major changes were introduced to the curriculum of the doctoral programme for educational sciences. A central reform was the more individualized character of the programme to allow for more flexibility for the individual doctoral student. Another important change was the introduction of the *Doctoral pre-school*, which consists of four sessions in four months. The Assessment Committee appreciates this initiative; it allows students to learn to know the academic life and to find out if the doctoral work is something for them. It also offers chances to find a supervisor in line with the prospective students' interests. Both employers and alumni stressed that the current

programme is more in line with today's needs of the Estonian society, as compared to the previous programme.

The taught part of the programme (60 ECTS) has three types of courses: general courses (e.g. research methodology), core courses (e.g. research seminars), and individual courses. In the total programme, only four courses are compulsory. All other courses are electives which maximizes the flexibility and allows for specialization. Specialization goes hand in hand with individualization, which seems to be a characteristic of the current programme. At the same time, too much specialization needs to be avoided and the programme needs to stimulate (or even require) students to get acquainted with a broad spectrum of methodologies and approaches. Attention needs to be paid to the standardization of the credit points allocated to the different type of courses and activities across different promoters.

The university-wide initiative of *Experience café* can be seen as an example of a good practice. It provides a chance to create a culture of learning and teaching. The Assessment Committee also appreciates the introduction of *Writing Camps* as a strong point of programme.

With relation to the content of the programme, the Assessment Committee notices that the attention for research ethics is rather sporadic; the school usually organizes a one-time seminar focusing on this topic. Therefore, the Assessment Committee recommends to pay more systematic attention to research ethics, data storage and security issues and give this a stronger and substantive position in the curriculum.

The Extended Supervisors Council (former Advisory Board) is responsible for the organization of the programme, the quality of the supervision, and the sharing of best practices. So far, there are no student representatives or external stakeholders in this Council, but plans exist to include them.

The progress review is introduced as an answer to tackle the high drop-out figures and the long duration to graduation. It allows closer monitoring of students' progress and provides guidance in cases when needed. It is meant to be more than an administrative exercise and additional possibilities for formative assessment can be considered.

The study programme also contains 180 ECTS for individual research work which is organized along the research projects of individual supervisors. The integration of the doctoral students' work with new or ongoing research projects creates a strong research environment in which students can become part of a research community, together with fellow-researchers. This way, students can also acquire necessary teamwork skills. It stimulates collaboration between students to avoid isolation; networking can be seen as a strong supporting structure that goes beyond the individual relation between supervisor and student and for these reasons, this should be applauded.

A research project may not always be in line with the students' interests and, therefore, students' ownership of the research topic may need to be guarded. Tallinn University intentionally opts for a dual approach. On one hand, the students can choose to become

part of -larger- research project activities, but on the other hand, the school still accepts individual suggestions for research PhD-topics based on the preference of individual students. This approach avoids the disappearance of original doctoral research coming from often very creative and ambitious students.

The collaboration with the University of Tartu and the University of Helsinki is fruitful for a number of reasons, e.g. for the development of new courses, but also for the mentoring and co-supervision of the PhD students.

Strengths

- Well-designed and organised study programme which is individualised and flexible, as well as more in line with today's needs of the Estonian society when compared with the previous one.
- Introduction of the *Doctoral pre-school* enables better preparation of candidates before entering the study.
- Initiatives like *Writing camps* and *Experience café* can be seen as good practices.
- Efforts to integrate doctoral students into research projects/groups (but not always; individual cases are taken into account).
- The progress reviews which allow closer monitoring of the students' progress and provides help on guidance in cases when needed.
- Opportunities for students to establish a community feeling and get a sense of academic life.
- Cooperation between Tallinn - Tartu - Helsinki universities.

Areas of improvement and recommendations

- More advice to students when selecting courses.
- Too much specialization needs to be avoided and the programme needs to stimulate (or even require) students to get acquainted with a broad spectrum of methodologies and approaches.
- Attention needs to be paid to the standardization of the credit points allocated to the different types of courses and activities.
- The attention for research ethics, data storage and security issues is rather sporadic.
- With regard to the progress Review additional possibilities for formative assessment can be considered.
- Doctoral students and external stakeholders not (yet) included in the Extended Supervisors Council.
- Strengthening collaboration between the university and the external environment (e.g. schools, public institutions, economy, etc.)

Resources

Standards

- ✓ In conducting doctoral study programmes, an adequate number of teaching staff and researchers participate, who hold the appropriate qualifications required to carry out doctoral studies and supervise doctoral theses in a given study programme.
- ✓ Universities shall ensure that sufficient funds are available to conduct doctoral studies, to provide development activities associated with doctoral studies and research, and to support the professional development of teaching staff and researchers.
- ✓ Resources (teaching, learning and research environments; libraries; resources required for teaching, learning and research) support the achievement of objectives set out in study programmes as well as the actual teaching, learning and research at the level of doctoral studies. Resource development is sustainable.
- ✓ Trends in the numbers of current learners, admitted learners and graduates (by study programme) in doctoral studies under the study programme group during the last five years indicate sustainability.

The Assessment Committee agrees that the above criteria are generally fulfilled. Details in the comments below.

Comments

In terms of human resources, the doctoral programme has an adequate number of teaching staff with appropriate qualifications to provide sufficient critical mass to run a quality programme. The number of doctoral students is relatively low but must be seen in the context of demographic trends in the country.

An important issue for the attractiveness of the doctoral programme in educational sciences is that teachers' salaries in primary and secondary education are generally higher than the stipend on offer to students. Employment as a teacher is also more secure and long-term than a doctoral studentship.

The current situation in Tallinn is that students receive a 660 € stipend from the government, which can be increased by grants within each department depending on access to research project funds. The grants typically are used to employ the doctoral students as research assistants (the so-called early-stage researchers - ESRs) to bring their total income in line with the average income of Estonia. While this can be very positive when it works well it depends upon the supervisors' access to appropriate funding; in turn, this puts pressure on supervisors to find funding and raises issues of sustainability especially as the timescale of grants is usually shorter than the timescale of the doctoral research. All the students whom the Assessment Committee met were part-time because they were employed elsewhere; even when this was within the university it did not necessarily coincide with the focus of their PhD. This need to work

in order to earn enough money to survive while studying for a PhD has an impact on the drop-out rates and the length of time to completion.

Adequate funds are available for mobility both for short term travel to conferences and summer schools and for longer-term study stays abroad. The longer-term (more than one month) opportunities are of great value for career development but are under-used mainly due to family and work commitments that make long term travel difficult for most students. The source of funding for mobility comes from temporary European structural funds which might be reduced in the near future. Plans need to be made to address this. It is also desirable and important to guarantee that the students have a good overview of the existing funding resources.

Space for work (desks) and access to IT resources including library facilities and software for data analysis appear to be adequate. By default, students provide their own computers unless project money can provide this. Each student negotiates their own working conditions and support with their supervisors and local departments. Although there were no complaints this leaves open the possibility of unfair or unequal treatment. Some more central oversight and organisation in relation to the allocation of resources to students is recommended.

The Assessment Committee observed that the staff are all committed to supporting students and serve as a human resource for information and support offering varied introductions into the academic world. The Committee noted depth and breadth of support in the educational sciences with a long history and a wide range of expertise amongst staff. The Centre of Excellence on Educational Innovation provided further human resource and support for innovative projects with stakeholders. This is a particular strength of Tallinn University which needs to be maintained.

Financial resources are allocated to provide the possibility of co-supervision with international researchers and international visiting professors. This supports the integration of research students into the international research community, thus enhancing their future employability.

Interestingly there is no central IT system to support and monitor PhD progress. Given that there is an issue about the efficiency of the programme measured in terms of drop-out rates and the time to completion it might be worth considering implementing such a system. There are systems being used elsewhere in the sector that allow for an easy access overview of the state of progress of each student including uploaded notes on each supervision, reminders of the need for supervision meetings, contracts, credit points, training experience and self-assessments, progress reviews and so on. This might be supportive for both students and supervisors but also provide awareness of possible risks at a larger system level. An IT support system for the doctoral programme in educational sciences could also serve to provide more social interaction, peer learning opportunities and community building for the doctoral student group. Currently the students themselves have created Facebook groups for mutual support.

While this is very positive it might be good if such supports were provided in a more systematic and inclusive way.

Strengths

- The depth and breadth of support from staff represents a strong human resource at Tallinn including the Centre of Excellence on Educational Innovation which links research to educational stakeholders.
- A stipend from the government (660 €) can be increased by grants within each department depending on access to research project grants.
- Financial resources can be used to provide the possibility of co-supervision with international researchers and international visiting professors and to integrate doctoral students into the international research community.

Areas of improvement and recommendations

- The fact that most students are *de facto* part-time students is a risk to the efficiency of the programme in delivering on-time completion and lower drop-out rates. It would be good to offer students the sustainable option of being full-time by matching their stipend with the national average salary.
- The long-term risk of depending on EU funding is a challenge. This could be addressed by diversifying sources of research funding, such as for instance exploring the possibilities of links with the commercial sector, as well as securing more funding from central government and NGOs. The Centre of Excellence on Educational Innovation might have a stimulating role to play here.
- It might be desirable to have one administration role providing a person or office that all doctoral students can turn to for issues of working space, equipment and other related resource needs.
- It might be worth exploring the possibility of an IT system to support the doctoral programme and monitor progress more systematically, timely and continuously. IT support could also be provided for supporting community building (including international community building) and peer learning opportunities amongst students. Two cases of good practice: ELGG (an award-winning open source social networking engine; see <https://elgg.org/>) and MyPGR (an online facility for the tracking of postgraduate research student progress; see <https://www.exeter.ac.uk/students/administration/mypgr/>).

Teaching, learning, research and/or creative activity

Standards

- ✓ Uniform principles, based on best international practices and agreed upon at the university level, shall be followed while implementing doctoral programmes and assuring the quality of the doctoral studies (including supervision of doctoral theses).
- ✓ Doctoral studies support students' personal and social development, including creating an environment which will prepare them to successfully participate in international working environments at research and development institutions, as well as in the business and public sectors.
- ✓ Supervision of doctoral theses; modern methodology used in teaching and research; organisation of studies; and doctoral students' professional research, development and/or other creative activities all support achievement of the objectives and learning outcomes of doctoral studies.
- ✓ Assessment of outcomes of the learning, research and creative work done by doctoral students is relevant, transparent and objective, and supports the development of doctoral students.
- ✓ Doctoral students are asked for feedback regarding supervision on a regular basis and the results of these surveys are taken into account for quality improvement activities.
- ✓ Effectiveness of the doctoral studies is analysed, and such analyses serve as a basis for planning quality improvement activities.

The Assessment Committee agrees that the above criteria are generally fulfilled. Details are provided in the comments which follow.

Comments

During the visit, the Assessment Committee received enough information to conclude that doctoral studies at TU help students to develop as early-stage researchers and to meet their research goals. The students have various opportunities to participate in national and international research environments. Furthermore, satisfactory efforts have been made to support integration in the public sector. However, the Committee sees that only very limited efforts have been made to prepare students to work in the business sector.

In general, and for historical reasons, educational studies seem to have a very strong position in terms of the university strategy. Thus, the research environment seems to be strong, including a sufficient number of full professors with varied experience, which the Committee sees as a strength. The studies support student development and help them to reach academic goals; in particular, international collaboration with other universities is well supported. However, in some cases, visits abroad seemed to be related more to the facilities (e.g. libraries) than to actual collaboration with the research partners.

According to the available documents and evidence obtained during the interviews, supervision of doctoral theses employs appropriate methodologies to support doctoral

students in their studies. There are strong historical roots that provide a solid foundation for current practices. The advantages of cross-university compulsory classes (e.g. on methodology), joint seminars, and a rich array of electives seem to be well exploited. This is especially beneficial for small universities as these arrangements can compensate the lack of courses in some areas (qualitative methods was mentioned during an interview as an example). The doctoral students are asked for feedback regarding supervision, and the supervisors seem to be very interested in using this feedback to further develop the doctoral programme.

When implementing doctoral studies, doctoral students' work can be closely integrated with the research project, but individualized approaches are also encouraged. The Committee sees this as very positive with regard to enabling the skills and competences needed in various future work of the students.

Nevertheless, there are some challenges. The proportion of students who graduate during the nominal period (based on data from 2013–2017) is quite low, and many drop-outs still seem to exist. The interviews indicated that efforts have been made to prevent this. For example, the project-based approach is intended to help students to better integrate their work within an organised research group. This is doubtless a positive trend; however, many students also work outside the university (for financial reasons), and this may hinder such a project-based approach.

The Assessment Committee noted some concerns related to ethical issues of supervision as well as to the handling of data. There seems to be a blurred line with regard to the tasks and workload between the students and supervisors. For example, in the case of writing articles, it is not clear what should be done if there is a conflict of interest. Therefore, the Assessment Committee recommends that clear instructions for the course of action should be established (e.g. an external person could be named at the beginning of the studies for a student to contact in the case of a conflict of interest or other such issue). It also recommends more systematic and effective procedures for data storage, especially for students who are working individually and are not involved in the larger research projects.

Strengths

- Access to the programme (consultation, preparation, and selection of candidates) is well conceived. The *Doctoral pre-school* is an example of good practice; it engages the students and gives them a realistic picture of the demands of doctoral studies.
- The study programme is characterised by flexibility in terms of designing individual learning/research paths.
- Courses seem to be well in line with the student needs in terms of general research support. Actions are also taken to increase the opportunities for students (e.g. cross-university compulsory classes).

- The supervision of doctoral theses employs appropriate methodologies; the advantages of cross-university compulsory classes, joint seminars, and a rich array of electives are well exploited.
- Multi-disciplinarity is guaranteed by the numerous areas of expertise in the university.
- The cooperation among Tallinn, Tartu, and Helsinki Universities supports both teaching and research. In practice, many students seem to have co-supervisors from other countries (e.g. Finland), and the students clearly expressed that this collaboration is an added value.
- Article-based theses are encouraged, but monographs are also supported. The Assessment Committee believes that it is positive that both options are supported at the university level.
- Supervisors seem to have good collaboration between each other with regard to ensuring the quality of supervision provided.

Areas of improvement and recommendations

- The proportion of students who graduate during the nominal period (based on data from 2013–2017) is quite low, and there are still many drop-outs; this is an issue that, despite recent efforts, still requires a lot of attention.
- It is difficult to find time to regularly discuss the progress of those students who do additional work and are very busy with a lot of tasks outside the horizon of their studies (because of a lack of appropriate funding).
- The option of greater long-term mobility has not been sufficiently utilized. It would be a good idea to consider alternatives ("mobility at home"; e-mobility) that would allow networking with students and institutions abroad.
- For future development, concerns related to ethical issues of supervision as well as to the handling of data should be addressed more systematically. The Assessment Committee recommends that clear procedures should be developed to resolve potential conflicts of interest as well as more systematic and effective procedures for data storage.
- Entrepreneurship could be better addressed. The Assessment Committee encourages more courses and collaboration to make sure that the students acquire sufficient skills and competences to be employed in the business sector, in addition to universities and schools, which definitely remains the main option.

Teaching staff

Standards

- ✓ Teaching staff participate in research, development and/or creative activity at the level of and to the extent sufficient to conduct doctoral studies in the curriculum group and to supervise doctoral theses.
- ✓ Teaching staff develop their supervisory competences and share best practices with one other.
- ✓ Teaching staff collaborate in fields of teaching, research and creative work within the university and also with stakeholders outside the university (public sector organisations, enterprises, other research and development institutions).
- ✓ Teaching staff further their skills at foreign universities or other research institutions, participate in international research and creative projects, and present papers at high-level conferences.
- ✓ Qualified international and visiting teaching staff are involved in conducting doctoral studies, participating in doctoral thesis defence panels and/or reviewing doctoral theses.
- ✓ When assessing the work of teaching staff (including their evaluations), the effectiveness of their teaching as well as of their research, development and creative works is taken into account; including the effectiveness of their student supervision, development of their teaching and supervisory skills, and their international mobility.

The Assessment Committee agrees that the above criteria are generally fulfilled. Details are provided in the comments which follow.

Comments

The School of Educational Sciences (SES) faculty are required to have a PhD degree and experience with independent research; the selection of teaching staff and supervisors is guided by national and university standards (i.e., the national Standard of Higher Education, the TU Regulations for Doctoral studies). At the level of the university as a whole, approximately 60% of the staff has a PhD. Most of the staff involved in the implementation of the doctoral programme, and especially supervisors, are active researchers in various research projects. Many graduates of doctoral studies continue their academic career at TU. In addition to TU staff, faculty from other Estonian institutions and from abroad (especially from the University of Helsinki) are involved in the implementation of the programme and (co-)supervision. In the recent period, faculty members were also recruited from abroad.

The SES Council is the body responsible to approve the PhD topics and supervisors; the appointment process considers the supervisor's research profile and, if necessary, may recommend another (co-)supervisor. According to available data, in the past 5-year period, 63 supervisors worked with 98 doctoral students; about half of them had a co-supervisor. A mentoring system in place enables that new supervisors are first trained as (co-)supervisors, before they can perform independent supervision. Special supervision training is offered to all supervisors on a voluntary basis, taking into

account various stated needs. There are plans to make these seminars compulsory in the future, as part of the new career model at TU.

The ratio of doctoral students to faculty (about three students per faculty member) is at a level that is considered satisfactory (not too low, not too demanding). According to the self-evaluation report, about a quarter of the students were connected with their supervisors' research project and the PhD topics are directly connected with the project. TU plans indicate that they wish to increase this proportion, to support the supervisors in balancing their workload and also to support the students academically and financially.

The Extended Supervisors' Council operates at the SES, meets 4-5 times a year, and fulfils the role of a forum to express opinion, solve problems and share good practices. New monthly meetings in which supervisors gather around a specific topic were introduced in 2018. These activities also contribute to improving supervision quality, and based on the information received, it appears that they have developed more strongly at the SES than in other TU schools. The transfer of such good practice to the university as a whole will be a valuable contribution of SES to TU.

Overall, and based on the data the Assessment Committee collected, it appears that SES is in the process of evaluating its doctoral programme and identifying weaknesses and areas of improvement, and has taken, or is planning, appropriate actions to address them.

According to this, the Assessment Committee gives the following suggestion. In some specific cases, it would be necessary to take better care of language dimensions (teaching and learning materials) in the courses performed in English. For example, students who were interviewed have reported variety in the quality of instruction, noting problems such as using the Estonian language or articles in Estonian in English-speaking PhD classes which are attended by students who do not speak Estonian.

Strengths

- The students of SES reported satisfaction from the support of, and collaboration with, their supervisors.
- The staff members of SES represent depth and breadth of experience in diverse fields of the educational sciences. Additionally, SES faculty includes international senior researchers, employed by the ERA project.
- Supervisors can be recruited from other TU faculties or schools, which encourages inter- and multi-disciplinary approaches to research, and collaboration among different units of the University. Co-supervisors from abroad are also strongly pursued, as part of the SES internationalisation strategy.
- Supervisors propose competing proposals to attract new doctoral students, which are then evaluated by a special SES committee.

- The supervisors' workload is regulated and is well integrated into their overall workload (e.g. 50 hours/year/student has been allocated).
- A productive collaboration between Tallinn, Tartu, and Helsinki universities has been reported.

Areas of improvement and recommendations

- Linking the professorship status with the number of defended theses is a very strict criterion, as the graduation rate may depend on factors beyond a supervisor's reach, such as demands on students' personal lives. Removing the professorship status from a faculty member based on this criterion alone may be demoralising and result to less motivation to work with doctoral students. Therefore, a suggestion could be to link the rates of graduation with the offering or removal of other incentives.
- The Assessment Committee recommends to monitor the effectiveness of the newly introduced actions (e.g. the monthly supervisor meetings) to create a culture of supervision among faculty supervising students.
- Even though the TU Regulations for Doctoral Studies indicate that a doctoral student is entitled to challenge decisions relating to the organization of doctoral studies the process by which this can be done and the possible outcomes could be more clearly articulated in the regulations' document.
- In some specific cases, it would be necessary to take better care of language dimensions (teaching and learning materials) in the courses performed in English.

Doctoral students

Standards

- ✓ When admitting students to doctoral study, their suitability for successful completion of their studies is assessed on the basis of transparent criteria.
- ✓ Doctoral students plan their studies as well as research and development activities in collaboration with their supervisor(s), setting out specific objectives for each year and taking responsibility for achieving these objectives.
- ✓ Evaluation of doctoral students is transparent and impartial. Its purpose is to support development of the doctoral students, provide an opinion regarding the effectiveness of their work to date, and assess their capabilities to complete their studies on time and successfully defend their doctoral theses.
- ✓ Universities offer doctoral students counselling on completing their studies and planning their further careers.
- ✓ Doctoral students' extracurricular teaching, research and/or creative activities or other work-related activities at the university support successful completion of their doctoral studies.
- ✓ Doctoral students participate in international mobility programmes or take advantage of other opportunities for learning or research at foreign universities and/or research and development institutions².
- ✓ Alumni are regularly asked for feedback on the quality of the doctoral study, and employers are asked for feedback on the preparation of the graduates.

The Assessment Committee agrees that the above criteria are generally fulfilled. Details are provided in the comments which follow.

Comments

The *Doctoral pre-school* enables students to have a realistic experience of the PhD process before signing up. Recent changes in recruitment to the doctoral programme mean that students are attracted to research projects developed by supervisors in addition to the more traditional route of proposing their own projects and finding a supervisor. This has the advantage of integrating most students into research teams where they have expert support while, at the same time, allowing an alternative path for those students who will benefit from a more traditional individual PhD.

Most employment of alumni is in the university sector. Alumni, students and staff all commented that PhDs are not attractive to employers in the business sector of Estonia. The potential for entrepreneurship of the doctoral programme could be emphasised more with courses on entrepreneurship and more support and guidance on, for example, how to turn the doctoral project into a start-up.

² In the context of this document, 'research and development institutions' denote both research institutions and research-intensive companies.

Data for the last few years show that there is a high drop-out rate as well as high rate of delayed completion. This seems to be due to family and work issues of the students.

Progress reviews seem to be fairly conducted.

The Centre of Excellence on Educational Innovation offers good examples of research collaborations with stakeholders.

Students take advantage of short-term opportunities to travel abroad to go to conferences and summer schools but do not fully take up the opportunities for longer term stays.

For more on these points see also the relevant parts of the above chapters.

Strengths

- The opportunity to participate in the progress reviews is offered to students every semester.
- Efforts are ongoing to attract more international students, with some positive results already.
- Students have the opportunity, and take advantage, of short-term international mobility opportunities (i.e. attending international conferences).
- The *Doctoral pre-school* is a good structure for helping potential students assess their fit with the doctoral programme.
- Recent changes in the doctoral programme leading to more advertised places to join projects are good, particularly as these are attracting candidates from other academic fields at home and from abroad (besides former BA/MA students from TU)
- The involvement of many students in the Centre of Excellence on Educational Innovation offering them more contact with stakeholders.
- Access to sufficient funds for international mobility with students able to travel and visiting professors coming in to offer expertise and co-supervise.
- There are many promising practices such as supervisor seminars in which supervisor(s) and their student meet together. These kind of activities are especially beneficial for those students who do not have that much support from own research group.
- Collaboration with Tartu and Helsinki Universities compensates for some limitations in the study programme of TU (e.g. the interviewed students mentioned that their courses focus more on quantitative than qualitative methods, but they can study qualitative methods at Tartu or Helsinki Universities.)

Areas of improvement and recommendations

- To reduce dropout rates, it is suggested that the selection process of new students is reviewed, so that only candidates who have strong motivation to complete a PhD are selected.
- Another area that can be considered in the attempt to reduce dropout rates is strengthening the collaboration with potential employers of PhD graduates and identifying various pathways for employment after graduation.
- The range of opportunities for optional courses and funding could be more clearly communicated to students.
- Long-term (more than a month) international mobility is still a challenge for many students. SES should consult students to see how they can be supported in taking advantage of the available funding for long-term mobility activities.
- Ensuring sustainable enrolment in the programme as dropping birth rates lead to reduced applications.
- Most of the students whom the Assessment Committee met are part-time as they also work. Providing the option of a stipend at average national income level might be useful as would the option from employers for a leave of absence during their studies.
- Employment outside the narrower academic space is a challenge. This could be addressed by more focus on employability skills in the programme and particularly on entrepreneurship.
- TU could offer more early-stage researcher positions (i.e. doctoral students would have contract of employment to the University) that would promote the integration to research communities (and reduce drop-out rates).
- From the viewpoint of students, funding opportunities may be a bit confusing as there are so many different sources of money.