Doctoral Students’ Research Stall: Supervisors’ Perceptions and Intervention Strategies

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Abstract
We explored doctoral supervisors’ explanations for students’ lack of progress toward gaining their degree and describe the activities that supervisors said they take on such occasions. Data were collected using semi-structured interviews from 21 supervisors specializing in the fields of natural and educational sciences and then analyzed using thematic analysis. The results indicated that supervisors communicated understanding about the stalling of studies. The supervisors noted that it is important that students have the knowledge and skills suitable to maintain progress toward their degree. However, the supervisors indicated that successful progress depends on a student’s initiative to ask for help, believing that because the student is an adult learner, they should be intrinsically motivated. Consequently, supervisors often adopt a wait-and-see attitude in terms of their intervention strategy.

Keywords
doctoral education, doctoral supervision, stall of studies, supervision strategies, qualitative research

Doctoral student attrition rates have raised concerns, as only half of admitted doctoral students graduate within the nominal period of time (see Gardner, 2009; Vassil & Solvak, 2012). Higher education reforms and the recent economic crises have put pressure on institutions to increase graduate rates and shorten the time it takes to be awarded a degree. The arguments supporting this are connected to limited financial resources, and that long, intense, or complicated study periods can be emotionally draining for both doctoral students and their families (Bair & Haworth, 2004).

Despite an increasing number of studies, student attrition rates remain high in several countries (Clarke & Lunt, 2014), including Estonia (Vassil & Solvak, 2012), the latter being the context of the current study. The problem is especially serious in Estonia, because despite the set target of 300 new doctoral graduates per academic year (Eesti teadus- ja arendustegevuse . . . , 2014) and an overall upward trend in the number of students completing their doctoral studies, the annual increase of PhD degree holders is still one third smaller than planned (approximately, 200 defenses of doctoral theses a year; Haridussilm, 2015).

Given an increasing societal need for PhD degree holders to help alter Estonia’s economic structure and meet societal requirements, the lack of doctoral students reaching graduation is a cause for concern. It is, therefore, essential to determine what is causing low on-time graduation rates and high attrition rates and what could be done to ensure a sufficient output of PhD degree holders.

Studies that examined doctoral student attrition highlight two main groups of associating factors: (a) personal and (b) environmental (Bair & Haworth, 2004; Latona & Browne, 2001; Leijen, Lepp, & Remmik, 2015). In this study, we focused on the latter group of factors. More specifically, we investigated the perspectives of doctoral supervisors and supervisory arrangements in connection to doctoral students’ study stalls and graduation efficiency. It is important to note that supervisors cannot be observed in isolation from their doctoral students or environmental factors.

We first present the results of a literature review and reflect on the factors that influence the course of doctoral students’ studies, with the focus on the reasons for doctoral students’ study stalls and dropouts. In addition, we provide a brief overview of studies that focused on the reasons for and types of intervention strategies applied by doctoral supervisors.

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Literature Review

Universities have sharpened their focus on the quality of doctoral studies to enhance their understanding of the factors that influence the timely completion of a degree. The underlying factors are complex and intertwined (Lovitts, 2001; Manathunga, 2002; Pole, Sprokkereef Burgess, & Lakin, 1997), and no “single recipe” leads to successful completion for all doctoral students. Previous studies (see Bair & Haworth, 2004) have distinguished two mutually influencing factors affecting doctoral students’ study progression: (a) student-related factors (student cohorts and characteristics; that is, personal context) and (b) environmental factors (institutional and structural contexts, including those related to supervision).

Student-Related Factors

According to Bair and Haworth’s (2004) meta-analysis of 118 research studies regarding doctoral students’ attrition, there are several important student-related personal factors that seem to correlate with PhD students’ persistence with their studies: intrinsic and extrinsic motivations, goal direct-edness, positive self-concept, and well-being. In addition, it has been indicated (e.g., by Lovitts, 2001) that personal characteristics such as intelligence, knowledge (both formal and informal), and thinking style are also key factors influencing degree completion. For instance, Lovitts (2001) found that supervisors consider it important to find “the right doctoral students who are well suited for the doctoral studies” (p. 21). “The right doctoral student” is, in addition to the already mentioned factors, also characterized by academic capability. When a student stalls or discontinues their study, a supervisor considers critical thinking skills and/or academic writing skills a shortcoming (D’Andrea, 2002; Lovitts, 2001; Leijen et al., 2015).

Doctoral students’ study progress has been associated with self-sabotaging behaviors that lead to activities hindering academic progress (Kearns, Gardiner, & Marshall, 2008). For instance, Kearns et al. (2008) found several self-sabotaging behaviors of doctoral students during their studies: (a) over-committing—where a doctoral student takes on too many responsibilities and high-priority goals such as writing their doctoral thesis suffer; (b) business—a doctoral student deals with minor duties and leaves the impression that they cannot deal with their doctoral thesis; (c) disorganization—a doctoral student lacks a system and routine that would contribute to an optimal use of their time; (d) effort—a doctoral student does not make sufficient effort; and (e) performance-debilitating circumstances—a doctoral student tries to work in an unsuitable (e.g., noisy) place. Self-sabotaging behaviors can also include: (f) excessive perfectionism—a doctoral student sets unrealistic and unnaturally high expectations for themselves and their work and (g) procrastination—a situation that Rothblum, Solomon, and Murakami (1986) define as the “tendency to always or nearly always put off academic tasks, and always or nearly always experience problematic anxiety associated with this procrastination” (p. 387). Procrastination has been considered as one of the most common self-sabotaging behaviors (Kearns et al., 2008).

Ahern and Manathunga (2004) have described blocks (the reasons for study stall) in three domains: (a) cognitive—for example, a doctoral student lacks the necessary knowledge and skills for writing a doctoral thesis, but does not have the courage to admit it to their supervisor; (b) affective—a doctoral student’s self-esteem is poor; performance anxiety is a widespread problem; and (c) social—a doctoral student has a weak connection with the department’s research culture. It is important to note that many student procrastination factors are interrelated.

Several studies (e.g., Lovitts, 2001; Nelson, Dell’Oliver, Koch, & Buckler, 2001; Smith, Maroney, Nelson, Abel, & Abel, 2006) have also described student-related interpersonal factors such as (a) support systems, for example, loved ones who provide important environments of acceptance and understanding during the study period; (b) family responsibilities and relationships with significant others, and the time spent away from family can create feelings of guilt and anxiety, which in turn can create stress that leads to discontinuation (Smith et al., 2006); and (c) employment responsibilities and financial strain, which have been associated with time constraints and work overload. According to Tinto (1993), the amount of financial aid shapes a PhD student’s participation in the program to a great degree, as time spent by students on supporting themselves financially equals less time spent on the demands of their candidature. In general, however, the authors of this article tend to agree that the advancement of PhD students and the success or discontinuation of doctoral studies are influenced by many interrelated factors.

Environmental Factors Affecting Progress

In addition to students’ personal factors, PhD studies are also affected by the study environment, with all its regulations and requirements; the domain-specific traditions in use; and the people who create the environment and affect the functioning in it (Pyhältö, Stubb, & Lonka, 2009). In spite of the harmonizing impact of the Bologna reform movement in Europe, higher education and doctoral studies are nevertheless characterized by considerable diversity in organizational policies and procedures across different countries within Europe, universities within the same country, faculties/institutes within the same university, and disciplines. Universities set the minimum criteria and requirements for graduate students and programs, while departments control admission, the curricula, degree requirements, and student training, which in turn enables departments to organize graduate education to fit the culture of their discipline (Crosier, Purser, & Smidt, 2007). Hence, doctoral studies, doctoral students, and doctoral
supervisors are all influenced by and affect the research climate; the social practices of the scholarly community (Lovitts, 2001).

**Supervisors and Supervision**

Supervisors significantly influence the time needed to attain a degree and doctoral graduation rates (Lee, 2008; Zhao, Golde, & McCormick, 2007). Few empirical studies (Manathunga, 2002, 2005) report on the activities of supervisors or their explanations for these activities when dealing with stalled PhD studies. The current study fills this gap by examining PhD supervisors’ experiences.

According to Kam (1997), the “quality of research supervision is a subjective construct—the perceived satisfaction of the student with the supervisory process and practice” (p. 82). Advice must be tailored to the needs of the particular student (Barnes & Austin, 2009). In spite of this personalized nature and while there can be no single recipe for successful supervision, numerous sources have suggested several general principles of good supervision. Latona and Browne (2001), for example, outlined a number of supervisor activities and responsibilities related to good supervisory practice as follows: open and dynamic negotiation of mutual expectations and responsibilities, supportive and collegial relationships with students, encouraging students to start early on their topics, encouraging students not to change topics, continuity in supervision; frequent meetings with PhD students, and targeted and timely feedback.

Although supervision has been thoroughly examined from different aspects, there is little research on how supervisors identify factors that hinder doctoral students’ studies and what they, as supervisors, do on such occasions. Manathunga (2005) investigated the cues that highly effective supervisors use to stay alert to their students’ research progress. These supervisors identified warning signs centered on four key types of doctoral student behavior: (a) constantly changing the topic or planned work, (b) avoiding all forms of communication with the supervisor, (c) isolating themselves from the school and other students, and (d) avoiding submitting work for review. Manathunga’s study also offers several strategies to recognize these warning signs and develop effective interventions. First, it is important to establish and build a supportive relationship between PhD student and supervisor, thereby facilitating the sharing of concerns and hesitations by the students. Second, frequent and individual supervision through regular meetings where the supervisor systematically monitors the student’s progress and where necessary intervenes. Third, provide pedagogical focus and scaffolding through direct teaching if and when the doctoral student needs it.

Manathunga (2005) also notes the importance of supervisors to model the research process by encouraging students to ask questions and build their research confidence in the process. This supports Lee’s (2008) suggestion that a significant supervision success factor is “functional supervision” (p. 271) characterized by goal orientation and efficient process and time management. Lee also stipulates that a doctoral student’s emancipation, where the supervisor pays attention to the student’s personal development and growth, is also necessary. Hence, the supervisor is seen as a “clutch starter” for their stalled students (Ahern & Manathunga, 2004, p. 237). This requires that supervisors are able to recognize when their students stall, can determine the causes of the stall, and provide encouragement and support so the student can move forward again. It has, however, been noted that not all supervisors are able or willing to watch for warning signs and to help students through difficulties (Ahern & Manathunga, 2004; Manathunga, 2005).

The aim of this study was to describe doctoral supervisors’ explanations for the stall of doctoral students’ studies and the activities that supervisors say they take on such occasions. The following research questions were formulated for the empirical study:

**Research Question 1:** Which factors are perceived by supervisors as contributing to the stall of the doctoral study process?

**Research Question 2:** Which strategies do supervisors claim to use to assist PhD students through difficulties, and which explanation do they give to these?

In this article, we view stall of studies to be situations where there is lack of progress, that is, a doctoral student does not progress with their studies at a pace considered sufficient by the supervisor (Ahern & Manathunga, 2004).

**Context of Doctoral Studies in Estonia**

At Estonian universities, the standard period for a doctoral study is 4 years, during which 240 European Credit Transfer and Accumulation System (ECTS) credits must be earned by the doctoral student. To be more exact, during a doctoral study, 60 ECTS are earned for specialty, elective, and optional subjects, and 180 ECTS for the dissertation writing process. One credit in Estonia corresponds to 26 hr of study.

There are two options for meeting the requirement of completing a doctoral dissertation: A student can write a monograph or a dissertation based on a collection of published articles. In the case of the monograph, the student must have published at least one article in an international peer-reviewed journal or a publication by an international academic publisher. The dissertation is generally written and defended in English (which for most PhD students is their first or second foreign language besides their mother tongue, Estonian). A dissertation based on a collection of articles requires three articles that are published in international peer-reviewed journals and an overview article that combines the published articles into a complete dissertation (see more in the summary, by Eamets et al., 2014).
In Estonia, doctoral education is financed by the state, meaning students have no fees (Universities Act, 2015). In 2015, a doctoral allowance of €422 per month was established for full-time PhD students during the nominal study period. In comparison, the average monthly salary in Estonia in 2014 was €1,005 (Economy in Numbers, 2015).

Eamets et al. (2014), in their study of Estonian doctoral students, stated that about one third of Estonian doctoral students work part-time, 35% work full-time, and 14% maintain that they work overtime. Supervising a doctoral student is a faculty obligation; however, supervisors have not been required to pass any compulsory course on supervision.

Method
Participants and Data Collection

To identify the factors that influence the advancement of PhD students, the actions supervisors take when students’ studies stall and the discontinuation of students’ studies, 21 PhD supervisors (six in the natural sciences and 15 in the educational sciences) from two research-intensive universities in Estonia were interviewed between 2011 and 2013 using a semi-structured format.

The motive for including supervisors from both the natural sciences as well as the educational sciences was related to variations in (a) graduation rates and (b) the progress of PhD students. Namely, doctoral students in the natural sciences tend to advance quicker in their studies than students from the educational sciences (see Eesti Kõrghariduse Kvaliteediagentuur, 2011; Lepp, Remmik, Karm, & Leijen, 2013). Furthermore, Golde (2005) states that due to the influence a discipline can have on the overall study experience of a PhD student, it is relevant to conduct studies on doctoral education from the perspectives of varied disciplines.

The majority of the supervisors participating in the study were either senior lecturers or professors. At the time the current study was carried out, 77 PhD students had defended their dissertations (29 in educational science and 48 in natural science), and 16 students had discontinued their studies under the supervision of the participants in the study.

Data Collection

Semi-structured interviews with doctoral supervisors were conducted. The aim and research questions of the current study, as well as some earlier studies (e.g., Lee, 2008; Sinclair, 2004), were used as a basis for formulating the interview questions. To first identify the influences supervisors find as being conducive to study stall, and second the actions supervisors themselves commonly take in such cases, the following main themes were included in the interview questions: supervisors’ descriptions of their regular supervisory practices, supervisors’ conceptions of the factors that lead to doctoral students’ study stall and discontinuation, and the actions supervisors take in the case of study stall. For instance, the participants were asked to describe their common supervisory actions, to give their opinion about the causes of doctoral students’ study stall and discontinuation, to talk about their experience and actions (as well as giving reasons for these) related to PhD students who either drop out of sight for a while or entirely, to describe some of the most serious cases, and to explain when, how, and why they as supervisors intervene. The abovementioned questions served as a starting point from which additional detailed questions—concerning the instances mentioned by the supervisors—followed. A pilot interview with one supervisor was conducted, after which the main interviews followed with a slightly modified interview guide. See Lepp (2015), for the complete guide to the interview.

An interview lasted for approximately 90 min, with the length of interviews ranging from 70 to 115 min. All the interviews were audio-recorded. Participation of the supervisors was voluntary.

Data Analysis

All interviews were transcribed unabridged. Pseudonyms were assigned to the participants and people mentioned during the interviews. Braun and Clarke’s (2006) six phase thematic analysis model was used to analyze the interviews after the transcripts had been entered into the computer program QCAmap. A preliminary analysis was conducted by two researchers, who then exchanged their materials and debated the results at different stages of the analysis (Mayring, 2014).

First, all the transcripts were read and commented on to become familiarized with the data set. Based on the research questions, preliminary lists of notions about the data content in the two focal areas were created by the researchers: (a) the causes for doctoral students’ study stall and discontinuation and (b) the activities of doctoral supervisors in supporting students in bridging their study stall or the idea to continue their studies. Then what could be described as intriguing aspects in the data were identified and systematically coded throughout. Next, after a discussion between the researchers and an arrival at a consensus, these codes were arranged under four central themes and sub-themes. To gain a more visual overview, the researchers used the analysis as a basis for drawing up a thematic map of the themes and sub-themes, after which two other researchers assisted in establishing whether the coded excerpts from the interviews and the entire data set were in agreement with the themes.

In cases where domain-specific differences in supervisors’ answers were noted, these differences were given special attention by the research group—within the specific theme or sub-theme—in the form of additional analysis and discussion. For the purpose of increasing the reliability of the data analysis, the researchers held reflective debates with the aim of realizing a consensus in cases of disagreement (see Eisner, 1991).
The research group determined four main and eight sub-themes relevant from the perspective of the research questions. These four main themes were defined as follows: (a) the possibility and necessity of completing the studies within the nominal study period, (b) supervisor’s activities to prevent study stall, (c) supervisor’s activities in cases of doctoral student’s study stall, and (d) supervisor’s coping with the process of doctoral student’s study stall. These main themes and their sub-themes were followed by results, which were supported by interview excerpts. The abbreviations ED and NA stand for “supervisors from the educational sciences” and “supervisors from the natural sciences,” respectively.

Results

The Possibility and Necessity of Completing the Studies Within the Nominal Study Period

Supervisors, in this study, saw the completion of a student’s studies within the nominal study period as not an end in itself. They brought out the specificity of the domain, which does not always enable fast results (e.g., researching people, natural objects, or longitudinal studies). As Anne (ED) explained,

When working with people, to develop something that would also have let’s say a scientific and practical relevance, then it is practically impossible to complete this within four years.

Also, the long review process and time spent trying to publish were brought out as a hindrance. In the field of educational science, the supervisors also mentioned lack of funding as hindering the nominal process. Many doctoral students work during their studies in positions not related to their doctoral research and cannot proceed at the required pace. According to most interviewees, completing a doctoral study within 4 years is not necessarily the best option from the perspective of the doctoral student’s learning and development. A longer study period and time spent in the academic community can help a doctoral student see the bigger picture regarding their particular domain, as well as in research in general. The supervisors found that where the resources stretched further, the study period could be longer than the nominal 4 years, as illustrated by Kristjan (NA):

It is not possible to plan science. Research advances as it advances. In my head the plan is that they complete it in six years, they could in four years as well, but each year longer they’re here the more they learn. So there’s no rush, they have another 30 years to work afterwards.

Supervisor’s Activities to Prevent Study Stall

The supervisor’s earlier collaboration with the future doctoral student. Supervisors considered previous positive experiences with supervisee(s), as well as any previous activity in the same research field, as significant in influencing their cooperation process. Previous experiences facilitated subsequent interactions, resulting in a clear and more detailed overview of the knowledge, skills, and personality traits and motivation of the doctoral student. Several supervisors (mostly from the natural sciences) expressed preparing possible doctoral students already at previous study levels, as Kalle (NA) pointed out:

It’s actually necessary to start grooming a good doctoral student already in the first year of studies. In the first study years you have to look and find the bright students, and then you actually start grooming them.

In such cases, most supervisors expressed satisfaction with their doctoral students in the subsequent process, as Maria (ED) explains:

I know them, as they’ve been as my children from the baby stages then well . . . I have no problems in supervising them because I know how to supervise them.

Several ED admitted having accepted students with whom they had no previous experience to a PhD study. In some cases, the supervisors collected background information about the candidate and were therefore better prepared for further cooperation.

Finding sources for funding and thereby securing a doctoral student’s employment. The supervisors brought out that resources provided by the university are essential in enabling a PhD student to commit to their doctoral research and not to work elsewhere. One of the activities of supervisees from the natural sciences was to find sources of funding to create a job in their research team for a doctoral student during the study period. The availability of funding was also mentioned as a condition set by the faculty for enabling a supervisor to take on a PhD student. Therefore, supervisors write grant applications for projects and if given funding, can employ a PhD student to their research team, as illustrated by Heldur (NA):

The faculty sees if a supervisor has enough resources . . . which grants and finances does he/she have and the infrastructure, the existence of funding. It is the supervisor’s responsibility . . . If a supervisor doesn’t have the funds, they won’t take on doctoral students.

Only a few interviewees from the educational sciences described finding sources of funding and including doctoral students in research groups. It was often brought up that it is difficult to get funding for research projects in the educational domain, and as a result, supervisors lack the financial resources for employing doctoral students, as exemplified by Sandra (ED):
You proceed along as fast as you can and well, there’s not much financing and project funds anyway and so we practically operate with our nonexistent finances solely on our brain potential.

The supervisors in education sciences mainly expressed the expectation that “funds should come from somewhere,” but at the same time, they distanced themselves from finding the sources for funding, as highlighted in the following example:

Well I think that it is the lack of resources that makes them take on a full-time job, that these kind of resources are not possible and I don’t see that kind of resource. (Karolina; ED)

These results demonstrate the necessity for the supervisor to find funding. Based on our interviews, the participants from the natural sciences considered research to be a doctoral student’s main job during their study period. The ED mainly accepted the idea that the primary source of employment of a doctoral student lies elsewhere during their study period, resulting in a prolonged study.

The responsibility of the admissions committee to select suitable doctoral students. Several interviewees from the educational sciences considered the role of the admissions committee to be important in preventing stalling. The committee should ascertain the knowledge and skills, personality traits, and motivation of the potential doctoral student. Although most of the interviewees were or had previously been members of an admissions committee, it was brought out that the selection process had not always been sufficient. As a result, some doctoral students among their previous and current supervisors, and also in general, should not have been allowed onto a doctoral study program. Some supervisors (from the educational sciences) expressed their dissatisfaction as follows: “the level is low, not enough capable students; doctoral students lack sufficient preparation” (Sander; ED); “most candidates were weak and if we admit a lot of them then also the research won’t progress as it should; I’d like people with more brain potential to come to this domain” (Vambola, ED).

A tighter selection procedure during the admission phase could ensure better progress of doctoral students and also facilitate the job of the supervisors during the subsequent supervisory process, as is highlighted in the following excerpts:

Implementation of the requirements should be stricter. The requirements themselves are OK, but sometimes we’re too soft. . . . Our usual practice at the admissions committee: we do our evaluation and then it turns out that most of the candidates fail, and then we add 23 points to everyone and then we can admit the required number of doctoral students. (Karla; ED)

On the contrary, the interviewees from the natural sciences described the admissions committee’s role in preventing subsequent problems during the study period as only a formality. Preparatory work with the doctoral student was already organized, and the supervisor had ensured funding to employ the doctoral student to their own research group. As Heldur (NA) explains it,

There’s a pre-selection taking place so that at the time of admissions we don’t have a line at the door. . . . We know which project we have where we can admit a doctoral student, which qualities are required for that and which qualities we need from the student.

Supervisor’s Activities in Cases of a Doctoral Student’s Study Stall

The data analysis revealed four broader sub-themes in the descriptions of the supervisors, which according to them explain why doctoral students stall their study: (a) shortcomings in the doctoral student’s academic preparation, (b) the doctoral student’s motivation and diligence, (c) personal events in the doctoral student’s life, and (d) the material resources and time available to spend on doctoral research.

In the following section, we first describe in which situations (if at all) the supervisors considered it necessary to contact their students.

Noticing a stall and communicating with the doctoral student during a break in their studies. Supervisors’ descriptions of situations where a doctoral student had been “out of sight for a longer period,” how the supervisor approached the student to ascertain what the student was currently doing with regard to their doctoral research, and what help they might need, demonstrated that contact time between supervisor and student differed among the supervisors.

Busyness was frequently named as a reason for not contacting a doctoral student (“Well I have other work to do” [Karla, ED]). Another position taken by some supervisors is that an adult pursuing a doctoral study must be intrinsically motivated, be able to direct their studies, and take responsibility for the process. Working independently for long periods is how a doctoral student becomes an independent researcher. It was found that asking doctoral students about their research might be unpleasant, and therefore, several of the supervisors thought it was better to wait until a doctoral student is ready to consult with their supervisor, as highlighted in the following excerpts:

I think that it’s unpleasant to the person when I keep asking all the time . . . I think that it makes them feel bad and so I just wait until the person comes and shows their work. (Anna; ED)

ED believed that doctoral students get into contact when they have questions or when they have time aside from their other work commitments and personal life.

NA described that it is not possible in their domain that people get out of sight for long periods of time as everyone is
consistently working in a team. There is a work-related employer–employee relationship with the supervisee, thus, a doctoral student needs to earn their living by doing their studies. If the doctoral student is not prepared, then the collaboration is ended, as the following example clearly illustrates:

If a person wants help, I help them, but I’m not going to pull someone who’s lazy, stupid and careless through all this. . . . So in that sense the aim of my activity is definitely not that someone must receive a doctoral degree. . . . My way is either you lead, you follow or you get lost. (Uku; NA)

Shortcomings in a doctoral student’s academic preparation. The supervisors considered the lack of methodological knowledge, an insufficient level of English, and poor academic writing skills to be the main shortcomings of doctoral students associated with stalling.

Methodology. Supervisors mostly expected that a doctoral student received sufficient preparation in the relevant methodology during previous study levels. Increasing their knowledge of methodology continues during the doctoral study in relation to the research topic by consulting with specialists and or via courses and training.

A domain-specific difference appeared with the interviewees from the natural sciences, who deemed it common practice that a doctoral student includes specialists in the data analysis process and that a doctoral student does not learn to perform all the details of data analysis themselves, as highlighted by Kristjan (NA):

We have very complicated data analyses and well then we have to do it together with statisticians who are separate people for that.

It was highlighted that methodological questions and difficulties are also discussed in research groups and that doctoral students in research groups also teach their peers.

In the educational sciences data, supervisees are advised to attend methodology courses and learn how to analyze data. It was, however, mentioned that doctoral students do not always use this knowledge in their research work, as illustrated by Vambola (ED):

They take some statistics course and learn everything there, solve some exercises and then when they need to use it at work they can’t do it . . . and we’re back at the beginning.

Academic writing. The majority of the supervisors considered the writing skills of PhD students to be problematic. It was mentioned that doctoral students have problems with synthesizing sources in their dissertation. In addition, doctoral students often struggle writing the discussion part of articles. According to the supervisors, weak academic writing skills increase the workload of supervisors, as poorly written manuscripts need thorough and repeated feedback.

Mainly the NA added that doctoral students are included to write joint articles with members of the research group already at the beginning of their studies. According to some, academic writing needs to be directly taught to doctoral students, as Maria (ED) explained:

I tried to explain to them that the overview of the literature needs to be a kind of synthesis, but they had still just copied and pasted segments from the sources. . . . I tried to create a sort of a structure for them.

English language skills. Insufficient knowledge of English was also brought out as a hindrance to the study progress. The English language skills of younger doctoral students were, however, considered to be much better—as they have had a better language preparation at school—that those schooled during the Soviet era. In the occurrence of language problems, doctoral students were generally advised to attend courses. In cases where insufficient language skills hindered study progress, the supervisors helped their students to find translators and language editors and ways to finance the involved costs.

Doctoral student’s motivation and diligence. Motivation, diligence, and persistence were also considered important factors for the progression of studies. Motivated doctoral students were described as persons who are interested in their research topic and who have the ability to purposefully and intently work on it. The interviewees emphasized that a person studying at doctoral level must be consistent and very patient. A doctoral student has to know how to commit to long-term goals even when experiencing setbacks and hesitations along the way, as Uku (NA) vividly explained:

Mental abilities are not enough for doing science, you must have an ability to work, you need to have patience. . . . It’s like with pregnancy, you can do whatever you want during these nine months, but you cannot make the normal pregnancy move along any faster, you have to wait the nine months, can’t make it any faster.

When the supervisors noticed that a doctoral student has motivation issues and or has informed the supervisor that they wish to discontinue their studies, they talk to the student and try to help the student see the longer term goals, as the following example clearly illustrates:

I try to convince them by telling them to hang on in there for another few years, and then they have a doctoral degree that feeds them for life. No one can take it from them, and then they realize that they need to think about their life over the next 30 years and perhaps it’s useful to get the degree, after all. (Kristjan; NA)

The interviewees noted that a doctoral student is only convinced to continue with their studies in cases where the supervisor still has faith in their abilities and the possibility
of them completing their studies. The supervisors added that in cases they doubt whether a student’s academic skills and diligence are sufficient to complete their study, they stop motivating the student. In addition, the supervisors were mostly of the opinion that doctoral students are adult learners who themselves decide to continue or discontinue, as Uno (ED) pointed out during his interview:

I’m not a babysitter. A PhD student is an adult after all, and I’m just a helper. I’ve never gone looking for anyone at their home or something and if they don’t do [their research] then so be it.

**Personal events in a doctoral student’s life.** The supervisors from both domains also highlighted personal events occurring in a doctoral student’s life, such as the birth of a child, relationship problems, and illnesses, as a hindrance to study progress. These events were often described in conjunction with the theme of motivation.

**Children and study breaks during child care leave.** Supervisors generally understood that at the time of doctoral study, the persons are often at an age of creating a family and that raising children is an understandable part of everyday life. They also expressed that absences during child care leave can hinder the progress.

Mostly it was mentioned that when away from research for a longer period, a student loses the habit of doing research work, which is why several doctoral students had decided to give up on their studies. There were supervisors who also openly expressed their dissatisfaction with doctoral students putting their families before their commitments to doctoral research. The supervisors claimed that in cases where doctoral students return from academic leave, it is often difficult for them to get adjusted to research and the work routine, as highlighted by Kristijan (NA):

They start the doctoral studies, then find someone, and then can’t bear to wait; they have a baby, and then another one and then several years pass . . . it is very hard to return because they’ve lost the habit to work already—here you have to work every single day! . . . and then they say that they can’t do it anymore and they’d rather discontinue their studies.

**Other events in a personal life.** The supervisors also expressed their understanding toward the influence of other personal events in a doctoral student’s life, for example, relationship difficulties with a partner and a doctoral student’s own or a parent’s illness. If the student shares this information with the supervisor, the supervisors say they offer support and are generally understanding and patient about any drop in the pace of research, as the following example illustrates:

They are like your own child to you . . . You also know how their family matters are going, why they cannot do research, or how things are with babysitting or some other things and then you try to solve the problems as much as you can, so that they can commit to their doctoral research. (Heldur; NA)

**Material resources and the time available to spend on doctoral research.** Alongside a weak academic level, lack of motivation and diligence, and personal life events hindering a student’s studies, the interviewed supervisors from the educational field also mentioned insufficient material resources and thereby the need for doctoral students to work elsewhere during their doctoral studies. We have previously indicated that the NA apply for funding to employ doctoral students into their research groups. Even in cases where students need a higher income (for instance, the interviewees named having children, taking up a mortgage), they nevertheless tried to avoid that a doctoral student would take up employment outside the university. Additional work at the university was offered to the doctoral student; for instance, getting a doctoral student involved in supervising a master’s thesis.

In the educational sciences, however, it was mostly already clear at the admission phase that a doctoral student will be employed elsewhere during their doctoral studies, and thus, their doctoral research was not going to be their primary job. The interviewed ED saw working alongside one’s studies as a necessity, because neither the supervisor nor the university has sufficient resources to provide the student. Therefore, longer breaks in a student’s studies caused by other commitments were also considered natural, as Karla (ED) pointed out during his interview:

Doctoral study is a pain. A pain in a sense that there’s no money, a person has to work at their main job and then do their doctoral studies and so they have two primary loads, they have family, children . . . cannot do research like this . . . in a good case a doctoral student is paid the allowance. How much? 384 Euros. Which is considerably lower than the average salary and now I [as a supervisor] have to poke them and ask why are you not doing your doctoral research?

**Supervisor’s Coping With the Process of a Doctoral Student’s Study Stall**

When analyzing the text excerpts where the supervisors described students’ study stalls, then with only a few exceptions was a doctoral student’s progress directly linked to their supervisor’s activity (i.e., problems were observed in the actions of both parties), as Riina (ED) explains it,

To be honest I do think that it was a two-way process that they didn’t complete their studies. Maybe I didn’t support them enough, maybe they needed more help.

Several supervisors brought out how students’ study stall affected their motivation to supervise a doctoral student.
When the supervisor sensed it unlikely for a student to complete their studies (i.e., according to the supervisor, the doctoral student is not capable, motivated, nor diligent enough; has too much other work or family commitments), they also cease to contribute to the supervision. It was found that a one-sided effort (i.e., supervisor’s) is not enough, as illustrated below by Anna (ED):

Now another year has passed. . . . Last time I bothered them was a long time ago, and I don’t know how can I make them to write the dissertation? I can’t make an adult person to write. . . . In the end the supervisor also loses motivation.

How the supervisors get past difficult supervision situations was discussed in a few interviews. For example, it was mentioned that they discuss problems with other supervisors from the research group or with a co-supervisor. It was also emphasized that colleagues’ advice and suggestions had not always solved the problems, and it was said that because the problems mostly came from the PhD student, it is hard to solve the situations. Several participating supervisors also believed that supervisors need to manage everything by themselves and there is no need to support the supervisor specifically or to train them in management, as highlighted by Uno (ED):

I think that supervisors are independent enough, and I guess it has to be like that. Who else would know how to supervise a supervisor?

Overall, supervisors use different strategies in cases of study stall and are mostly understanding when the study time stretches longer than the nominal period of study. However, they also think that the responsibility for the studies lies with the doctoral student, as was concluded by the words of Uku (NA):

You can’t make anyone become a researcher! You have to want to do this, and if you do, then my job [as a supervisor] is to help you. If a person doesn’t wish to become a researcher, then they can do something better then.

Discussion and Conclusion

The aim of this study was to explore doctoral supervisors’ explanations for the stall of doctoral students’ studies and to describe the activities that they said they take on such occasions. We discuss some of the main results and conclude with recommendations for making changes in doctoral study arrangements.

Overall, the results of this study align with results of other studies (D’Andrea, 2002; Gardner, 2009; Hoskins & Goldberg, 2005; Lovitts, 2001). These results demonstrate the importance of getting the “right applicants” from a supervisor’s perspective. Therefore, one of the possible solutions for preventing slowing of the study progress is to find the right doctoral student, that is, someone whose abilities and motivation are well suited.

The results of the current research showed that the interviewed supervisors considered previous positive experiences with the supervisee(s), as well as previous activity in the same research field, as a significant and positive influence on the cooperation process. However, such an approach considerably narrows down the available selection of “able” doctoral students, especially in the context of internationalization. Therefore, it would be important to discuss the issue openly with supervisors to find solutions on how to guarantee the quality of doctoral students as well as the feeling of security expected by supervisors while starting cooperation with an unknown doctoral student.

In relation to this, what is novel about the results is that only a few of the educational sciences supervisors claimed to systematically and purposefully prepare potential doctoral students for doctoral study, while this was considered to be a natural part of the process among the NA. Thus, both supervisors from the educational and natural sciences expected doctoral students to have a prior thorough preparation when entering doctoral study and the ability to be as independent as possible during their studies. However, the supervisors also did preliminary work to a different extent so that the doctoral student could be successful in their studies. Knowing that the graduating efficiency is higher in the natural sciences (see, for example, Gardner, 2009; Ots, Leijen, & Pedaste, 2012), we suggest that this theme should therefore be analyzed more when developing a doctoral study program. In our opinion, the organization of doctoral studies should move more toward the aim of a systematic, purposeful, and substantive preparation of a doctoral student, and the functional cooperation between a doctoral applicant and a potential supervisor should already begin during previous study levels or that previous cooperation should be at least sufficiently long so that the supervisor and supervisee have the opportunity to understand each other’s expectations and working style before the potential student applies for a doctoral study. Closer communication with a supervisor would also be necessary to enable a doctoral candidate to get an overview of the nature of doctoral studies, including the knowledge and personality traits expected from a doctoral student and the demands set by doctoral studies to a doctoral student’s daily life. This would prevent and lessen situations where the cooperation falters due to a lack of clarity regarding communication and competencies. One practical recommendation for preparing suitable candidates for doctoral study is the idea of a pre-PhD programs offered by Sonneveld (2015), the aim of which is to test student candidates’ motivation (i.e., doctoral students’ ambitions), while also helping the students to develop their research plan and allowing them to communicate and build a relationship with their supervisor.
Another interesting theme we discovered, which is also linked to the previous sub-themes, is the dissatisfaction several supervisors (from educational sciences) expressed with the knowledge and skills of their doctoral students and the strategies they claimed to use to develop these. If the knowledge and skills of a doctoral student were considered insufficient for them to progress in their studies, then the ED expressed that these doctoral students should attend relevant courses to address these shortcomings. In the case of doctoral students’ study stalls, Ahern and Manathunga (2004) have also recommended that supervisors should first seek to find out the origin of the block. If the cause of a block is in the cognitive domain (e.g., a doctoral student has insufficient academic writing skills), it will be efficient to advise the student to attend suitable courses. In the present study, teaching by supervisors (e.g., teaching academic writing) was only mentioned in a few cases. However, previous studies (e.g., Pyhältö, 2011) have demonstrated that a pedagogical focus—direct teaching—is essential during doctoral study to avoid study stall.

The results of this study demonstrated that doctoral students in the natural sciences have daily contact with their supervisors and often have an employer–employee relationship. However, doctoral students from the educational sciences mostly have day jobs unrelated to their doctoral research. The investigated supervisors noted that work commitments are often the reason for longer breaks in a doctoral student’s studies, and the supervisors often do not have an overview of the doctoral student’s progress and activities. This formed the basis of the supervisors’ strategy in the cases of study stall. In situations where the supervisor had no employment relationship with the supervisee, the supervisors created a kind of “defense explanation” for themselves. In other words, as they do not provide the doctoral student with any funding, they also do not have the right to demand faster progress with their studies. Therefore, specific deadlines for finishing different stages of doctoral research are not set, and regular contact with the doctoral student is not maintained. Previous studies (e.g., Brew & Peseta, 2004; Lee, 2008) have, however, demonstrated that regular meetings are crucial for the study to progress.

Following Manathunga’s (2005) advice, contact between a supervisor and a supervisee should be regular, as this allows for systematic monitoring of the doctoral student’s progress. In addition, it also gives the supervisor the opportunity to model the research process. This can also lead to situations where independent work periods (especially after completing the mandatory classes) leave a doctoral student alone in the process. Previous studies (e.g., Stubb, Pyhältö, & Lonka, 2011) have demonstrated that being left alone, as a doctoral student, is a substantial factor behind study stall and discontinuation. Interaction between doctoral students and their research environments leads to a greater acquisition of knowledge and student development, and is therefore central for succeeding in one’s studies (e.g., Lovitts, 2001; Pyhältö et al., 2009). Ahern and Manathunga (2004) have also found that the reasons for a doctoral student’s slow progress and study stall can be related to aspects of their social domain, that is, a doctoral student’s weak connection with the department’s research culture is often a factor that hinders the student’s study progress. Our suggestion for supervisors is, therefore, to incorporate the student into the research community. Therefore, it is important to teach and train supervisors institutionally, including aspects of how to support different students.

Because the results demonstrate that the employee–employer relationship gives the supervisor more opportunity to support a doctoral student’s progress, the universities could also discuss to what extent working as a supervisor is even justified in cases where there are no research projects and hence, no financial support. In the case of working in a research group, it is important to observe that a doctoral student maintains the possibility to develop into an independent researcher and to prevent a situation where the doctoral student just remains the supervisor’s underling. However, a parallel analysis is needed if solely large (financed) research projects and research groups would also cover themes in society that are related to developing smaller and narrower research areas. In the context of a small country such as Estonia, it is especially important as big research groups have high research capability (and thus, the possibility to obtain financial support for their research projects), but there is a danger of developing a limited number of research topics, and many important practical problems may not reach high-quality studies.

We also consider relevant the result where the participating supervisors considered completing a doctoral study within the nominal 4 years not that important for them, as a longer study period enables the doctoral student to spend more time in the research environment and facilitate more comprehensive learning. Thus, it is possible that several supervisors also select a supervising strategy which, provocingly, can be named as a “patiently waiting” or “wait-and-see” attitude. However, this view can also be a “defense explanation,” that is, since the supervisor has not been able to help their supervisee to reach the dissertation defense within the nominal period, the supervisor justifies this as a non-priority goal. Therefore, we think that a debate in the education field is needed to discuss the shared understanding of the nominal period for a doctoral study and the necessity to graduate within the nominal period of study, and whether and to what extent it is even necessary that the doctoral study period is so rigidly laid out in the first place. It is possible that if a supervisor does not put value to a student completing their studies within the nominal study, values lifelong learning and personal development, and prefers a longer study period to a fast completion, and hence, a longer period of staying in the research world, then it is hard to make the supervisory cooperation more efficient. Hence, we suggest that it is first necessary to ascertain supervisors’, doctoral
students’, and institutions’ expectations about doctoral study and accordingly design strategies.

The last sub-theme in the results that particularly attracted our attention was how the supervisors described their activities in cases where a doctoral student stalls or wishes to discontinue their studies. With only a few exceptions, the reasons were described as also supervisor related. It is well known that the supervisor is one of the central success factors in the doctoral study process (see, for example, Golde, 2005; Lee, 2008), and therefore, it was surprising that the participating supervisors emphasized their role to such a small extent. A discussion is also needed about the role of a supervisor and their tasks during the study process of a doctoral student and whether supervisors should be offered opportunities for self-analysis and reflection.

Although this article reports on a small-scale study in which the narrow focus poses certain limitations, we find that the above-described implications could benefit doctoral programs in Estonia and other countries facing similar challenges. It is important that supervisors are aware of the possible hindrances students can experience during their doctoral study, can notice them, and know efficient and useful support strategies. Debates to ascertain the different parties’ expectations are also important. Further research could, in our opinion, concentrate on doctoral students’ views on their supervisors’ activity or the lack of in cases of study stall. Additional value to increase the credibility of the findings of this study could be brought about by researching supervisors’ actual activities and practices.

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