

Ellu Saar / René Mõttus (eds.)

Higher Education at a Crossroad: The Case of Estonia



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Content

Higher Education at a Crossroad: the Case of Estonia

Ellu Saar, René Mõttus

1. Introduction: A brief overview of the Estonian higher education system and its challenges 11

Karmo Kroos

2. Estonian higher education and research strategy: a systematic review and policy discussion 27

Part 1. Learning at higher education institution

Karin Täht, Liina Adov, Mari-Liis Mägi, Olev Must

3. Does research-oriented university really have a negative effect on students' self-evaluations? 73

Helle Pullmann, Anu Realo, Kairi Kreegipuu, Jüri Allik, René Mõttus

4. Fatigue does not predict academic performance among university students 92

Larissa Jõgi, Katrin Karu, Kristiina Krabi

5. Experiencing learning at university: making the best of lifelong learning? 119

Eve-Liis Roosmaa, Auni Tamm

6. What makes a good classroom environment for an adult learner? Comparative perspective 137

Helena Metslang, Anastassia Šmõreitšik

7. How non-native speaker students cope in higher education: a case study of ethnic minority students in Estonia 165

Part 2. Teaching at higher education institutions

Marvi Remmik, Mari Karm

8. From teaching to guiding learning: novice university teachers' concepts of teaching and learning 199

Krista Jaakson, Anne Reino

9. The impact of Estonian research, development and education policies on perceived value conflicts in universities 217

Liina Lepp, Mari Karm, Marvi Remmik

10. Supervisor's activities in supporting PhD students in the supervisory process..... 247

Einike Pilli, Kätlin Vanari

11. Defining the determining element of content mastery as the key aspect in congruence between learning outcomes and assessment..... 267

Kairit Tammets, Kai Pata

12. The trends and problems of planning outcome-based courses in elearning 283

Part 3. From higher education to labour market and back

Marge Unt, Kristina Lindemann

13. From bust to boom and back again: social positions of graduates during the last decade in Estonia 307

Kerly Espenberg, Aivi Themas, Jaan Masso, Raul Eamets

14. Why do social science graduates earn more than natural science graduates in Estonia? 343

Marge Unt, Kadri Täht, Ellu Saar, Jelena Helemäe

15. The expansion of higher education: devaluation or differentiation? The Estonian case 367

Kerly Espenberg, Aivi Themas, Jaan Masso

16. The graduate gender pay gap in Estonia 391

Ellu Saar, Kadri Täht, Triin Roosalu, Auni Tamm Wishing

17. Welcome to the nontraditional student: how institutions create barriers for returning to higher education..... 415

Contributors..... 441

**HIGHER EDUCATION AT A CROSSROAD:
THE CASE OF ESTONIA**

Foreword

This is a very timely publication, coming as it does during a period of continuing changes in higher education landscape and policies in Estonia. While much has been written about different aspects of higher education in Western European countries, less is known about the developments within this sector in the new European accession countries, such as Estonia. What are the challenges for higher education in Estonia? Is the sector experiencing similar or different challenges from other countries? This volume provides the reader with a useful understanding of some of the issues confronting the Estonian higher education sector today, as well as providing an insight into how institutional processes and practices shape the lives of students within these institutions and beyond.

Higher education in Estonia has a long history. In 1617, during the Swedish-Polish war, Estonia became incorporated into a Swedish province called Livonia and came under the rule of the Swedish king, Gustav Adolf II. Following the foundation of Uppsala University, in 1632, the *Academia Gustaviana* was established in Estonia as the second university founded in the Swedish Empire. At that time, the only students were of Swedish and Finnish origin and the *Academia Gustaviana* was not open to Estonian students. However, the *Academia Gustaviana* was to be the predecessor of the University of Tartu, which is now recognized as one of the oldest universities in Northern Europe.

Over the centuries, the Estonian education landscape has been shaped and re-shaped by the turbulent historical developments in the region. In 1918, Estonia emerged as an independent country and, in the following year, established Estonian as the principal language of instruction at the University of Tartu. During the period of political independence (1918–1940), education became highly valued and many higher education institutions began to emerge that provided a number of different disciplines.

The events of the Second World War and the Soviet occupation resulted in further changes in higher education in Estonia. For over 40 years, until the end of the 1980s, Estonia was influenced by the Soviet education system. Following the country's independence from the Soviet Union in 1991, Estonia has undertaken several extensive reforms in the field of higher education, which have aimed at integrating Estonia into European models and practices of education and research.

This volume focuses on these and subsequent developments and challenges in higher education that have taken place in Estonia. However, these changes have not been implemented without problems and the current situation has received criticisms for issues such as uneven development of higher education policies and practice, over-supply of higher education institutions for the popu-

lation size (approximately 1.3 million citizens), mismatching of fields of study for the needs of the labour market, insufficient international cooperation and academic mobility, and limited funding, among others. That said, for years, Estonia has continued to rank among the top countries internationally with a high proportion of people achieving higher educational qualifications.

This book provides a comprehensive outline of various developments and challenges in higher education in Estonia. It covers a wide range of issues, including the development of higher education policy, access to higher education, changes in the profile of higher education students, the experiences of students in higher education institutions and their subsequent transition to the labour market. It also addresses key questions about quality improvement and inequity in higher education.

This very comprehensive collection is directly relevant to higher education professionals working within the Estonian system and will be useful for international readers with an interest in comparative perspectives of developments of higher education systems. It is a wonderful resource for researchers, policy makers and practitioners and a welcome addition to the emerging literature in the field of higher education.

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Chapter 1.

Introduction: A brief overview of the Estonian higher education system and its challenges

Ellu Saar, René Mõttus

Higher education in Estonia: broad trends

Following independence from the Soviet Union, Estonian higher education underwent rapid changes during the 1990s. These changes, which took place against a background of a general shift from a socialist planned economy to a market-based economy, were characterised by an increasing number of higher education institutions and developments in areas including funding, quality assurance, equity and links to the job market. The changes continued into the following decade, however, by then many aspects of the changes were different. We start the chapter by giving a brief overview of the developments in Estonian higher education since the early 1990s to the present, as it is our view that much of what will be written in this and the following chapters has to be understood in the context of these developments.

Since 1991 there have been two types of higher education establishments: universities that offer academic programmes and institutions of professional higher education that offer professional higher education programmes. At the end of the 1990s, the Bologna Declaration was implemented, the '3+2' curriculum was adopted and provisions for professional higher education studies were drafted. Since then higher education has been divided into two categories:

- professional higher education, requiring three years of study based on a professional higher education curriculum (ISCED 5B);
- academic higher education, in which three years of study are required for a Bachelor's degree (ISCED 5A), two years for a Master's degree (ISCED 5A), and four years for a doctoral degree (ISCED 6).

Due to a liberal higher education policy, the number of higher education institutions grew very fast to 49 institutions in 2002 but is now somewhat lower than this at 34 institutions (see Figure 1). This expansion of higher education occurred through (1) the establishment of new private universities and professional higher education schools; (2) the reorganisation of specialised secondary schools as public professional higher education schools; and (3) new legislation allowing foreign universities to establish branches in Estonia. With the aim of maximising revenue and keeping costs low, the private higher education institutions tend to concentrate on programmes in the more lucrative professions, such as law, busi-

ness management, and psychology, which do not require expensive infrastructure.

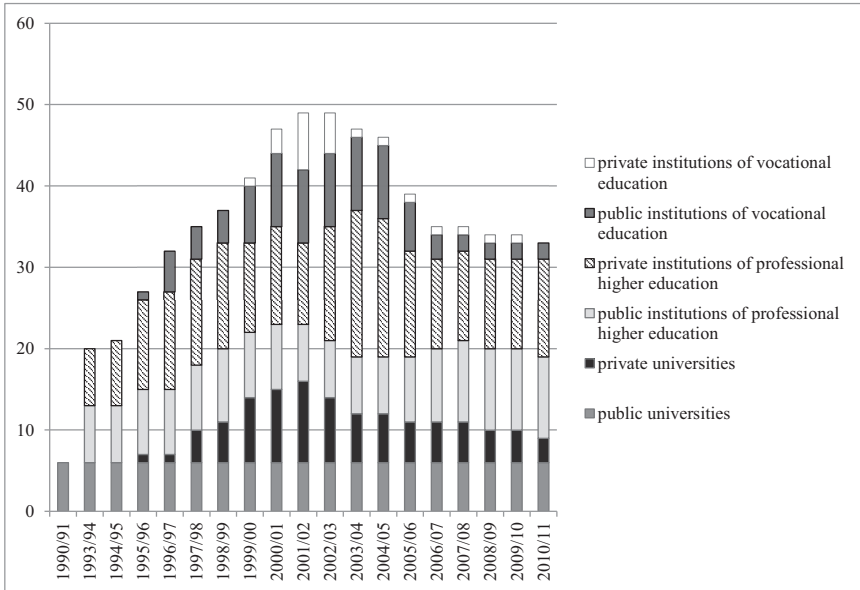


Figure 1. Number of higher education institutions, 1990–2010

Source: Tõnisson, 2011

The number of students enrolled in higher education increased 2.7 times between the academic years 1994/1995 and 2008/2009, growing from 25,000 to 68,000 (Tõnisson, 2011). In 2009 36 per cent of people aged between 25 and 64 had undertaken tertiary education (OECD 2007 average: 28 per cent). Over the past decade the number of higher education graduates has doubled as well.

The proportion of students who had enrolled in professional higher education increased until 2001, then it started to slightly decrease. Since the academic year 2005/06 the proportions of students in academic and professional higher education (66 per cent and 34 per cent respectively) have remained the same (Tõnisson, 2011).

This rapid expansion might have led to inequalities. On the one hand, the expansion opened up more places in tertiary education institutions, and these should have increased the opportunities for under-represented students to attend. On the other hand, given the pattern of the expansion, socially disadvantaged or otherwise less prepared students might have gained access to lower-status insti-

tutions, including those in smaller towns, and to fee-paying places either in the public or the private sector. As the OECD Review of Tertiary Education in Estonia (2007:63) indicates 'as is the case in many other countries, vocationally-oriented tertiary studies still suffer from a lack of parity of esteem relative to university studies'. Chapter 14 of this book also indicated that vertical differentiation exists in higher education in Estonia.

Subject area is important in horizontal differentiation in higher education. In a similar way to other Central and Eastern European countries, Estonia experienced a substantial decrease in enrolment in engineering, manufacturing and construction; the proportion of students in these areas fell from 20 per cent in 1994 to 14 per cent in 2009. The agricultural fields also declined in popularity from 5 to 3 per cent in the same period. Enrolment also declined, but less significantly, in arts and humanities, and education. The number of students studying business increased dramatically between 1994 and 1999 and then levelled out at about 23 per cent (Saar and Lindemann, 2008; Tõnisson, 2011). Enrolment in social sciences and media can be looked at as a U-shape, with higher proportions of students enrolling during the mid-1990s and mid-2000s. An inverted U-shape is evident for law specialities, with almost 10 per cent of all students choosing this subject area in 1999.

Among the most notable tendencies in higher education is the increasing number of female students; in the 1993/94 academic year 51 per cent of all students were women and this figure had grown to 60 per cent by 2010/11 (Tõnisson, 2011). Of those who graduated from university in 2009, more than two thirds (69 per cent) were women, which is more than in any other developed country (50–60 per cent). There is also a strong gender differentiation in terms of subject area. Men still dominate in engineering, manufacturing and technology (although the proportion of women has been increasing), and in sciences, where the proportion of men has remained more or less static over the past twelve years. Although the proportion of women studying agriculture and services is inferior to the proportion of men, women dominate the rest of the subject areas. In recent years the proportion of women in services and in health and welfare has been increasing particularly rapidly. However, the rankings of popularity of different fields, in terms of the proportions of female graduates, were very similar for Estonia and other developed countries, suggesting that, although women were more likely to graduate in Estonia than men, they generally choose the same fields as their peers in other countries.

One of the most striking features of the development of Estonian higher education since independence is the rapid growth in the numbers of tuition-fee paying students, both in terms of absolute numbers and as a proportion of all students. In the early 1990s the majority of students were publicly funded; the

situation now is that half of all students are fee-paying. The proportion of students paying tuition fees has increased from 7 per cent in 1993 to 49 per cent in 2011 (Tõnisson, 2011).

Some important challenges

This development raises some fundamental issues for funding policies, particularly regarding the appropriateness and impact of a funding model which results in half of all students receiving no public support. Support for students is provided in the form of grants for living costs and a student loan scheme, but eligibility for grants is restricted to students in state-commissioned places. With the exception of a small proportion (5 per cent) of grants that are distributed on the basis of financial need, grants are generally allocated on the basis of academic performance. Furthermore, the existing loan scheme does not fully remove the risk that some students with the ability to successfully undertake higher education will be prevented from doing so due to lack of funds. Loans are only available to full-time students to cover tuition and living costs, but the amounts available do not cover the tuition fees for most of the fee-paying students. In addition, because access to a loan is conditional on a student's credit worthiness taking out a loan is not an option for students from poor backgrounds.

The recently adopted reform of higher education will make all full-time study places free from 2013/2014 onwards and will also introduce a system of means-tested income support. However, full time study is required to maintain the free study place and support. As a result, this reform might make students from poor backgrounds and non-traditional students (for example adult students) worse off because the proposed value of 135 EUR for the means-tested grant is likely to mean that students without parental support and older students with their own families will need to work to support themselves while studying (OECD, 2012; Saar et al., 2012).

So, the expansion has led to a number of challenges which are demanding a priority shift from growth to quality improvement and equality. With respect to access to higher education in Estonia, the policy has emphasised the overall expansion of enrolment rather than equity of access, which relates more to differences in participation rates among groups of students (OECD, 2007). The Estonian Higher Education Strategy 2006–2015 does not put enough emphasis on the equity dimension. In an interview, an official from the Ministry of Education and Research indicated the following (Tamm and Saar, 2010):

I mean that we must be aware of the problem. For example, the support system based on students' needs and social fairness. Two years ago we participated in an

OECD study and the experts were amazed that our higher educational institutions do not recognise that there is a problem. They – both the staff and the management – do not see it as a problem and neither do the students. The current system of state commissioned education is considered normal – people believe that if you have finished a so-called elite school (one of the best schools in Tallinn or Tartu that accept 7 year olds to year one on the basis of entrance tests) then you have the right to a state funded study place, because you are better than others. Nobody seems to realise that the advantages of an elite school graduate may be the result of his/her better starting position compared with a graduate from a secondary school in the countryside or a small town. Our society does not recognise that social fairness is a problem. People do not want to see it.

Previous studies indicate that the impact of social origin on access to higher education has increased since the 1990s (Saar, 2010; Saar and Unt, 2011). The enrolment in higher education of students from poor backgrounds is particularly low (OECD, 2012). An OECD Review (OECD, 2007) also indicated that Estonian higher education was inequitable in its overall admissions policy and access to state-commissioned places (especially in the best institutions) were disproportionately granted to students from families with well educated parents. In Estonia the main demographic group that is under-represented in higher education is the Russian-speaking population because the language of instruction in public higher education institutions is mainly Estonian. However, although it is possible to study in Russian at several private universities, the students enrolled in these institutions have to pay tuition fees. In total, 11 per cent of all students in higher education are studying in Russian, predominantly in private higher education institutions. The OECD (2007) finds that Russian-speaking school leavers find themselves at a disadvantage accessing the main higher education institutions as these institutions give instruction mainly in Estonian. Statistics for secondary school graduates who continued to higher education are provided by the Estonian Ministry of Education and Research. In 2007, 55 per cent of Estonian-language secondary school leavers secured a state-commissioned place in tertiary education, while only 49 per cent of Russian-secondary school leavers did so. In 2010 the differences have decreased (66 and 64 per cent respectively) (Tõnisson, 2011). Previous analyses also indicated that higher education opportunities for people not proficient in Estonian are limited because they have a limited choice of courses to choose from and they have to pay for their studies (Lindemann and Saar, 2012). Chapter 7 examines a very acute problem that is the provision of higher education to non-native speaker students in the face of their lower command of the language of instruction.

The age structure of students has changed. In the middle of the 1990s less than 10 per cent of students were over 30 years old but now this figure is 20 per cent (Tõnisson, 2011) and most adults pay for their studies themselves (Tamm

and Saar, 2010). Despite the expansion of higher education and the different age structure of students, the lifelong education offerings from higher education institutions are underdeveloped and the needs of adult learners have not been focused on by the institutions. There are no provisions to allow for entry into higher education on the basis of a person's assessed competencies instead of formal qualifications. In Estonia, earlier studies can only be of use (e.g., for obtaining credit points) after the person has been admitted to the higher education institution. Currently, about 40 per cent of students are working and learning simultaneously (Beerrens, Mägi and Lill, 2011; Kirss et al., 2011). The OECD Review (2007) states that it is important to provide support to these students by making available more flexible programmes. An extract from an interview with an official from the Ministry of Education and Research describes the situation very well (Tamm and Saar, 2010):

As regards the access of adults to higher education, it has not been recognized as a problem yet. The mainstream understanding is that if a person is hard working enough he/she will manage without any help. The studies of people over 30 years old should not be supported financially. There is even no discussion in the society. We don't talk about it; we do not have comprehensive policies. ...We do not know what the problems of people over 40 years old who work full-time and study half-time are.

Therefore, one challenge for higher education is the development of strategies for promoting lifelong learning. The aim of Chapter 17 – to analyse the institutional barriers perceived by adults participating in higher education programmes and the impact of institutional factors on the formation of these barriers – is directly connected with this challenge.

Quality assurance

The growth of the higher education system has led Estonians to realise that the quality of higher education varies depending both on the type of institution and the subject area. Estonia started to build its national higher education quality assurance system in the mid-1990s, following the rapid expansion of the higher education sector. Since 1996, the *Standard of Higher Education* has regulated the establishment of higher education institutions and has determined the requirements that they and their programmes must meet in order to obtain an appropriate education licence. The *Strategy for Higher Education 2006–2015* also places considerable emphasis on quality and the means of assuring it. However, an OECD Review (2007) indicates some problems in the existing quality assurance system (see also Tomusk, 1997; Kroos, 2010). First, there is a risk of de-

veloping a formal quality assurance system based on quantitative indicators rather than a qualitative system. Second, the standards for programme evaluation are general and do not refer to the requirements of specific programmes. Third, the quality criteria applied to the programmes fail to take into account the views of stakeholders or any specific national requirements. The system is based on the work of international evaluators. It makes it difficult to systematically take account of any national priorities, be they at the institutional or the programme level. The review also emphasises the importance of learning outcomes. 'The learning outcomes would thus provide the core of contents, abilities and attitudes that should be developed during the teaching and learning process' (OECD, 2007:78). Chapters 8 to 11 examine problems connected with the quality of learning in higher education institutions.

Higher education and labour market

Despite the expansion of higher education, the demand for it remained strong in the 2000s. Unemployment rates were lowest for individuals with higher education and have remained relatively stable at between 3 and 6 per cent in the period 1997–2008 (Statistics Estonia). However, the recession in 2008 somewhat changed this situation. The unemployment rate of people with higher education increased to 8 per cent whereas the unemployment gap between educational groups increased, suggesting that higher education nevertheless offered a relatively better protection against unemployment. In 2010 (i.e. during a time of economic hardship), people with a higher education qualification were 50 per cent less likely to be unemployed than people with upper secondary or post-secondary vocational education qualifications and 67 per cent less likely to be unemployed than people who had not undertaken secondary education. In the other developed countries (OECD members), the respective percentages were 38 and 63, which suggests that having a higher education qualification was slightly more protective against unemployment in Estonia than in many other developed countries (OECD, 2012). However, while the relatively low unemployment rate of graduates suggests that their qualifications are well recognised by employers, the return to higher education in terms of wage premiums is low when comparing internationally (OECD, 2012). Some analyses indicate that a significant proportion of graduates appear not to find employment in an area matching the competencies and skills that they acquired in higher education (Saar and Unt, 2012). Also, a growing number of graduates are not obtaining high-level positions (see Chapter 13). Chapter 15 points to another potential issue that higher

education graduates face: that the value of Bachelor's degrees may have decreased.

Another general problem, according to the OECD Review (2007), are the limited opportunities for practical training experience for students because companies are not interested in providing these places for students.

The objectives of this book

In this book we aimed to cover a comprehensive range of topics pertaining to Estonian higher education. First, we focused on various aspects of the learning process and learning environment. For instance, one study investigated the degree to which peer comparisons can influence students' self-concepts and showed that students' expectations for their own performances may depend on their peer groups and ultimately influence their evaluations of progress. Another study looked at the association between fatigue and academic performance, comparing students who undertake employment while studying with those who do not. The study found that fatigue was unrelated to academic performance once a number of psychological and demographic variables were taken into account. However, academic performance was predicted by the personality trait conscientiousness, by academic self-esteem, and by high-school performance. Other studies have investigated perceptions of the class-room environment, students' roles in society in general, and, on the more practical side, the language needs of minority students. Second, various aspects of the teaching process were investigated from the point of view of teachers. For instance, teacher's views of themselves and their teaching processes are considered, and issues relating to planning and organising teaching are studied. Third, the book has addressed the transition from higher education to the job market. In particular, the relationships between higher education and employment and unemployment, professional success, income and male-female income differences have been studied. The changes in higher education and the effects of these on the labour market were also investigated. Finally, as a somewhat separate topic, Chapter 2 presents an overview of the strategy documents that steer Estonian higher education policy.

The book benefits from contributions from a range of scientific disciplines, including educational sociology, educational sciences, psychology and econometrics, and we believe that this multidisciplinaryity is one of the strengths of the book. Below we summarise each of the chapters.

Chapter 2, Estonian Higher Education and Research Strategy: A Systematic Review and Policy Discussion, had three interrelated goals. The first aim was to map the content of the Estonian higher education and research policy

documents together with their goals, measures and actions. The second aim was to assess the extent to which the policy met the reasonable expectations, framed within the rational-comprehensive policy paradigm, that these goals, measures and actions should be equipped with at least one indicator that would allow the evaluators to assess the policy progress and its outcomes. The final aim was to make indirect inferences about the policy process that produces the strategic documents. The author concluded that Estonian higher education policy is fragmented across many documents. Numerous strategic documents have been approved to steer higher education and research, as have the goals, measures and actions that allow the justification of almost any policy decision. In addition, there is a lack of local policy analysis and evaluation of the measures and actions described in the strategic documents. This situation suggests that, rather than problems looking for solutions, it is the other way around in the Estonian higher education and research policy process – the ideas expressed in the policy documents are looking for issues to tackle and problems to solve.

Chapter 3, Does a research-oriented university really have a negative effect on students' self-evaluations?, investigates differences in students' self-evaluations in a research oriented university and in institutions of professional higher education. Evidence was found to support the hypothesis that actual grades at university, not estimates of students' intellectual levels, are linked to students' self-evaluations, after controlling for the influence of cognitive ability. Although the choices for students are limited in a small country like Estonia, aspects of the Big Fish Little Pond Effect (equally able students have lower levels of academic self-concept in high-ability schools than in low-ability schools) are evident. The implications of the Big Fish Little Pond Effect for the students' futures (lowering career aspirations, dropping out from university) are discussed.

Chapter 4, Fatigue does not predict academic performance among university students, found that higher levels of self-rated fatigue were linked to lower academic performance at university. However, the association disappeared after controlling for a number of psychological traits, demographic factors and high-school performance. Structural equation modelling revealed that better academic performance was associated with higher levels of the personality trait Conscientiousness, higher academic self-esteem and higher high-school performance. Therefore, fatigue might have an apparent correlation with low university performance but this may be because the kinds of people who tend to perform better in university may simply experience less fatigue.

Chapter 5, Experiencing learning at university: making the best of life-long learning?, concentrated on how students experience learning and teaching practices at university. The results confirmed that universities are still dominated

by teaching practices where little consideration is given to the learning experiences of students and where the understanding that students are adult learners is not common. Learning is primarily experienced in situations where teachers impart knowledge, which results in passive learning. More specific limitations of teaching practices in typical study situations at university include, for example, a lack of support from academics for the students' development and learning. The analysis suggested that academics should see dealing with adult learners and their learning experiences as a great opportunity to develop their teaching practice.

The aim of **Chapter 6, What makes a good classroom environment for an adult learner? A comparative perspective**, was to study the differences in classroom environment perceptions in Estonia compared to other European countries. The particular objective was to show which aspects of the classroom environment were seen more positively by adult learners in higher education, and which of those aspects related most strongly to confidence in completing studies and satisfaction with the learning process and outcomes. The results indicated that adult learners in Estonia were positive about the classroom environment, and this was the case in other European countries as well. However, the adult learners were less positive about their potential to achieve their personal goals and here the Estonian adult learners were more critical than learners in other countries. Adult learners are not a homogenous group and, depending upon their learning stage, they might need different approaches: at the beginning of their studies they might benefit from a more supportive, and thus teacher-centred, learning environment, whereas in the later stages a more independent, learner-centred environment might be appropriate.

Chapter 7, How non-native speaker students cope in higher education: a case study of ethnic minority students in Estonia, examined how Estonian non-native speaker students cope in various higher education situations and what kind of support they need and get. The study demonstrated that the universities' language courses partially met the students' academic language needs. It also showed that the question of whether subject instructors should provide language support in their courses is controversial (opinions differ about whether coping is just the student's responsibility or whether mature expression skills in the language of instruction constitute part of the general education quality that speciality subject instructors should provide). However, most instructors still use a range of support measures. There is room for development in moving from merely helping the student pass the content requirements of speciality subject courses, to deliberately supporting the development of their academic language skills.

Chapter 8, From teaching to guiding learning: novice university teachers' conceptions of teaching, aimed to develop the understanding of Estonian early-career university teachers' ideas about teaching and the factors that influence their teaching practice. The results of the study showed that novice teachers' teaching practices are mostly based on their own learning experiences and on teaching traditions in their discipline. Pedagogical courses might motivate novice teachers to change their teaching practice. However, problems in implementing methods that value more learner participation, the discipline's prevailing conceptions of teaching, and pressure from colleagues, might influence novice teachers to turn to traditional teaching.

The aim of **Chapter 9, The impact of Estonian research, development and education policies on value conflicts in universities**, was to show which of the goals and processes set out in Estonian research, development, and education policies created value conflicts among university employees. The authors concluded that pressure to publish, which is linked to budgeting policy, was found to be detrimental to excellence and co-operation. University employees felt that insufficient and project-based funding, favouring applied research, jeopardizes academic values, most notably those of academic freedom, being science-based, and being committed. Finally, a distinct policy area that has caused much discontentment among academic employees is the 'massification' of higher education.

Chapter 10, Supervisors' activities in supporting PhD students in the supervisory process, examined the supervisory practice of supervisors of educational studies' PhD students in the context of the changes taking place in higher education in Estonia. The results showed a connection between finding a supervisor and the course of the supervisory process. The role of the supervisor was considered to be very important in the planning stage of a doctoral thesis, in helping to find appropriate resources, and in supporting the PhD student in the process of writing. The PhD supervisors' activities to support PhD students to become fully-fledged members of the academic community were described, including passing on contacts and participating in different academic events with the PhD students.

Chapter 11, Defining the determining element of content mastery as the key aspect in congruence between learning outcomes and assessment, was based on research undertaken in the Estonian Academy of Security Sciences about the alignment of intended learning outcomes and assessment. Research on police and border guard curricula indicated that learning outcomes and assessment were not well aligned, and, in addition, there was almost no information about assessment in the syllabuses. The analyses of the assessments of the 2009/2010 and 2011/2012 school-year subjects indicated that the main differ-

ences appeared in defining and aligning assessment both toward greater clarity and alignment. Examples of the congruence of the learning outcomes and assessments with the Determining Element of Content Mastery, and the reasons for deviations, were also presented and examples were given about how the Determining Element of Content Mastery was expressed in the final grade of the subject.

The aim of **Chapter 12, The trends and problems of planning outcome-based courses in e-learning**, was to study the actual practices of outcome-based e-learning at Estonian universities, focusing on the courses where personal learning environments (e.g. blogs and portfolios) were used as a medium. The frequencies and co-usage of the learning outcomes, activities and assessment types were described, which enabled the trends and critical problems in planning outcome based e-courses to be illustrated. Based on the study results, the authors suggested design guidelines to help in the planning of learning activities and assessment types for e-learning courses held in personal learning environments, taking into account the different types of learning outcomes prescribed by the Higher Education Standard.

Chapter 13, From bust to boom and back again: Social positions of graduates during last decade in Estonia, gave an overview of the occupational position of graduates during the last decade in Estonia, a decade marked by educational expansion, two severe economic recessions and one exceptional boom. The authors also explored gender and ethnic effects and their interaction with educational level in predicting employment status. The analyses indicated that it is possible to observe the differentiation in graduates' occupational positions and the downward substitution process that was taking place during the 2000s. The likelihood of insecure employment and the risk of unemployment have risen most rapidly for graduates with professional higher education qualifications. There was also a clear tendency for every succeeding cohort of BA graduates to start their careers from a lower position than the previous cohort. An increasing proportion of BA graduates continue on to study at the Master's level without entering the job market. Master's degrees still seem to hold distinct value in the job market. There is also clear horizontal differentiation – except for MA graduates, graduates belonging to ethnic minorities have a significantly higher risk of being unemployed and have less chance of securing atop position than Estonians.

In **Chapter 14, Why do social science graduates earn more than natural science graduates in Estonia?**, the authors compared the labour market performance of hard science and social science graduates. Their aim was to analyse whether there is any evidence of an over-supply of social science graduates. The wage analysis, based on data from the Estonian alumni survey 2010, indicated

that there is a wage-premium for social science graduates, but only at the master's/doctoral level, not at the bachelor's level.

Chapter 15, The expansion of higher education: devaluation or differentiation? The Estonian case, examined the perceptions of employers, graduates and representatives of higher education institutions of the potential devaluation of higher education in Estonia as a consequence of the expansion of the sector. Going to university or an applied higher education institution has become the norm and not having a higher education qualification may give a negative signal and result in de-selection in job applications. Vertical differentiation exists in the sector, indicating some devaluation of higher education in Estonia. Differentiation within the sector has also increased. The expansion of higher education has meant that the qualifications from some private higher education institutions have lost their capacity to 'make a difference'.

The focus of **Chapter 16, The graduate gender pay gap in Estonia**, was on gender segregation in subject areas in Estonian higher education, the male-female wage gap among recent graduates and the main reasons for the gap. The results indicated that the Estonian higher education sector is clearly gender segregated. On average the gender wage gap was around 25 per cent, but vast discrepancies exist across subject areas, for example, in health and welfare on average men earned 40 per cent more than women, while in the service sector the wages were almost equal. The wage discrepancies are largely explained by labour market segregation by gender – occupation and sector are the most important determinants of the gender wage gap. The expansion of higher education and the falling birth rate have changed the profile of the student population, amongst other things the number of adult students has increased.

Chapter 17, Wishing welcome to the non-traditional student: barriers to returning to and learning in higher education, examined the barriers to the participation of adults in higher education, concentrating on the impact of supply side factors such as access, flexibility and affordability of higher education programmes. The analysis was based on a comparative international data set. Among the countries analysed, Estonia has one of the highest levels of perceived institutional barriers to learning. Estonian non-traditional students are paying the highest tuition fees, and the proportion of students who pay for their studies themselves (two thirds) is high. Lack of financial means is a serious barrier to accessing higher education, financial support is inadequate and the current system for applying for this support is demeaning.

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References

- Beerkens, M., Mägi, M. and Lill, L. (2011). University studies as a side job: causes and consequences of massive student employment in Estonia. *Higher Education*, 61, 679–692.
- Kirss, L., Nestor, M., Haaristo, H.-S., Mägi, E. (2011). *Eesti üliõpilaste eluolu 2010* [Being a Student in Estonia. 2010]. Tallinn: Praxis.
- Kroos, K. (2010). *Kõrghariduse kvaliteet kehtivates riiklikes strateegia dokumentides* [Higher Education Quality in the Existing National Strategy Documents]. Unpublished report.
- Lindemann, K. and Saar, E. (2012). Ethnic inequalities in education: second-generation Russians in Estonia. *Ethnic and Racial Studies*.
- OECD (2006). *OECD Factbook 2006: Economic, Environmental and Social Statistics*. Paris: OECD.
- OECD (2007). *OECD Reviews of Tertiary Education. Estonia*. Paris: OECD.
- OECD (2012). *OECD Economic Surveys: Estonia*. Paris: OECD.
- Saar, E., Tamm, A., Roosalu, T. and Roosmaa, E.-L. (2012). *Mittetraditsiooniline tudeng kõrgkoolis* [Nontraditional student in university]. Tartu: Archimedes Foundation.
- Saar, E. (2010). Changes in intergenerational mobility and educational inequality in Estonia: comparative analysis of cohorts born between 1930 and 1974. *European Sociological Review*, 26, 367–383.
- Saar, E. and Lindemann, K. (2008). Estonia. In Kogan, I., Gebel, M. and Noelke, C. (Eds.), *Europe Enlarged: A Handbook of Education, Labour and Welfare Regimes in Central and Eastern Europe*. Bristol: Policy Press, 151–181.
- Saar, E. and Unt, M. (2011). Education and labour market entry in Estonia: closing doors for those without tertiary education. In Kogan, I., Noelke, C. and Gebel, M. (Eds.), *Making the transition: Education and Labour Market Entry in Central and Eastern Europe*. Stanford: Stanford University Press, 240–268.
- Saar, E. and Unt, M. (2012). Labour Market Returns to Tertiary Education in Post-Socialist Countries. In Lambert, P., Connelly, R., Blackburn, R.M. and Gayle, V. (Eds.), *Social Stratification: Trends and Processes*. Farnham UK: Ashgate Publishing, 209–219.
- Tamm, A. and Saar, E. (2010). Projekt LLL2010. *SP5 Estonia country report*.
- Tomusk, V. (1997). External quality assurance in Estonian higher education: its glory, take-off and crash. *Quality in Higher Education*, 3, 173–181.
- Tõnisson, E. (2011). *Kõrghariduse valdkonna statistiline ülevaade 2011* [Statistical overview of higher education 2011]. Tartu: Estonian Ministry of Education and Research. Available online and only in Estonian: <http://www.hm.ee/index.php?048183>

Chapter 2.

Estonian Higher Education and Research Strategy: A Systematic Review and Policy Discussion

Karmo Kroos

The problem was not in the first place the nature of the consultation, but rather the vagueness of the White Paper which achieved consensus, as with all policy documents produced in this period, by providing all things to all people (Cloete and Maassen, 2002:454).

Introduction

Higher education and research (HE&R) policy is fragmented across a number of strategy documents in Estonia. More specifically, at the end of 2010, the effective number of HE&R policy documents in Estonia, (which is a country of just 1.3 million people, with a student body of 67,607 in the academic year 2011–2012) were spread over more than 500 pages (see Table 1 and Appendixes 1–3). In addition to these policy documents, there was a growing number of HR&R programmes and documentation developed for the implementation of specific policy tasks. After careful selection, explained in the Population and Sampling section of this paper, 12 documents listed in Table 1 and specified in Appendix 2 and 3, remained for closer analysis in this paper. A meta-analysis was undertaken to get an overview of the various goals and measures, as well as to determine how well they were connected to the metrics and data sources. On the basis of the systematic overview and as the argument of the paper developed, we showed that Estonian HE&R is steered by a huge number of policy goals, measures, and actions. In total, there were 22 different major goals and 37 sub-goals, 34 measures¹ and 193 activities² related to HE&R in these policy documents. Contrary to the proposal from the Estonian Ministry of Finance (2007), ‘Proposal for the Method of Selecting the Aims and Indicators’, which states that each goal mentioned in the state policy document should be associated with at least one indicator that would allow the assessment of progress and evaluation of results, it was found that two-thirds of the existing state HE&R policy docu-

1 There were 40 measures before the obvious duplicates in various policy sets were excluded. See Table 2 and its notes for details.

2 There were 220 activities before the obvious duplicates in various policy sets were excluded. See Table 2 and its notes for details.

ments met the formal criteria only if the meaning of ‘indicator’ is stretched to include, in addition to metrics, the descriptions of intended results. Furthermore, it was surprising to learn that none of these strategy documents contained the major goals that were worded explicitly to tackle the challenges in the traditional policy areas, such as ‘Curriculum & Studies’, ‘Study & Library Materials’, ‘Infrastructure’, ‘Financing’ or ‘Life-long Learning’.

The observed content of the Estonian HE&R policy papers, explained in details in the forthcoming coming sections, allowed us to make indirect inferences about the process and the steering mechanism that produce such documents. As will be argued in more detail below, the uncoordinated and unstructured time frame of adoption of the policy documents related to tertiary education at different levels, as well as the number of policy aims, measures and activities in these documents, suggested that this Estonian public policy area cannot be classified into any of Olsen’s state steering mechanisms (Olsen, 1988:236–237) but can be better described along the lines of the ‘garbage can model’ developed by Cohen, March and Olsen (1972).

It must be stressed that this study interpreted policy as a strategic plan and did not consider the politics around it or limit the analysis to the laws related to HE&R. In English there is a clear conceptual difference between the words policy and politics, but no such difference exists in Estonian where both words are ‘*poliitika*’. To keep the conceptual clarity, whenever the word ‘policy’ is used in this paper only its English meaning is implied (which in Estonian would correspond to such terms as strategies, development plans or action plans). That is, this paper was about these documents and not about the political struggles or legislation of Estonian HE&R. Furthermore for the sake of clarity that this study concentrated only on the strategic plans advanced at the national level and, hence, left out of the analysis those policy papers that were developed and agreed among the member states of the EU, or the development plans adopted by the particular institutions of HE&R in Estonia.

The paper consists of the following four parts: (i) brief notes on the scholarly literature of HE&R policy-making, (ii) the research method, (iii) a description of the Estonian HE&R policy documents, and (iv) the Estonian HE&R policy process (including the discussion and policy suggestions).

Brief Notes on the Scholarly Literature of Higher Education and Research Policy-Making

Mainstream political science treats policy as an outcome of the formal distribution of power that is determined through free and fair elections in a democratic

system. As a result, policy is presented all too often in political science textbooks as the outcome of a rational and well-structured process. In these models, labelled the ‘rational-comprehensive process’ (see e.g. Heineman, Peterson and Rasmussen, 1995:257), the policy process starts with setting the aims, followed by specifying the goals; enumerating the alternative policies; selecting the policy; implementing the chosen policy; and finally, evaluating the policy outcomes, which also serves as preparation for the next policy process. The latter clarifies why some scholars like to present the policy-making and its implementation as cyclical instead of hierarchical and top-down process. In both approaches, the (unnaturally) systematic and well-structured policy process is assumed, which is why this over simplistic view is challenged from various angles.

Political sociology, with its models of democratic pluralism, incrementalism, élitism and bureaucracy, which describe policy as an outcome of the political struggles among the competing interest groups, arguably better captures the empirical reality. Concerning the latter model, Salter and Tapper (1981:87–114), for instance, argue that it is a mistake to assume that the implementing ‘state educational apparatus’ is itself policy neutral. More specifically, they make the point that the ‘struggle over educational policy takes place in a bureaucratic context which is far from passive in its policy preferences, and which, in fact, sets the parameters within which the policy debate is conducted’ (Salter and Tapper, 1981:88). Therefore, they support a closer analysis of the role played by the bureaucratic power holders in the educational policy-making process. This is the analytical position taken by Voldemar Tomusk in some of his comments about Estonian HE&R policy. The conclusions of his analysis might be disturbing to some as he is very sceptical about any positive policy impact of an HE&R strategy developed at the national level by the responsible Ministry (see Tomusk, 2004:50) under the influence of the closely related academic oligarchy³ (see Tomusk, 2003). But since, in the mid-1990s Tomusk was the Head of the Higher Education Division and Acting Director of Higher Education and Research in the Estonian Ministry of Education and is currently the Director of Policy and Evaluation on the Open Society Foundation’s International Higher Education Support Program, there is little doubt that he knows something⁴ about the Estonian HE&R policy (process) from the comparative perspective⁴.

3 A related term, ‘oligopoly’, has later also been used by Masso and Ukrainski (2009:693) to describe the Estonian competitive project funding for research.

4 Although for different reasons, Tomusk’s view on the ineffectiveness of HE&R public policy-making is, interestingly, similar to the assessment of the current Minister of Education and Research, Jaak Aaviksoo, of the Estonian R&D policy from the same time period (when he was still the Rector of the Tartu University). For details, see Aaviksoo (2003).

However, the problem with the otherwise rather realistic models of political sociology is that they seem to assume that policy is identifiable in strategic decisions or in law. More specifically, there is a tendency in the literature about HE&R steering to simplify and to understand the policy as something that can be found in a single strategic document or in a (handful of) legal act(s). This mistake seems to be to do with two interconnected developments: the ambiguous legal position of the ‘development plan’ type of policy documents within the Estonian legal structure, and the fact that policy deviations and violations bring hardly any sanctions on those who simply ignore it or who pursue strategic goals determined independently and outside the formal policy-making framework. In fact, it was not until the end of 2005, when the Estonian Government (2005) introduced the Governmental Regulation no. 302 which classified the different types of strategic development plans and set out the procedures for their drafting, revision, implementation, evaluation and reporting, that there was legal regulation for strategic planning in Estonia. Before this, Keit Kasemets (2006), the former Director of Strategy of the State Chancellery (i.e. the Government Office), responsible for the coordination of the policy drafting and implementation at the highest level in Estonia⁵ considers that the lack of legal regulation led to a situation where a large number of strategies were approved at various levels, with hardly anyone caring whether the goals were consistent with each other, if the content duplicated another strategic document or if there was any money for implementation. Heli Aru (2001, 1.4), who later became the Advisor to the Minister of Education and Research, considers that in addition to the public policy decisions, approved at different levels, being in conflict with one another to a greater or lesser extent, it was not uncommon to work actively against orders, to take up an inactive ‘wait and see’ position, or to consciously ignore or distort their meaning in areas where the policies affected many organisations.

The current understanding of policy instruments seems to be largely limited to understanding policy as mandates and rules (i.e. legal regulations) as the primary (if not the only) elements. Although there are some important exceptions, such as the review of Estonian tertiary education policy undertaken by the OECD (see Huisman et al., 2007), in most cases, both locally and internationally, there is a tendency to limit the study and analysis of policy to the legal aspects. Indeed, some of the most active tertiary education policy researchers in Estonia as well as in Europe take the approach that limits policy analysis to legal regulations. Among the local observers, Aaviksoo (2001:27)

5 For a more detailed discussion of the problems related to the strategic planning and policy process, including the impact assessment, at the national level in Estonia see Pruks (2000), Kasemets, K. (2006 and 2009), PRAXIS (2008), Kasemets A. (2006 and 2009) as well as Järve and Vörk (2009).

emphasises, and the Estonian Ministry of Education and Research (2006:5–8) reports, that Estonian HE&R policy developments are only about formal legal changes. Even the afore-mentioned Tomusk, a well-read and widely travelled expert of tertiary education, a critical intellectual, who is not influenced by local funding, institutional or political pressures, takes a legalistic perspective in his principle publications on Estonian tertiary education policy (see Tomusk, 1996, 2001). More recently, Vilgats (2008) has continued within the same analytic frame and complained about the wide use but little conceptual clarification of the term ‘quality’ in Estonian legislation, which regulates tertiary education. Within the international context, the legalistic approach has also been followed in the pan-European policy studies on tertiary education that have been directed by Velt, Füssel, and Neave (1996), CHEPS Consortium (2006) as well as de Boer and File (2009).

Although limiting policy studies to legal aspects conforms to developments in Estonia⁶, where strategy documents can easily be ignored unless they take the form of mandates or formal rules, one should not disregard the different types of policy documents that have been adopted. Indeed, Estonian multidimensional HE&R policy deserves to be analysed and understood because it is one of the key strategies that should secure the transfer of the country to a knowledge-based society and economy. As the OECD (2001:191) review of Estonian tertiary education policy emphasises:

The challenge for Estonia – as it is for all OECD Member countries – is to establish the means for nation-wide strategic direction for higher education – while at the same time supporting a highly decentralised, flexible and responsive network of institutions. Higher education is perhaps the most important national resource for developing the human and intellectual resources of a small country to compete in the global economy.

To make sense of the many and varied HE&R strategies, adopted at different levels and time periods, we needed to undertake a systematic overview of all of the policy documents that have been developed to steer Estonian HE&R. To conceptualise the processes that lead to these documents we needed to look beyond the theoretical frames of mainstream political science and public administration about the policy-making and its implementation. As will be suggested below, the ‘garbage can model’ developed by Cohen et al. (1972) is more appropriate than the traditional steering mechanisms developed for Western democracies. Although it was initially proposed for conceptualising decision making in complex organisations, such as universities, it has recently been employed

6 As the current Chief Justice of the Supreme Court of the Republic of Estonia, states: ‘There is no politics outside the law and no law outside politics’ (Rask, 1998:167).

more widely to describe the irrational nature of the policy-making process (see Peters, 2005 for details) by showing that rather than policy problems looking for solutions, it is policies that are looking for problems to solve.

It could be expected that within the ‘garbage can model’ all political or institutional interests can find support within the existing strategies. Within this context, it is not surprising to learn that the Estonian Ministry of Finance’s (2007) ‘Proposal for the Method of Selecting the Aims and Indicators’, originating from the framework of normative thinking about policy-making as a ‘rational-comprehensive process,’ is hardly followed in the Estonian HE policy process. Instead of the systematic evaluation-planning-execution-evaluation cycle we can expect to find that Estonian HE&R policy has been developed and implemented on an ad hoc basis. More specifically, given the abundance of the Estonian HE&R policy documents, we can expect in line with the thesis statement of the ‘garbage can model’ that at some level they contain aspects, which can be used to support or even justify almost any political agenda or proposal for changes.

Research Method

In order (i) to find out what the Estonian HE&R policy consists of, (ii) to learn to what extent it follows the above mentioned Estonian Ministry of Finance’s (2007) ‘Proposal for the Method of Selecting the Aims and Indicators’ and (iii) to investigate what kind of process (steering mechanism) produces (i) and (ii), a policy study has been undertaken. Based on Hogwood and Gunn (1981), who distinguish between different kinds of policy studies (study of policy content, study of policy process, study of policy outputs, and evaluation) and policy analysis (evaluation, information for policy-making, process advocacy and policy advocacy), this research aimed to describe the substance of the multi-dimensional HE&R policy in Estonia and identify its steering mechanism. The assumption was that the analysis of the structure of and interrelationships between the different HE&R related strategy papers reflected the policy-making process and studying the content of these documents allowed us to identify the type of the steering mechanism that is being used in Estonian HE&R policy implementation.

To achieve the research aims we undertook a systematic review of the Estonian HE&R policy documents particularly looking at their goals, measures, activities and metrics, and we used methodological tools developed for meta-analysis. As far as possible with this kind of meta-study, we followed the QUOROM⁷ quality

7 This acronym stands for The Quality of Reporting of Meta-analyses. For details, see Moher et al. (1999).

standard, which specifies the criteria for conducting systematic overviews. The authors of the QUORUM standard, Moher et al. (1999), state that the meta-analysis has to be sufficiently detailed and include specific information, from objectives to data collection, and review methods as well as reporting the results and including a discussion section. For instance, it has to be explicit about the research aim (question), the inclusion and exclusion criteria of the selection of the primary studies (in this case the policy documents), data abstraction methods used and processes followed. As for the sampling, which is the basis of data collection and meta-analysis, a summary of the selection and exclusion process in the form of a flowchart has to be provided. In the final discussion section, in addition to summarising the main results and validity threats, which might lead to different interpretations of the results, suggestions should also be made for future research. To meet the QUORUM's requirements and make the methodological choices transparent, the following sections give details of the aim, population, sampling, data collection and analysis.

Population and Sampling

An aim of the systematic review was to map what the Estonian HE&R policy consists of and clarify to what extent the goals mentioned in the strategic documents met the criteria of the Estonian Ministry of Finance (2007). To do this all the valid Estonian state policy documents (including the national strategies, development and implementation plans) that are directly applicable to HE&R were collected. Although it is often almost impossible to collect all of the existing documents (Cooper and Lindsay, 1998), an attempt was made to compose the complete sample in this systematic overview. As an absolute minimum, the searching methods and selection criteria should enable the identification of all of the important policy documents for steering Estonian HE, together with the goals, measures and actions, as well as the metrics used for the evaluation. The sample was considered to be representative once the saturation point had been reached – recognition that additional data collection and analysis does not lead to new or additional findings about Estonian HE&R policy documents. The inclusion and exclusion criteria should be explicitly stated as this allows other researchers to validate the analysis (King, 1995) or update the results (Patrick et al., 2004).

As new policy documents are often added and existing ones updated before they expire, a clear search window had to be set. Given the time when the data collection was undertaken, to be included in the analysis the policy document had to be in effect on 27.04.2009 and because the state registry that should include all of the national strategies and their implementation plans did not exist,

the sample frame had to be composed by the author following the logic of snowball sampling. First, the list of the existing development plans available on the website of the State Chancellery was compared to that of the Estonian Ministry of Education and Research and the Estonian Ministry of Economic Affairs and Communications. On 27.04.2009 the State Chancellery listed 134 public policy documents, the Estonian Ministry of Education and Research 51 and the Estonian Ministry of Economic Affairs and Communications 22. Altogether this meant 207 strategic documents and from these 162 remained after duplicates were excluded. The titles and the author's prior knowledge enabled the identification of 27 documents from the sample frame, which were directly relevant to HE&R. However, the initial analysis showed that some of these 27 documents did not fit into the sample either because they had expired (n=8) or because they were still in the process of development (n=2). Also, a decision was made to exclude the Academic Programme for Teaching Estonian Language and Culture Abroad (2005–2010) because it represents one of the programs that Estonian Ministry of Education and Research has developed to implement specific tasks of the HE&R policy⁸. So, the total number of policy documents was therefore 16 which were grouped into 12 policy sets (see Appendix 1) in order to avoid double counting strategies and their implementation plans.

The sample was checked again while undertaking the meta-analysis. The list was sent to Tiina Annus, Head of the Analysis Department, and her colleagues at the Estonian Ministry of Education and Research on 12.05.2009. As they did not suggest any additions, it was concluded that the saturation point had been reached in the sampling. However, it was discovered later, when an attempt was made to collect the evaluation reports of the policies that had been implemented for a sufficient amount of time, that the 'Estonian e-Learning Strategy in Vocational and Higher Education 2007–2012' cannot be referred to as a strategic document. Similarly, neither can the document entitled 'National higher education program on ICT "Tiger university+" (2009–2012)', which was approved by the board of the Estonian Information Technology Foundation, be viewed as an official policy document. Both documents concerned semi-private policy initiatives (Aru, 2009) and were, therefore, excluded from the sample. Furthermore, taking into account that not all of the remaining policy documents dealt solely with HE, the sample was further refined by filtering out from the strategies only

8 There is no publicly available list of programs implemented by either or both the Estonian Ministry Education and Research and its policy implementing agencies. The HE&R policy documents analysed in detail in this paper mention 20 different programs among the planned activities. At least six of these programs are also mentioned among the 34 programs implemented by the Archimedes Foundation from the EU Structural Funds. (For details, see Archimedes Foundation, 2012).

the components that were directly related to HE&R. In the process of doing so, it also turned out that in two instances the specific objectives, measures and actions related to HE&R were only specified at the level of the implementation plan⁹ or programmes¹⁰. Therefore, the National Strategy for the use of Structural Funds 2007–2013, and Estonian Integration Strategy 2008–2013 were left out from the sample, or to be more precise, included only through their implementation plans or programmes. The final list of policy papers (N=12) that were included in the meta-analysis is listed in the Table 1 and their exact components that relate directly to HE&R are given in Appendix 2. In order to provide a schematic picture of the sampling process, the following flowchart suggested by the QUOROM statement was created.

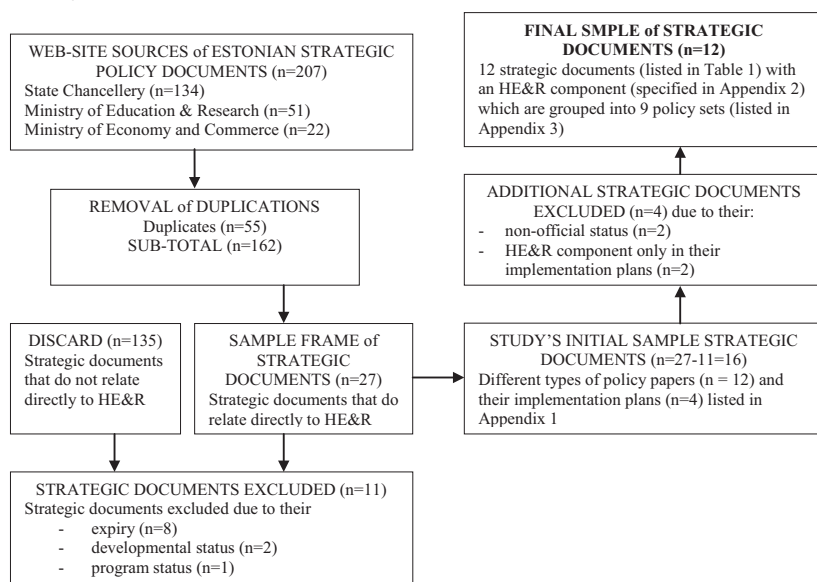


Figure 1. Sampling of the Estonian Higher Education and Research (HE&R) policy documents

Composed by the author

9 An element of the Estonian Integration Strategy 2008–2013 and its implementation plan for 2008–2010.

10 Elements of the National Strategy for the use of Structural Funds 2007–2013 and its Operational Programme for Human Resource Development, CCI number: 2007EE051-PO001.

Data Collection

Data collection from the Estonian HE&R policy documents (with the special emphasis on their goals, measures, activities and metrics) followed the procedures identified by Forster (2006:91) who divides the *modus operandi* of document research into five stages: (i) securing access, (ii) controlling for authenticity, (iii) understanding documents, (iv) evaluating (the usability) of data and (v) further application (actual analysis) of data. Access to the data was secured in several stages of data collection and went hand-in-hand with the specification of the population and use of the selected (snowballing) sampling procedure, as described in detail in the previous section. Checking the authenticity of the documents did not present a major challenge. In the case of the policy documents that required the approval of parliament or the government, the electronic version of the State Gazette was used. This ensured that the final and valid version of the document was used for the analysis. In the case of the development plans, it was assumed that the versions available through the websites of the State Chancellery and the Estonian Ministry of Education and Research were the most recent and valid versions of the documents¹¹.

The first step in undertaking the systematic overview of the Estonian HE&R policy documents with special emphasis on the goals, metrics and data sources was the compilation of a separate factsheet (an overview table) on each of the policy sets listed in Appendix 1¹². In addition to the basic information (such as the title, author(s), responsible ministry, contacts, source and its reference, date of issue and expiry, type of policy document, the concentration on HE and parts that were included in the analysis) an attempt was made to abstract the following information from the documents whenever available: (i) major goal(s); (ii) sub-goal(s); (iii) measure/course of action; and (iv) activities. In addition, whenever possible components relating to all of these (i–iv) were registered: indicators/metrics and method of measurement, base-lines of measurement, intended results, and data sources.

In the second stage of data collection we had to overcome the challenges of understanding the data. The first had to do with the language and our interpretation abilities (Scott, 2006:32). As all of the documents were fairly recent and written in Estonian, this did not present a challenge such as those faced by

11 Although this may sound trivial, the National Audit Office (2008:11–13) reports that the working versions of the documents can be misleading, not only for the auditors but also for the Ministry.

12 During the course of data collection, some policies were eliminated from the analysis for the reasons mentioned in the previous section. The final list of policy sets, about which an overview Table was composed, is listed in Appendix 3.

scholars working on historic documents in foreign, extinct or dead languages. However, the interpretation of the policy documents' basic terminology (such as goals, expected results, measures, and courses of actions) was not always very easy.

As Scott (2006:39) highlights, there are three aspects of the understanding of the text: (i) intended content – what the author wanted to say; (ii) received content – how readers understood it; and (iii) internal meaning – semiotic meaning of the text. In other words, one should not forget, according to Scott (2006), the reasons why the text was formed and the identity of the intended reader. The fact should not be ignored that the objective meaning of the text is actually wider than the one intended by the author. Although the various authors of the HE&R policy documents use different terminology, the (intended) meaning can be expected to be rather similar. The opposite also occurs – despite the use of the same concepts and terms in the strategy papers, the anticipated meaning of these by the authors in the given context differs. So, it is imperative to get a good sense of the context, otherwise it is difficult to understand the intended meaning. To overcome these challenges, we double-checked our interpretation of the terminology with the authors of the implementation plans as well as evolutions, whenever they were available¹³. This additional data collection effort enabled us to harmonize our interpretation of the terminology used in the policy documents with respect to the following aspects: goal(s) at various levels, measures (courses of action) and activities. The re-coding of the components of the strategy is documented in the notes of the Table 2. Last but not least, an effort was made to extract from the policies and the accompanying documents, such as the implementation plans and evaluation reports, the metrics and their data sources.

13 At the time, midterm evaluations were available for the Higher Education Strategy (n=1), Knowledge-based Estonia (n=2), Operational Programme for Human Resource Development (n=1), Integration Strategy (n=1), and Development Strategy of the Estonian Language (n=2).

A Description of the Estonian Higher Education and Research Policy Documents

The fragmentation of Estonian HE&R policy is almost overwhelming – especially given the size of the country and the total number of students enrolled in the institutions of tertiary education. More specifically, there are 12 strategic documents (listed in Table 1) with HE&R components (specified in Appendix 2) which can be grouped into 9 policy sets (listed in Appendix 3). As shown on Table 1, in addition to the five sectoral policies and one implementation plan, relating just to HE&R, there are six other strategic documents, which cover additional public policy issues but include HE&R in Estonia. After elimination of duplicates (because the implementation plans repeat in some cases the content of the strategy that they relate to), we identified in total 22 different major goals and 37 sub-goals, 34 measures¹⁴ and 193 activities¹⁵ related to HE&R in these policy documents. In the following sections the content of the Estonian HE&R policy documents is discussed in more detail.

Using the Governmental Decree no. 302 that differentiates hierarchically between the Central Strategic Plan (CSP), Sectoral Development Plan (SDP) and Organisational Development Plan (ODP), for the classification of the strategy documents listed in the Table 1, it can be concluded that there is a single CSP to steer HE&R, five sectoral policies and one ODP. In addition to these, there are four implementation plans (IP) that coordinate issues relevant to HE&R. Last but not least, a separate programme document has been developed to plan and guide the channelling of EU funds to Estonian HE&R. Although this programme document is difficult to classify into the hierarchical structure of the governmental decree, it was nevertheless included in the sample as the document specifies the very general ideas of the strategy¹⁶ into specific goals, measures and activities (together with their indicators).

Most of the reviewed policy documents, listed in Table 1, were launched quite recently. There were three that started in 2007, five that started in 2008 and four that were put into effect in 2009. The strategic document concerning Estonian language policy was older; they were introduced in 2004. The most important strategy paper in this context – the Estonian Higher Education Policy – was also older; it was approved in November 2006. Of the 12 documents reviewed in this analysis the expiry dates of 3 occurred in 2010, 1 each in 2011

14 There were 40 measures before the obvious duplicates in various policy sets were excluded. See Table 2 and its notes for details.

15 There were 220 activities before the obvious duplicates in various policy sets were excluded. See Table 2 and its notes for details.

16 National Strategy for the use of Structural Funds 2007–2013.

and 2012, 5 in 2013 and 2 in 2015. The point to be made here is that the dates when the policy documents came into effect, as well as when they expire, do not suggest a systematic planning approach. Systematic planning would presuppose that the CSP is set first, along with its major goals, which would be translated into specific goals in the sectoral, organisational and institutional strategies and in the implementation plans. During the period reviewed it appeared that the 'Action Plan for Growth and Jobs' – the state's CSP (of which there are only three) – had been set for the years 2008–2011, while many of the lower level policies were set to last few years longer. For instance, two SDP are in effect until 2013, and another two until 2015, and the ODP until 2012, while the programme document developed for channelling EU funds to HE&R is in effect until 2013. All this suggests that there is a long way to go in Estonian HE&R policy-making to meet the intentions of the Governmental Decree no. 302 which structures the strategic documents approved at different levels of decision-making into different types, and sets a hierarchical relationship between them and determines the procedures for their drafting, revision, implementation, evaluation and reporting.

Table 1. *Strategic Estonian Higher Education and Research (HE&R) policy documents: Central Strategic Plan (CSP), Implementation Plan (IP), Organisational Development Plan (ODP), Sectoral Development Plan (SDP), of the Ministries of: Culture (MoC), Economy and Commerce (MoE&C), Education and Research (MoE&R)*

Name of the policy document	Responsible Ministry	Source	Starting year	Expiry year	Type of the strategic document	Does this relate only to HE&R?	Included in the review
Higher Education Strategy	MoE&R	State Gazette	2006	2015	SDP	Yes	Completely
The implementation plan of the Higher Education Strategy	MoE&R	MoE&R, State Chancellery	2008	2010	IP	Yes	Completely
Higher education internationalisation strategy	MoE&R	MoE&R	2007	2015	SDP	Yes	Completely
Action Plan for Growth and Jobs	MoE&C MoE&R	State Chancellery	2008	2011	CSP	No	Partially
Knowledge-based Estonia	MoE&C MoE&R	State Gazette, MoE&R	2007	2013	SDP	No	Partially
The implementation plan of the Knowledge-based Estonia	MoE&C MoE&R	State Gazette, MoE&R	2009	2013	IP	No	Partially
Estonian Teacher Education Strategy	MoE&R	MoE&R	2009	2013	SDP	No	Partially
The implementation plan of the Estonian Teacher Education Strategy	MoE&R	MoE&R	2009	2013	IP	No	Partially
Operational Programme for Human Resource Development	MoE&R	MoE&R	2007	2013	Uncategorizable	No	Partially
Development Strategy of the Estonian Language	MoE&R	MoE&R, State Chancellery	2004	2010	SDP	No	Partially

Table 1. Continued

Name of the policy document	Responsible Ministry	Source	Starting year	Expiry year	Type of the strategic document	Does this relate only to HE&R?	Included in the review
The implementation plan for the Integration Strategy	MoC	State Chancellery	2008	2010	IP	No	Partially
Smart and Active People	MoE&R	MoE&R	2009	2012	ODP	No	Partially

Source: Composed by the author

During the course of data collection the goals, measures, actions and metrics (together with data sources if available) of the Estonian HE policy documents were registered. It is more difficult to count the goals, measures and activities of the Estonian HE&R policies than it may seem at the outset because the actual policy documents use very different styles, structure, terminology and vary greatly in their detail. The documents not only use the preferred terminology style and structure of the authors of the different policy papers, the documents do not use any referencing system, which would allow one to identify how the goals, measures, or actions relate to other strategies. An additional complication is that even the style and structure of different parts of the same policy paper may vary a great deal (like for instance in the case of the Estonian Higher Education Strategy) – reflecting, in all probability that different contributors have authored different parts. Therefore, a great effort was put into producing the overview tables that would describe the policies in the common structure. This allowed counting the frequencies presented in the Table 2 (see the cross-totals for a summary).

A normative policy interpretation would allow one to exclude (automatically) from the total frequency counts the items related to the CSP (Action Plan for Growth and Jobs) and ODP (Smart and Active People). It could be argued that they represent strategies for different hierarchical positions (in the sense of the Government's Decree no. 302) which, if they were in total harmony with the content of all the HE&R related policies and their implementation plans, would lead to the double or triple counting some components of the policy documents. Following this logic, the sub-totals of the Table 2 show the total number of goals, measures and actions in the strategy papers (excluding the items of CPS and ODP). Furthermore, an attempt was made in this analysis to identify the

double (or triple) entries individually. As shown in Table 2 and explained in its notes, the results of this exercise allowed us to establish that there are 22 different major goals and 37 sub-goals, 34 measures and 193 actions that relate to HE&R in the selected Estonian policy documents. Altogether this means that there are 286 items that should be measured to assess the progress of the Estonian HE&R strategies. We shall return to this in the section that gives an overview of the metrics employed in Estonian HE&R strategies.

Table 2. The number of Higher Education and Research (HE&R) related goals, measures and activities in the selected Estonian policy documents

Name of the policy document	Major goals (n)	Sub-goals (n)	Measures / courses of action (n)	Activities (n)	Activities – duplicates in the policy & its implementation plan excluded (n)	Items to be measured total (n)
Higher Education Strategy	6	0	4	45	(34 ^a -32)+(33-32)+32=35	57
The implementation plan of the Higher Education Strategy	0	12		33		
Higher education internationalisation strategy	1	3	3	21 ^b	21	28
Action Plan for Growth and Jobs ^c	2 ^d	6	10	37	37	55
Knowledge-based Estonia	3	0	4	36	36	43
The implementation plan of the Knowledge-based Estonia				36		
Estonian Teacher Education Strategy	6 ^e	6 ^f	6	32 ^g	(29 ^h -18)+(23-18)+18=34	52
The implementation plan of the Estonian Teacher Education Strategy	0	0		23 ⁱ		
Operational Programme for Human Resource Development	0	5 ^j	4 ^k	8	8	17
Development Strategy of the Estonian Language	1	1	1	4	4	7

Table 2. Continued

Name of the policy document	Major goals (n)	Sub-goals (n)	Measures / courses of action (n)	Activities (n)	Activities – duplicates in the policy & its implementation plan excluded (n)	Items to be measured total (n)
The implementation plan for the Integration Strategy	0	1	0	0	0	1
Smart and Active People ¹	3	3 ^m	8 ⁿ	45 ^o	45	59
Cross-total	22	37	40	321	220	319
Sub-total (without Action Plan for Growth and Jobs & Smart and Active People)	17	28	22	239	138	205
TOTAL (duplicates individually identified & excluded)	22	37	34	220	193	286

^aSince the implementation plan merges the 15 activities listed under the 2nd field of action of the strategy into 5, and 2 activities listed under the 4th measure into 1, 34 (instead of 45) activities are used in this calculation. ^bAlthough within the 2nd and 3rd measures (called chapters in the strategy) the activities are also grouped and titled under the common nominators, the figure in the table above includes only the specific actions. ^cThis strategy uses the structure which lists aims, sub-goals and measures with no activities. However, the 8th aim groups the measures into 5 categories and subtitles these under the common nominators. For the purposes of this research, the latter were interpreted as courses of action and therefore, the Table lists 10 measures (of which 5 are titled and 5 untitled in the strategy) as well as 37 activities (which are called measures in the strategy). ^dAlthough the strategy mentions in the introduction 3 measurable goals, there are also 9 aims (of which 2 are directly relevant to HE&R) that are listed in the table of content and are used as the sub-headings/structural components in the strategy. The figure in the table above refers to the latter. ^eThese major goals are called ‘strategic visions’ in the strategy. ^fThese sub-goals are called ‘aims’ in the strategy. ^gThe strategy lists these under the courses of action as sub-measures. ^hIn one instance the implication plan merged 2 actions mentioned in the strategy into 1, in another instance 3 were merged into 1 and in the third instance only a third of the action mentioned in the strategy was mentioned in the implementation plan. Therefore, 29 (instead of 32) activities are used in this calculation. ⁱThe operational programme calls these ‘goals/actions’. ^jThese are aims attached to the ‘priority directions’ in the operational programme. ^kThe implementation plan calls these ‘priority directions’. ^lThis strategy uses a structure which identifies 3 general goals and 4+1 ‘fields of activity’, to which sub-goals (called strategic aims) along with the indicators and measures (divided further into sub-measures and sub-sub-measures) are related. Basically these 4 fields of activity should cover the strategies that MoE&R is responsible for. ^mThese relate to the aims of the ‘fields of activity’ that have a HE&R component in the strategy. ⁿThese are listed as sub-measures under specific measures in the strategy. ^oThese are listed as sub-sub-measures in the strategy.

Source: Data collated by the author

In order to get a better idea of the content of the Estonian HE&R policy papers, the data was recoded, allowing the same major goal, sub-goal or measure to be classified into more than one category (i.e. major policy theme listed in the first column of Table 3). Multiple entries were allowed because the Estonian HE&R policy documents have been worded so that each of its functional component (such as aim, measure or action) may include more than one suggestion about the strategic direction of the specific policy item. Table 3 shows the results of the recoding by listing the frequencies of Estonian HE&R strategy in different policy themes¹⁷. The fact that the ‘Knowledge Based Society/Economy’ came up as the most frequent category within the major goals was to be expected by anyone familiar with the Estonian context. Yet, the finding that indicates ‘Access & Equity’ as the second most frequent category within the Estonian HE&R policy documents while important categories within HE&R policy studies and public discussions, such as ‘Curriculum & Studies,’ ‘Study & Library Materials,’ ‘Infrastructure,’ ‘Financing’ and ‘Life-long Learning’ remained completely empty at the major goals level of all of the strategic documents. The case of ‘Life-long Learning’ can be explained by the fact that a separate strategy was being developed, but it was surprising that during the period reviewed here traditionally central HE&R policy issues were not prioritised in Estonian HE&R policy documents. Moreover, the effects of the major infrastructure developments, as well as the reform of HE&R funding and the introduction of learning outcome-based curricula have been characterizing the internal life of many HE&R institutions in recent years. But as the effects have impacted without having any explicit prioritization in the national strategies at the level of major goals, they reflect that these themes might be seen as means rather than ends of the policy. In addition to the ‘Knowledge Based Society/Economy’, HE&R polices place a lot of emphasis on the ‘Curriculum & Studies,’ ‘Students (including doctoral students),’ and ‘Quality’ at the level of sub-goals, as shown on Table 3. On the basis that ‘Quality’ and the ‘Knowledge Based Society/Economy’ appeared at the sub-goal level amongst the most frequent categories reflects that these policy themes have been introduced and used in Estonian policy discussions as imperatives that no right-minded individual should oppose¹⁸. Also, similar to the major-goals, ‘Study & Library Materials,’ ‘Infrastructure’ and ‘Financing’ get very little attention at the level of sub-goals.

17 It was not practical to list the exact content of the classifications. However, these lists that contain all the Estonian HE&R policy goals, sub-goals and measures in different categories, are available upon request.

18 For a critical discussion concerning the ‘Quality’ theme within the West European context see Neave (1994) and concerning the ‘Knowledge Society’ theme within the East European context see Tomusk (2004:145–166).