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Gender Segregation in Estonian Vocational Education and Training Through the Eyes of Stakeholders



Meril Ümarik¹ 💿 • Kadri Aavik²

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Abstract

In this paper we aim to understand how the discourse of VET stakeholders (educational administrators, school leaders and vocational teachers) reproduces and/or contests gender-typical occupational practices in VET. Drawing from interviews with VET stakeholders in Estonia, we found that, as a rule, teachers and heads of schools have noticed gender segregation both in society and in the context of their own school. However, it was typically not seen as problematic. While generally holding supportive views on gender balance in occupational fields and challenging gender stereotypes in society, the respondents' narratives tended to reproduce gender stereotypes via three different strategies: 1) attributing different abilities, dispositions and interests to male and female students and teachers; 2) emphasizing that female students were physically weaker; and 3) evoking the notion of the "breadwinner" to explain and justify why fields occupied by male students and teachers were more paid more. We argue that VET stakeholders in Estonia do not fully acknowledge the gendered nature of VET institutions or their own role in shaping gender ideologies and practices in this context.

Keywords Gender segregation \cdot Occupational segregation \cdot Vocational education \cdot Gender stereotypes \cdot Gender equality \cdot Estonia

Introduction

Promoting gender equality in education has been a worldwide policy aim and subject of academic interest throughout the last 30 years. It has been a mission for several

Meril Ümarik Meril.Umarik@tlu.ee

> Kadri Aavik kadria@tlu.ee

¹ School of Educational Sciences, Tallinn University, Narva Road 25, 10120 Tallinn, Estonia

² School of Governance, Law and Society, Tallinn University, Narva Road 25, 10120 Tallinn, Estonia

international organizations (OECD, UNESCO etc.), stipulated in national legislation of many countries and a goal in numerous research and development projects. Two parallel discourses have co-existed. On the one hand, there is the 'gender equality discourse', that includes policies aimed to empower girls and women in education. On the other hand, the 'boy discourse' that has been popularized in the media, decries the lower educational outcomes of boys and men (see Lahelma 2014). As argued by Lahelma, neither of these discourses have been effective. Moreover, the latter incorporates a theoretical problem (ibid) by relying on a stereotyped, binary and essentialist view on gender, conceptualizing men and women as radically different. Moreover, this view tends to present a distorted picture of reality, as in practice, despite their lower educational outcomes, male students still tend to end up in better labor market positions (Jørgensen 2015).

Despite these legislative and policy aims, gender segregation in education and employment has remained a critical issue and a central dimension of labor market inequality (Hillmert 2015). This involves both horizontal and vertical segregation. The former means that men and women are concentrated in different occupations and sectors, whilst the latter reflects their unequal positioning on the career ladder. There is an extensive body of research that has focused on the relationships between educational and occupational gender segregation. Less attention has been paid to the role of vocational education and training (VET) systems, institutions and teachers shaping gender-specific occupational segregation (Hillmert 2015; Smyth and Steinmetz 2015) and the role of gender in recruitment into vocational programs (Haasler and Gottschall 2015).

The role of VET in facilitating or challenging gender segregation in the labor market is a complex issue. When viewing educational institutions as 'sorting machines' (Kerckhoff 1995) it should be acknowledged that some of the sorting is selfsorting—that is, students and parents choose different study programs. Yet, sorting in this context is also institutional: the placement of students into academic and vocational tracks done by teachers, school administrators or through organizational routines (Reisel et al. 2015) or vocational guidance (Lappalainen et al. 2013). The norms and attitudes prevailing in the wider society, in educational institutions or shared among teachers and student peers play a role in both cases.

Educational institutions are gendered. This means that besides providing knowledge, skills and competences, they also shape students' gender related attitudes. The individual choices of students, including career choices, are shaped by their educational experiences, institutions and circumstances. Educational institutions serve as a significant social and cultural context, where regulative and normative practices, power relations as well as identities are produced and reproduced (Renold 2006). Many studies have argued that often educational institutions could do much more to promote gender equality. Studies from several countries focusing on the attitudes and pedagogical approaches of VET practitioners suggest that VET institutions are gender blind (Evans 2006). Existing unequal gender arrangements are reinforced through the curricula (Ledman et al. 2018), by teachers and teacher educators (Kreitz-Sandberg 2013) or by educational training guidance practitioners (Lappalainen et al. 2013).

In this paper, we focus on the perceptions and discursive practices of central stakeholders in Estonian VET— educational administrators, school leaders and

vocational teachers. We aim to understand how VET stakeholders reproduce and/or contest gender-typical occupational practices.

We have two central research questions. First, how do central stakeholders of VET perceive gender segregation in the context of VET? Second, what are the strategies applied by stakeholders in order to promote gender equality in VET institutions?

The (Vocational) Education System as a Gendered Institution

Institutions are gendered: they set normative standards for doing gender and are complicit in reproducing gender order in the society (Kimmel 2004).

A number of qualitative studies focus on how teachers, as well as the hidden curriculum, directly or indirectly shape gender differences and gender (in)equality in school settings. It has been found that teachers tend to perceive boys and girls and their abilities differently and consequently treat them differently (Kütt and Papp 2012). Although primary socialization takes place at home, the education system remains an important institution in shaping our understandings of gender in the private and public spheres, and in the occupational and career prospects of men and women. While early childhood and general education have been recognized as gendered institutions reproducing gender stereotypes as well as stereotype-led career choices (e.g. Kuurme et al. 2012; Neudorf et al. 2016), vocational education has been given less attention in this regard.

In their study of Swedish VET programs, Ledman et al. (2018) argue that vocational curricula tend to reinforce rather than challenge existing gender structures in the labor market and wider society. Similar conclusions have been made by Evans (2006) based on the case of the UK, where considerable 'gender blindness' in VET institutions and workplaces was identified. Lappalainen et al. (2013) have found that educational and vocational guidance practices in Finland rely on binary constructions of gender as well as on heteronormativity. Thereby, in the context of vocational guidance in comprehensive education, gendered patterns and traditional educational routes are reinforced. Even in cases where making gender-atypical career choices is encouraged by teachers, it has been challenged in informal student cultures. The role of the school culture in shaping students' dispositions has been further emphasized by Colley, James, Diment and Tedder (2003). They explain how students orientate themselves towards a 'vocational habitus' in the learning process influenced by that culture and its prevailing ideologies (ibid).

Gender stereotypes of occupations have been considered as the main mechanism by which patterns of segregation are reproduced. However, previous studies (e.g. Fuller et al. 2005) have indicated that gender segregation in VET persists partly because it is not always perceived as a 'problem' by young people, employers or other relevant stakeholders. Even teacher educators tend to relate to dichotomized perspectives on men and women and justify gender segregation, as argued by Kreitz-Sandberg (2013, p. 461). According to her, poorly mediated approaches to gender sensitive teaching might do more harm than good. It is not always acknowledged that gender stereotypes in career choices are restricting both men and women. In particular, men in 'feminized occupations' (e.g., early childhood teacher, care occupations) can encounter criticism from peers or social disapproval (Fuller et al. 2005). The fear of marginalization

potentially limits career choices of many young people. Moreover, due to genderstereotypical perceptions, significant potential has been unrealized in the labor market and in society where STEM and IT occupations continue to experience a considerable labor shortage.

Gender Segregation in VET as an Outcome of 'Institutional Sorting'

Studies aiming to explain occupational segregation by gender have outlined a number of distinct mechanisms through which this occurs. On the one hand, individual choices are crucial determinants of occupational positioning, but these choices are intertwined with and framed by institutional constraints (Smyth and Steinmetz 2015). The institutional structure of VET systems sorts students into different educational fields and influences their transition into the already gender-segregated labor market. Comparative studies focusing on the impact of VET systems on facilitating or hindering occupational and labor market gender segregation (e.g. Hillmert 2015; Smyth and Steinmetz 2015; Estévez-Abe 2006) have produced complex and contradictory findings. It has been argued that a highly differentiated tracking system in education (such as the German system) may reduce gender segregation because learning aspirations are determined more by the track that students are in and less by the influence of significant others (peers and parents) (Buchmann and Dalton 2002; cit Hillmert 2015, p. 130). However, Hillmert's analysis (2015) showed that early differentiation into educational tracks reduces gender-typical occupational choices among young men, but favors gender-typical aspirations among young women. The same tendency was found by Smyth and Steinmetz (2015). However, the findings of the study conducted by Estévez-Abe (2006) contradicted with those of Hillmert (2015) and Smyth and Steinmetz (2015), suggesting that educational segregation processes have a higher probability of leading to labor market segregation in early tracking systems. Estévez-Abe (2006) also acknowledges the role of gender differences inside the system. Apprenticeshiptype systems are targeted at developing industry- and company-specific skills that are biased against women because of labor market interruptions expected in their case.

While traditionally, gender segregation in education and in the labor market has mostly been the focus of quantitative studies, we suggest that these accounts offer only a partial explanation. For example, there are parallel systems of VET (schools-based and apprenticeship systems) in operation in Germany and Norway that are segregated by gender. Therefore, industry-related occupations that are mainly chosen by boys tend to be taught via an apprenticeship-type of training, while school-based training is provided for low-paid occupations related to social and education fields mainly pursued by female graduates. (e.g. Høst, Seland and Skalholt 2015; Haasler and Gottschall 2015). Moreover, the apprenticeship track itself can be segregated. A study from the UK reported that female applicants make up the majority in lower-paid occupational fields such as early childhood education and general education. Conversely, men dominated higher paid professions like engineering and information technology (Fuller et al. 2005). Even though correlations have been found between skills formation systems and gender segregation at the macro- and meso-level, the mechanisms explaining gender-typical occupational choices of women and men and inequality regimes in organizations (Acker 2006) are much less understood.

Seeking Institutional Change: Three Pillars of Institutional Order

In our paper, the neo-institutional approach, more specifically, the concept of three pillars of institutional order proposed by Richard Scott (2008), helps to explain the persistence of gender stereotypes reproducing segregation patterns in VET in post-Soviet Estonia. According to this conceptual frame, institutions comprise of regulatory, normative and cultural-cognitive aspects. Although institutions function to provide stability and order, they undergo both incremental and revolutionary change (Scott 2008, p. 48–50). The institutionalization of change at the regulatory level is based on the introduction of new legal regulations, while at the normative level, a change in shared norms is needed. Moreover, cultural-cognitive elements of institutions consist of shared conceptions and frames through which meanings are made (Scott 2008, p. 57).

However, the pillars of institutional order (regulations, norms and belief systems) can be aligned or misaligned (Scott 2008). For example, some new requirements may be legally supported at the regulatory level but have not become legitimate at the normative or cultural-cognitive level. However, achieving sustainable change in institutional development requires a change in laws and regulations as well as in shared norms and beliefs. Estonia provides an exemplary case, where radical changes have been introduced at the regulatory level during the last 25 years of reindependence. The transition from the Soviet regime to a democratic society has involved rapid transformations and institution-building in all spheres of society since Estonia's reindependence in 1991. This institutional change has included the introduction of gender equality regulations in 2004 - when Estonia joined the EU. However, it has been argued that these regulatory changes have not led to the adoption of more egalitarian gender norms and individual attitudes (Turu-uuringute AS 2016) or practices (Pajumets 2012; Aavik 2015). Currently, Estonia has the highest gender pay gap in the EU - 25.3% (Eurostat 2018).

The transition period involved the collapse of the previous VET system, closely related to the Soviet industrialized economy, and setting up a school-based VET system. Since the mid-1990s, several reforms have been introduced in VET, including the development of the national qualification system and national curricula, as well as the restructuring of the network of VET schools. (Ümarik 2015). However, the issue of gender has not been given much attention in the policies and strategic documents of the Estonian VET system. During the period 2001–2013, the main priorities in VET were stated in the national development plans for VET. None of these documents discussed gender (Aavik, 2011). In 2014, The Estonian Lifelong Learning Strategy 2020 (2014) was adopted. In this document, gender is occasionally mentioned. Gender stereotypes in career choices and gender segregation in the labor market are identified as barriers. However, gender equality is not reflected in its goals.

Although roughly equal numbers of male and female students take part in Estonian VET (53% and 47% respectively) (Haridussilm 2018), there is considerable gender segregation between the fields of study. For example, in 2017/2018, women formed only 17.6% of students in the field of information and communication technology and men made up 9.6% of the student body in the field of health and wellbeing (ibid). The longitudinal view shows that generally, segregation patterns have not decreased, but in fact grown. For example, in 2007/2008 the division between female and male students

in the field of IT and communication technology was 30.9%/69.1% and in the field of health and wellbeing 92.6%/7.4% (ibid).

Schools, school leaders and teachers are required to follow the principles established in the Gender Equality Act (Soolise võrdõigusikkuse seadus 2015) and the Equal Treatment Act (2017) in their work. They have a legal obligation to prevent discrimination and to promote gender equality in their organizations. Our study seeks to show how these regulatory changes have been adopted and inform VET stakeholders views on gender and gender segregation in VET. When proceeding from the three pillars of institutional order provided by Scott (2008), there are signs of institutional change taking place on the regulatory level. Whilst there are general national level regulations promoting gender equality, there are no specific requirements for schools. However, there are now guidelines to help integrate gender issues into teaching practice.

Studying Perceptions: Research Design

Gender in VET has not thus far been studied in Estonia, except for an analysis of vocational education and training development plans (Author 2011) and the construction of men and masculinities in vocational education and training (Aavik and Ümarik 2019).

The current study was designed as an exploratory one, canvassing the perspectives of three kinds of VET stakeholders and aiming to provide a foundation for more thematically focused studies in the future. The sample comprised of three key groups: central educational administrators in VET (educational experts), school leaders and vocational teachers. These stakeholders are directly or indirectly involved in shaping VET institutional environments and the attitudes of vocational students.

The data was gathered within the framework of the project, 'SIHT – Integration of Gender into Teacher Training and Continuous Training' (2014–2015).¹ Semi-structured individual interviews were conducted with educational experts (administrators from the Ministry of Education and Research of the Republic of Estonia and Foundation Innove supporting development of VET) and school leaders. The teachers and school leaders represented both vocational training centers, providing training in a variety of training fields, and more specific VET institutions in the fields of service, health care and arts. In addition, three focus group interviews were conducted with teachers from different fields, including those teaching vocational subjects and general subjects. The sample of teachers was compiled in collaboration with school leaders who suggested to us teachers who were potentially interested and available to participate in the study. Due to this sampling strategy, we can assume that teachers having no interest or strongly negative views on gender issues might have opted out from the study. In total, 24 people were interviewed, including 15 vocational teachers (eight women and six men), six school leaders (three men and three women) and three educational experts (one woman and two men). The length of the individual interviews ranged from 1 to 2 h, and focus group interviews lasted approximately 1.5-2 h. Gender equality was covered in four spheres: (1) in society, (2) in the education system, (3) in vocational education and

¹ The SIHT project aimed to integrate gender perspective into teacher training and further education and to raise gender awareness of educational professionals. The project was funded by the Norwegian Grants 2009–2014 program 'Mainstreaming Gender Equality and Promoting Work-Life Balance'.

(4) in the stakeholders' own specific fields of activity. The semi-structured nature of the interview enabled respondents to introduce additional topics relevant for them.

The transcribed interviews were analyzed by using a grounded theory-led thematic analysis approach (Braun and Clarke 2006). The analysis took place in three stages. First, all the textual units on gender were coded. Second, the codes were reviewed and thematic categories were formed. Finally, the thematic categories were grouped into broader themes and sub-themes. Research participants were offered full anonymity in the study, therefore in the paper pseudonyms have been used instead of real names.

Gender Segregation in VET: Perceptions of Experts, School Leaders and Vocational Teachers

In the interviews, a variety of different views on gender issue were presented. Some of the interviewees admitted that during their career, they had not given much thought to gender issues. It was evident that some respondents appeared to form opinions and develop their arguments regarding gender during the interview.

Gender Equality = 'Gender Balance' in VET: Important but Not Entirely Possible

Although we inquired the stakeholders about their views on gender and gender equality in VET more broadly, their narratives tended to center on 'gender balance', by which they reframed the focus and took up a very particular and narrow view on gender equality. Most experts, school leaders and teachers regarded gender balance in society and in VET institutions as important. However, by justifying the need for gender balance, they strongly (re)produce the gender binary. They primarily confined gender balance to equality of numbers. Few considered inequalities in terms of power relations between different genders in VET. Gender balance was seen as enriching the operation of VET institutions as women and men were seen as different in their perspectives, life experiences and mindsets, thus complementing each other. To have roughly equal numbers of men and women in a VET school was regarded as important for the health of the organization, but also in terms of providing a 'balanced view' to students. Gender balance, although regarded as favorable, was seen as inevitably having certain limitations because particular occupations and fields were seen as more attractive for men than women and vice versa. The explanations given referred more to personal dispositions rather than structural or institutional barriers.

Meelis (M), School leader: "Let's take mechatronics. A girl who does not understand maths has no business there, as she would need programming there. That's it. This blocks her path [...] [Boys] are interested in technical matters ... and as long as they have the will, they will manage." Villem (M), Teacher: "It actually might be that men are more talented in STEM subjects."

These articulations express the gender-stereotypical understanding that girls and women are by nature technologically incompetent and assume that they are not interested in technology. Justifications were drawn from biology. Such essentialism is also evident in previous research on gender in general education (Kütt and Papp 2012), but is also widespread among the general public in Estonia (Turu-uuringute AS 2016). These 'biological' differences were emphasized both in order to justify the need for gender balance in VET institutions, but also to explain why this is not happening in reality.

Moreover, gender balance was seen to function as a behavioral measure to regulate gender relations, as well as a way to reduce tensions within the VET school as an organization. When talking about the importance of gender balance among vocational students, male school leaders produced a heteronormative discourse according to which the vocational school is a meeting place for 'girls' and 'boys' to start relationships.

Allan (M), School leader: "Look, men behave better in women's company. We have experienced that. Men and women talk to each other and may also hug, if you like. A lot of families have come out of here."

Here, it is remarkable that gender balance was not seen as desirable because of its potential to create better work-related status or career opportunities for students, but rather as a means of (re)producing existing gender and heteronormative order in the VET school as well as in society more broadly.

Although gender balance was perceived as important in principle, the stakeholders' views differed as to whether all professions should be open to women. Some felt that some jobs may be too complicated or physically demanding for women. On the one hand, it was argued that gender equality is already achieved because there is full freedom in occupational choices. Women were regarded as doing as well as their male colleagues, with no physical restrictions.

Tõnu (M), School leader: "There are no barriers for a woman to work there if she passes the physical tests and if she is healthy"

On the other hand, male respondents in particular argued that the different physical capabilities of male and female students do affect their studies and job prospects. Gender segregation in the labor market was regarded as having certain objective reasons due to alleged biological and physical differences between men and women.

Toomas (M), Expert: "When you think about it, men and women tend to be a little different. There are biological and certain physical differences. For instance, regarding physical capabilities, men are able to lift heavier weights and do better in jobs requiring physical strength. So, there is a certain difference and we cannot put an equals sign between a man and a woman. It is an objective fact actually. And if there are such objective differences, then it is natural that in society there are certain fields where women can do more and contribute better, are more productive and do better and there are fields where men are more successful and do better." In justifying why some fields and occupations are more suitable for women and others for men, actual examples from their own experience as well as hypothetical scenarios were brought. By using the discourse of 'physically weak women', male school leaders suggested that gender equality is not attainable or only feasible to a certain extent, due to limitations deriving primarily from the 'different' physiology of men and women. Female school leaders however did not consider physiological aspects as significant barriers.

Gender Segregation between Occupational Fields and its Perceived Causes

The stakeholders cited low salaries and gender stereotypes — including those cultivated by the media — as the main reasons for gender segregation in the labor market and stereotypical occupational choices of students.

The issue of wages was regarded as a key factor shaping the occupational and career choices of men and women. The perceived lack of men in some fields of VET and in other types of education was seen as resulting from low wages.

Rene (M), Expert: "What's the problem? I think it's in the salaries. I think that the salary of kindergarten teachers is so small that it does not enable them to feed their families, particularly when the wife is at home with a child and, if there are many children, it is impossible. /.../ Men have a right and a need to be the breadwinner of their family, especially if you have children ... someone needs to bring the food to the table."

This excerpt reflects traditional views of men as breadwinners responsible for the wellbeing of their families. This ideal does not however correspond to the contemporary social reality in Estonia - *or* in most other European countries, which exhibit a dual-earner model. Salary was seen to affect the occupational choices of young people. However, the interviewees did not generally problematize the fact that female students or teachers tend to end up in occupational tracks where salaries are lower, leading to labor market inequalities.

Experts and female school leaders pointed out that low salaries in education affect the prestige of the teaching occupation and this shapes gender segregation in the field.

Merle (F), School leader: "I think that the prestige of this occupation [VET teacher] should increase in society but, in reality, we know that many fields that women tend to work in are less prestigious. It's a kind of vicious circle. On the one hand, if there were more men, the prestige would be higher. At the same time, the low prestige does not attract men and the salaries do not improve."

Interestingly, the increase in number of men entering a certain position was seen as potentially elevating both the status of the occupation of VET teachers and the level of pay.

Gender stereotypes prevailing in the society, seen as cultivated by the media and parents were considered as a second important factor explaining gender-stereotypical career choices. Although it was generally agreed that occupational positions should be open to all, irrespective of their gender, career and labor market choices were deemed to

be driven by traditional gender norms. The interviewees tended to hold negative views on gender stereotyping. They condemned media representations of 'girls' occupations' and 'boys' occupations' for what they saw as making young women and men feel that they are not suitable for certain occupations. In addition to the media, the attitudes of parents and friends, were also highlighted for their influence. According to teachers, parents often have a say in career related decisions.

Anu (F), Teacher: "Rather it is the parents who have no contact with the field that hold somewhat prejudiced views."

Mati (M), Teacher: "Probably many mothers make occupational choices [for the applicants]. We did some target group study where we mapped who the decision maker is and it was the mother. [...] The mothers were behind the door [at the entrance exams]. Actually, the applicants are not so young any more, but they still have mothers with them ... waiting behind the door. [...] The younger the person, the more their mother is deciding for them and teaching them."

It is significant that when talking about the influence of parents, rather the role of mothers not fathers shaping students' educational paths was emphasized. It is also notable that while gender-stereotypical media representations were condemned, some stakeholders themselves produced similar prejudiced views about the suitability of certain occupations for women and men, as discussed in the previous section.

Gender Segregation as Inevitable but Gradually and Spontaneously Changing

Although research participants regarded gender balance in general as positive and acknowledged that there is gender segregation - in society and also in VET, this segregation was not always considered problematic.

Allan (M), School leader: "There is no problem. Everyone can learn what they want and work where they like. I think we have absolute freedom in that respect."

The argument of 'freedom of choice' repeated in the interviews reflects the neoliberal discourse prevalent in the Estonian society, emphasizing the freedom of individual choice and denying or downplaying structural barriers or constraints. This discourse of individual responsibility makes it difficult to notice and acknowledge systemic and institutional gender inequalities. As gender-based occupational segregation and division of labor were often regarded as '*normal*' both by school leaders and teachers, any measures to deal with it were deemed unnecessary. Instead, it was hoped that societal changes (albeit slow) will spontaneously remedy the situation.

Meelis (M), School leader: "In every culture, there are fields where men operate and those where women operate. It has been like this for thousands of years. Change on this scale does take place, but slowly. There is no doubt about it. But it does not make sense to force these things with directives and regulations." These assumptions that 'everything will be resolved over time', sums up general views in Estonian society, where gender quotas have little support. In the context of management and politics, but also in higher education and academia, the idea of gender quotas is very unpopular (Aavik 2017). Nevertheless, some research participants, particularly female school leaders, regarded the low status of feminized occupations as problematic - a vicious circle that is difficult to break. They were concerned that women are concentrated in occupational fields that continue to be undervalued and underpaid in the labor market. The rise of the proportion of men in feminized occupations was seen as the solution.

Experts, school leaders and teachers gave examples of non-traditional career choices. Women who have studied to become blacksmiths or tractor operators were highlighted. The number of boys in feminized VET training programmes were said to be rising in the past few years (including in hairdressing, cooking or sales). As mentioned, these stakeholders viewed this gender segregation as diminishing over time, as each new generation breaks more ground.

Reeli (F), Teacher: "I think if we look at these students and ask why they come to study, [...] young boys who come from high school do not think that they would work in a hospital and be called a nurse [medical sister].² I remember it was five or six years ago when I talked to the boys who came to study here. The first problem they had was how they could go to work at a hospital and be called a nurse. This is actually not a problem. We called them male nurses [medical brother].³ So now they do not think about the title of the occupation any more. They think what they can do, how they can move forward. This is such a visible change".

Similarly to Reeli, other interviewees also tended to believe that the increasing number of non-traditional career choices might in the longer run challenge gender stereotypes. However, this is not supported by the evidence. In fields such as IT, gender segregation has increased year-by-year (Haridussilm 2018). Nevertheless, it was commonly agreed that regardless of certain exceptions, most young women and men who have made non-traditional career choices face stereotypical attitudes both during their studies and later in the labor market. Similar conclusions were drawn by Lappalainen et al. (2013) arguing that, instead of deconstructing gender stereotypes, sometimes choosing differently may instead contribute to reproducing stereotypical perceptions of men and women.

Experts' opinions on whether it is possible to affect the career choices of young women and men tended to diverge. On the one hand, career choice was regarded as a complex issue into which it is better not to interfere. On the other hand, some possibilities to shape this process were outlined. Education was acknowledged by experts as *both* the primary site where the reproduction of gender stereotypes takes place, *and* the site for change. It was also acknowledged that stereotypes were cultivated at home and in early childhood institutions.

² The word for 'nurse' in the Estonian language literally translates as 'medical sister'

³ A direct equivalent in Estonian is 'medical brother'

Eve (*F*), *Expert:* "It is known that in the kindergarten, usually boys get praised for example for building a car from Lego. Perhaps sometimes you should praise girls for these things as attention and praise are something that motivate ... For example, if a boy makes a great pancake, he gets praised, but girls do not receive praise for that because it seems so natural ..."

Especially female respondents, like Eve, tended to notice situations where gender stereotypes are reproduced and where unequal treatment takes place. Some shared ideas on how to foster change through teacher education, curricula, and gave examples of interventions in their own experience. Career counsellors were seen as decisive in guiding students on their path towards an occupational field that suits them best. Experts gave examples of how they have consciously tried to battle stereotypes by providing balanced views about occupations in their work. For example, in information materials on learning opportunities in VET schools, they have consciously chosen pictures of non-traditional career choices such as a male hairdresser or a female blacksmith as cover images. While sporadic efforts and ideas to challenge gender stereotypes in VET were outlined, it was evident that schools and teachers lacked a more systematic and knowledge-based approach in tackling the issue.

Strategies Applied at VET Schools to Attract Students to Gender-Atypical Careers

When thinking about the context of their own school, teachers and school leaders were concerned about the shortage of male students in certain VET programs. Stemming from this concern, potential and existing measures to attract male students to VET schools were discussed. Some VET school representatives mentioned the introduction of so-called 'boys' curricula', catering to the believed specific interests of male students. The stakeholders considered education as a whole as 'girl-centered', and thus unable to address the interests and needs of boys. By this they meant that curricula and the teaching process is 'boring' for boys and therefore leads to lower motivation in boys, already evident in general lower secondary education.

Toomas (M), Expert: Our education system is much more adapted to considering the advantages of girls in the learning process than of boys. It is the same paradigm that we have been talking about for decades: boys drop out of the education system because the system is mainly oriented towards knowledge. It requires learning facts. Girls behave better, they are better at fulfilling school assignments, are more successful in the education system."

This quote, exemplifying the views of the VET stakeholders in our research, illustrates and reproduces the concern over boys in education in Estonian public discourse but also in other countries (see Jørgensen 2015; Lahelma 2014). It is noteworthy that an alleged lack of creativity and the 'boring' nature of education was not seen as restricting the development of girls.

School leaders and teachers highlighted existing measures taken to attract boys to VET schools in 'softer' fields such as the service sector, the arts and health care occupations. For example, school leaders and teachers sent male students to different public events, to introduce their school or field of study. It was hoped they would act as inspiring role models for prospective male students.

Merle (F), School leader: "Of course we have dragged our male students to those [educational] fairs where we introduce our school, so that they would introduce occupations that [potential male] students could study."

On the other hand, some research participants working in schools where traditionally masculine occupations dominated, talked about attracting more girls to the school and making efforts to present their school as not too 'male-centered'.

Tonu (M), School leader: "We market ourselves in all kinds of educational fairs and we certainly do not want to display our school as male-centered. When a woman—although there are usually very few—approaches and sees other women in our stand, it is easier for her to approach, as opposed to seeing only men. So, when we go to educational fairs, we bring along our female students, so that prospective female students would see that we also have women in our student body [...] Also, in our advertisements of the school we try to include in the photos the few women we have."

Teachers believed that in order to promote male-dominated fields to girls (e.g., IT), 'feminine language' and topics presumed familiar and interesting to women should be used.

Interviewer: "What did these advertisements look like?" Mati (M), Teacher: "For example, we had virtual bras. It was partly a joke—we tried to advertise our school through 'women's topics'.

As evident from the excerpt above, stakeholders tended to contrast men and women in terms of their interests. Recruiting more boys to VET schools was the main focus, whilst attracting girls was secondary. Some schools tried to target boys through the launch of new occupational fields deemed to be either 'fascinating' or technical - to *boys*.

Riina (F), School leader: "Now more and more men and boys are entering sales training. This is positive. At first, our curriculum used to be centered on the food trade, but now it is developing a wider spectrum, involving construction goods and other areas, so this will bring more men to the program because the content won't be so unfamiliar to them any more. And now young men come here as it is not strange for them."

Similarly, some existing curricula and study programs have been revised in order to be more attractive and suitable for girls in male-dominated occupations.

Meelis (M), School leader: "Back in the day, we used to be thought of as a "boys' school", but we've made lots of efforts to develop new curricula to achieve a balance."

Some schools with this aim of attracting more boys have taken measures to adjust entrance exams to better accommodate boys.

Liia (F), Teacher: "I do not believe that they [girls] are better. It is simply the assessment system. They [girls] always diligently complete all the assignments, they never question why they should do it or protest. Well, boys think more rationally in this matter. He may understand the content but does not feel like studying because he does not feel that it will benefit him in any specific way. And then he drops out."

As Liia describes, there is a belief by some that girls tend to relate better to the current assessment system and learning methods that do not accurately reflect the abilities of boys. Indeed, boys were considered more creative, rational and self-conscious.

Whilst not officially sanctioned, some schools have admitted giving an advantage to boys in the entrance exams - to be more 'gender sensitive'. 'It is an unwritten rule', one of the school leaders argued, that they try to favor boys when interviewing students. In another case, the content of the work and creativity have come to be prioritized over formal requirements for the work. As 'creativity' is a rather subjective criteria, it affords schools great flexibility in their assessment of applicants. Thereby, schools are able to 'correct' the gender imbalance that an otherwise more objective entrance system would give. Given the fierce public resistance to quotas for women in Estonia (for example in politics and top management), it is interesting to note how some VET stakeholders favor and practice a quota system designed to advantage boys.

Discussion and Conclusions

This article aimed to provide an understanding of how VET stakeholders in Estonia discursively reproduce and/or contest gender-typical occupational practices. Interviews with central stakeholders in VET reveal conflicting views and attitudes. As a rule, teachers and heads of schools have noticed gender segregation both in society and in the context of their own school. However, it was typically not seen as problematic. The stakeholders believed that among younger generations, stereotypical views are less common and that a gradual change towards more gender-atypical career choices will automatically and naturally take place over time. However, it will not change (Fuller et al. 2005).

In principle, participants favored men and women's equal participation in occupational fields and were critical of gender stereotypes in society. However, their narratives tended to reproduce gender stereotypes via three different strategies: 1) attributing different abilities, dispositions and interests to male and female students and teachers; 2) emphasizing physical limitations of female students; and 3) employing the discourse of the 'male breadwinner' in order to explain and justify the concentration of male students and teachers into more financially rewarding fields and occupations.

First, it was common to associate certain characteristics, interests and capabilities with female and male students and teachers. Reflecting more widely held gender stereotypical views in society (Turu-uuringute AS 2016), the VET stakeholders saw men as rational and creative and women as more responsible and adaptable to routine tasks. Although, in principle, VET stakeholders often wanted to be gender sensitive, in reality they constructed opposition between men and women in terms of attitudes, interests and capabilities. Moreover, they did not acknowledge that the differences within gender groups might be larger than between the groups (Kütt and Papp 2012).

Second, although in general it was believed that people choose occupations freely and no gender barriers or structural obstacles exist, the stakeholders themselves saw women as physically less capable and therefore less suitable for some jobs. The argument of 'natural dispositions' was used to explain occupational segregation in VET specifically and in society more broadly.

Third, the gender-stereotypical narrative of a male breadwinner was typically used to explain and justify the concentration of men into better paid occupations and fields. As a rule, the disadvantaged position of female students or teachers were not problematized - except by some of the female school leaders and experts.

Typically, gender segregation was not understood to be linked with gender inequality. It was not believed to be tied to occupational choices or to men and women's unequal positions in the labor market - or indeed, to society more broadly. Gender segregation however, was seen as a problem in the context of VET schools where segregation was seen to contribute to gender imbalance among students and teachers. A 'more balanced' distribution of male and female students and teachers was considered important in terms of ensuring a good organizational climate and balancing the 'strengths' and 'weaknesses' of women and men. Curiously, the interviewed VET stakeholders conceptualized broader gender and gender equality issues in VET narrowly as 'gender balance', referring to the ratio of men and women in VET institutions. Gender was seen as a binary, where women and men's complementary roles were emphasized. An important function of gender balance in the school context was to reinforce the narrative of heterosexual romance. Gender equality was not thought of as a particularly political or radical goal with transformative potential in VET. In its place, 'gender balance' served as a softer and less radical substitute, under the guise of which heteronormativity was reproduced, as also found in previous studies (e.g. Lappalainen et al. 2013).

Some stakeholders described special measures which they have applied in their schools in order to attract particularly male students, for example, modifying the entrance exams so that boys could be favored. These measures were largely considered unproblematic from the gender (equality) perspective. On the contrary, research participants sought to present such measures as 'gender-sensitive'. Respondents typically did

not acknowledge that these measures were in fact discriminating *against* female applicants.

When conceptualizing our findings in the frame of Richard Scott's three pillars of institutional order (Scott 2008), we suggest that institutional change in gender equality has been uneven in these three pillars. Despite the presence of gender equality in Estonian legislation and in education and labor market policies, the narratives of central stakeholders in VET suggest that these regulatory changes have not transferred to the shared norms, beliefs and understandings regarding gender in VET. The attempts and strategies to address gender inequality and particularly occupational gender segregation in VET schools display gaps of knowledge regarding gender, and are not implemented in a systematic manner. At best, it could be said they do not adequately address the problem they were intended to solve; at worst, the stakeholders may be complicit in reproducing stereotypical beliefs and understandings of gender, as some of the narratives demonstrated.

In general, the perceptions of VET stakeholders tend to reflect common understandings of gender and prevailing gender stereotypes in society (Turu-uuringute AS 2016). Similar to previous studies focusing on general education in Estonia (Kuurme et al. 2012; Kütt and Papp 2012), the stakeholders do not fully acknowledge the gendered nature of VET institutions and their own role in shaping gender ideologies and practices in this context. The stakeholders did not typically problematize gender segregation, nor relate it to wider gender inequalities in the labor market or in society. Indeed, they make no contribution towards greater gender equality in VET. This suggests that gender equality remains a contested idea in VET in Estonia.

Inconsistencies identified in the participants' narratives on gender equality suggest it is not a topic widely discussed in VET schools, or in the VET system more generally. In addition, the findings point to possible tensions between personal views on gender and those that the stakeholders need to present as representatives of their official position.

This paper outlined challenges and barriers to gender equality reflected by VET stakeholders. In order to promote gender equality in educational institutions and in the society, a systematic approach is needed. Personal attitudes and beliefs make up the third pillar in Scott's model, and are the most difficult to shape. As this pillar shapes all levels of the education system, from early childhood education through to tertiary levels, it is vital that gender issues are addressed across disciplines and age groups. Moreover, students should be equipped with the skills needed and actively encouraged to make atypical occupational and life choices as a matter of priority. As our study indicates, not only teachers, but also school leaders and educational experts should be better informed about gender. Significant change in school culture is required. The broader teaching community, through formal and informal networks of exchange, could be a key site for change. Through this network, there is the potential to promote reflection, and share new ideas, attitudes and knowledge between colleagues. Teachers have a special role in changing attitudes. Thus, teacher training has a development potential both in methods used and topics covered. Beyond this, systematic monitoring of gender in VET is needed. This includes, but is not limited to, enrolment methods, as well as attitudes and practices of teachers, career counsellors and students. Moreover, as previous studies (e.g., Hillmert 2015) have indicated, gender segregation is lower among VET students than in the current labor market. However, to translate this trend into true gender equality across society, much work is needed. To this end, it is vital that future studies in this field pay special attention to attitudes to gender amongst workplace trainers. As this study highlights, institutional frameworks are simply not sufficient.

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References

- Acker, J. (2006). Inequality regimes: Gender, class, and race in organizations. *Gender & Society*, 20(4), 441–464.
- Aavik, K (2011). Eesti kutsehariduse arengukava aastateks 2009–2013 analüüs sooaspektist [The analysis of the VET development plan 2009-2013 from the gender perspective]. Tallinn: Eesti Naisuurimus- ja Teabekeskus.
- Aavik, K. (2015). Intersectional Disadvantage and Privilege in the Estonian Labour Market: An Analysis of Work Narratives of Russian-Speaking Women and Estonian Men. Dissertation. Tallinn: Tallinna Ülikool, Rahvusvaheliste ja Sotsiaaluuringute Instituut.
- Ümarik, M. (2015). Adopting Reform Policies in Vocational Education and Training: the Case of Post-Soviet *Estonia*. Dissertation. Tallinn: Tallinn University.
- Aavik, K. (2017). Doing Neoliberalism on Campus: The Vulnerability of Gender Equality Mechanisms in Estonian Academia. Gender a výzkum / Gender and Research, (18) 1, 130–153. DOI: https://doi. org/10.13060/25706578.2017.18.1.353.
- Aavik, K., Ümarik, M. (2019). The "exceptional male teacher" and the "vulnerable male student": constructions of men and masculinities in vocational education and training in Estonia. *Journal of Vocational Education & Training*, 1–21. DOI: https://doi.org/10.1080/13636820.2019.1586751.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101.
- Buchmann, C., & Dalton, B. (2002). Interpersonal influences and educational aspirations in 12 countries: The importance of institutional context. *Sociology of Education*, 75(2), 99-122.
- Colley, K., James, D., Diment, K., & Tedder, M. (2003). Learning as becoming in vocational education and training: Class, gender and the role of vocational habitus. *Journal of Vocational Education and Training*, 55(4), 471–498. https://doi.org/10.1080/13636820300200240.
- Estévez-Abe, M. (2006). Gendering the varieties of capitalism. A study of occupational segregation by sex in advanced industrial societies. *World Politics*, 59, 142–175.
- Estonian Lifelong Learning Strategy 2020. (2014). https://www.hm.ee/sites/default/files/estonian_lifelong_ strategy.pdf (06.11.2018).
- Eurostat. (2018). Eurostat news release. http://ec.europa.eu/eurostat/documents/2995521/8718272/3-07032018-BP-EN.pdf/fb402341-e7fd-42b8-a7cc-4e33587d79aa (06.11.2018).
- Evans, K. (2006). Achieving equity through 'gender autonomy': The challenges for VET policy and practice. *Journal of Vocational Education and Training*, 58(4), 393–408.
- Fuller, A., Beck, V., & Unwin, L. (2005). The gendered nature of apprenticeship: Employers' and young people's perspectives. *Education + Training*, 47(4/5), 298–311.
- Haridussilm. (2018). https://www.haridussilm.ee/. Accessed (06/11/2018).
- Haasler, S. R., & Gottschall, K. (2015). Still a perfect model? The gender impact of vocational training in Germany, Journal of Vocational Education & Training, (67)1, 78-92.
- Hillmert, S. (2015). Gender segregation in occupational expectations and in the labour market: International variation and the role of education and training systems. *Gender Segregation in Vocational Education* (Comparative Social Research), 31, 123-148.
- Høst, H., Seland, I., & Skalholt, A. (2015). Gender policies meet VET practices The case of health and social care in Norway. *Journal of Vocational Education and Training*, 67(1), 109–126.
- Jørgensen, C. H. (2015). Some boys' problems in education What is the role of VET? Journal of Vocational Education & Training, 67(1), 62–77.

Kerckhoff, A. C. (1995). Institutional arrangements and stratification processes in industrial societies. Annual Review of Sociology, 21, 323–347.

Kimmel, S. M. (2004). The gendered society. Oxford: Oxford University Press.

- Kreitz-Sandberg, S. (2013). Gender inclusion and horizontal gender segregation: stakeholders' strategies and dilemmas in Swedish teachers' education. *Gender and Education*.
- Kütt, R., & Papp, Ü.-M. (2012). Soolist ebavõrdsust märgatakse, probleemiks ei peeta ja lahendusi ei teata Eesti õpetajate hoiakud ja arvamused seoses soolise võrdõiguslikkusega [Gender inequality has not been regarded as a problem and no solutions are known – Estonian teachers' perceptions of gender equality]. In Ü.-M. Papp (Ed.), Kas õpilased või poisid ja tüdrukud? Uurimus Eesti õpetajate ja haridustöötajate valmisolekust sootundlikuks õpetamiseks ja kasvatamiseks [Students or boys and girls? Study on the readiness of Estonian teachers and educational workers on gender sensitive teaching] (pp. 19–38). Tallinn: Eesti Naisteühenduste Ümarlaua Sihtasutus.
- Kuurme, T., Kasemaa, G., & Roots, E.-M. (2012). Eesti haridustegelaste soodiskursus. In Ü.-M. Papp (Ed.), Kas õpilased või poisid ja tüdrukud? Uurimus Eesti õpetajate ja haridustöötajate valmisolekust sootundlikuks õpetamiseks ja kasvatamiseks [Students or boys and girls? Study on the readiness of Estonian teachers and educational workers on gender sensitive teaching] (pp. 37–40). Tallinn: Eesti Naisteühenduste Ümarlaua Sihtasutus.
- Lahelma, E. (2014). Troubling discourses on gender and education. Educational Research, 56(2), 171-183.
- Lappalainen, S., Mietola, R., & Lahelma, E. (2013). Gendered divisions on classed routes to vocational education. *Gender and Education*, 25(2), 189–205.
- Ledman, K., Rosvall, P.-A., & Nylund, M. (2018). Gendered distribution of 'knowledge required for empowerment' in Swedish vocational education curricula? *Journal of Vocational Education and Training*, 70(1), 85–106.
- Neudorf, E., Õun, T., Tuul, M., & Elissaar, E. (2016). Lasteaiaõpetajate arusaamad tüdrukutele ja poistele võrdsete võimaluste tagamisest [Teachers' understandings on assuring equality for girls and boys]. In T. Kuurme & Ü.-M. Papp (Eds.), Sugu ja haridus keeles ja meeles [Gender and education in language and in the mind] (pp. 108–120). Tallinn: Eesti Naisteühenduste Ümarlaua Sihtasutus.
- Pajumets, M. (2012). Post-socialist masculinities, identity work, and social change: An analysis of discursive (re)constructions of gender identity in novel social situations. Dissertation. Tallinn University.
- Reisel, L., Hegna, K., & Imdorf, K. (2015). Gender segregation in vocational education: Introduction. Segregation in Vocational Education, 1–22.
- Renold, E. (2006). Gendered classroom experiences. In C. Skelton, B. Francis, & L. Smulyan (Eds.), The SAGE handbook of gender and education. London: Sage.
- Scott, R. (2008). Approaching adulthood: The maturing of institutional theory. *Theoretical Sociology*, 37, 427–442.
- Smyth, E., & Steinmetz, S. (2015). Vocational training and gender segregation across Europe. Gender segregation in vocational education (Comparative Social Research), 31, 53-81.
- Soolise võrdõiguslikkuse seadus [Gender Equality Act]. (2015). Riigi Teataja I, 07.07.2015, 11.
- Turu-uuringute AS. (2016). Soolise võrdõiguslikkuse monitoring. Elanikkonna küsitlusuuringu raport [Gender Equality Monitor. Report on population survey]. Tallinn. https://enut.ee/files/soolise_ vordoiguslikkuse monitooringu raport 2016.pdf. (06.11.2018).

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Meril Ümarik (PhD in Sociology) is working as an Associate Professor in educational research and a Senior Research Fellow at the School of Educational Sciences at Tallinn University. Her research interests involve vocational education reform and adoption of reform policies in vocational education and training (VET), vocational teachers' professionalism, gender segregation in VET etc. Her methodological expertise lies in qualitative research methods.

Kadri Aavik is an Associate Professor of Gender Studies at the School of Governance, Law and Society at Tallinn University and a Postdoctoral Researcher at the University of Helsinki. Her research interests include gender in the context of work and education, including critical studies of men and masculinities