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Gendered distribution of ‘knowledge required for empowerment’ in Swedish vocational education curricula?

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Sweden is internationally commended for a high degree of gender equality, but many divisions in Swedish society, including the labour market, disadvantage women. This paper addresses gendered divisions of preparation for civic participation in the vocational upper secondary national curricula, which may participate in reproduction of the pattern. In a comparative analysis of the curriculum guidelines for different vocational upper secondary programmes, we focus on the inclusion of important knowledge for empowerment and how knowledge is contextualised in terms of valued labour positions. We deploy Bernstein's concepts of horizontal and vertical discourse and Connell's concepts of production, consumption and gendered accumulation. A general finding is that vertical discourse is contextualised towards discourses of consumption in girl-dominated programmes and towards discourses of production in boy-dominated programmes. Boy-dominated programmes include more knowledge that can be clearly classified in recognised disciplines or fields, whereas girl-dominated programmes include courses of undefined knowledge, such as creativity and entrepreneurship. We conclude that the vocational curricula reinforce rather than challenge existing gender structures in the labour market and wider society. In a historical perspective, it can be concluded that Swedish vocational education policy has a continuum of 'gender-blindness, and thus its confirmation with wider norms.

Keywords: Vocational Education & Training, Gender and Educational Training, Policy analysis, Policy Issues, Gender and Learning, Curriculum

Introduction

It has been argued that to avoid professionals being reduced to 'functional technical experts' (Grace 2014) their education must address political, social and moral issues of professional practice. Accordingly, this article focuses on the democratic function of vocational education and training (VET) in upper-secondary education. In addition, due to gendered inequalities in the labour market and wider society, we perceive a need to increase knowledge of gendered constructions of citizenship in VET curricula. In this context, Sweden is an interesting case due to a recent reform in 2011, which restructured civic education for young people in upper-secondary VET, and broke a 40-

year trend towards gradual integration of vocational and academic education. The reform also shifted more responsibility to prepare the young for active democratic citizenship (a key educational goal, stated in the national curriculum) to the vocational subjects' contents, as teaching hours in social studies, languages and maths, were cut (Nylund and Rosvall 2016, Nylund 2013, Ledman 2014). We argue, in line with others (Bernstein 2000; Grace 2014; Young and Muller 2014; Winch 2014), that it is important to consider how important knowledge and competencies for the ability to exercise democratic rights are distributed and made available for 16-19 year olds in VET. The reform's effects on class relations have been previously explored through a comparative analysis of differences in the curricula for higher education preparatory programmes (HEPP) and VET preparatory programmes (VETP) (Nylund, Rosvall and Ledman 2017). Here we turn our attention to gendered divisions among the VET programmes, i.e. how these divisions are challenged or reinforced through the distribution and contextualisation of knowledge.

Swedish upper secondary education is organised in three-year VET or academic programmes. VET and academic secondary education were unified under the same organisational umbrella in 1971. Today, students select which track to follow in upper secondary school when they are 15-16 years old, after 10 years of comprehensive school. Although upper secondary school is voluntary, approximately 98% of all students leaving secondary school chose to continue to either HEPP or VET preparatory programmes in the upper secondary education system (Skolverket 2016a). Several studies have shown that vocational education and training (VET) is strongly gendered, some programmes being either boy- or girl-dominated by tradition, peer pressure and/or other factors (Fehring and Herring 2013; Lundahl 2011), and gender-marked vocational programmes have gendered practices (Connell 2006; Smyth and Steinmetz 2015).

Others have identified settings and practices of vocational education programmes traditionally designed for men as being more workplace-like and less academic (based for example in vehicle workshops or construction sites) than equivalents for women, generally set in ordinary classrooms with ordinary textbooks (Hjelmér, Lappalainen, and Rosvall 2014). The gender divide in vocational education and training mirrors a gender-divided labour market. Even in the Nordic countries, where the gender divide is weak by international standards, VET and the labour market still contain many elements that can be understood as gender segregation (Svensson and Gunnarsson 2012; Høst, Seland, and Skålholt 2015; Brunila and Ylöstalo 2015).

Policy is often used as a political instrument to promote equality (Lappalainen and Lahelma 2015). However, patterns and practices seldom reflect this articulated goal. In addition, most reforms during the 1900s (including Swedish reforms) focused on socioeconomic inequality, rather than gendered inequality. From the 1940s until recently, aims of educational reforms included reductions in effects of inequalities derived from social background. For example, through educational reforms such as the introduction of comprehensive schools in 1962, and subsequent integration of upper secondary education in 1971 and 1994, differences between vocational education and more general education were reduced in Sweden (Hickox and Lyon 1998). However, liberal factions in the Social Democrats began to initiate implementation of minor reforms countering the trends around the turn of the millennium (Lundahl et al. 2010). A liberal/conservative alliance forged in 2006 then rapidly restructured the Swedish educational curriculum, policy and regulations, through the 2011 reform, Gy 11. This (*inter alia*) increased the division between vocational programmes and general programmes (Nylund and Rosvall 2016). In upper secondary education, the Gy 11 reform increased division between HEPP and VET programmes, and increased direct

employer influence, especially over the VET curricula and organisation (Nylund 2012). For example, national and local programme-specific advisory boards were established with representatives from the Confederation of Swedish Enterprise and the trade unions. The 2011 reform manifested a clear shift from attempts to reduce socioeconomic inequality towards introduction of more educational courses directly connected to future work, in more workplace-like settings. It also sharply reduced the formal civic education for young people in upper secondary VET.

Nevertheless, preparation for citizenship remains an overall goal of the national curriculum, and is thus supposed to permeate all subjects in upper secondary education. VET programmes are dominated by occupational preparation, i.e. courses on subjects intended to provide knowledge and skills required for the targeted occupation. The general subjects, especially social science, that are normally oriented towards civic education, were reduced by the 2011 reform. Thus, the degree to which the VET programmes' occupational courses meet students' pedagogic rights to civic education has become an increasingly important issue.

The Gy11 reform was expressly implemented to address perceived problems of throughput rates, inefficiency and drop out (Nylund 2012). Although those problems are often associated with 'boys' underachievement' (Griffin 2000; Moreau 2011), 'failing boys' (Smith 2003) and feminisation of education (Timmerman 2011), few attempts have been made to address gender inequality in VET in the Gy11 reform, or in the reforms since 1971 (Carlbaum 2012). However, it is important to analyse what a national curriculum offers in terms of citizenship, and how the curriculum might be understood in that respect as gendered. In addition, in both Sweden and internationally, there have been few studies of policy and gender dimensions of upper secondary school VET (Reisel, Hegna, and Imdorf, 2015).

Accordingly, the general aim in this article is to analyse gendered constructions of citizenship through the organisation of knowledge in Swedish vocational upper secondary education curricula. Two research questions (RQs) are specifically addressed. RQ1: How do the curriculum texts for girl- and boy-dominated VET programmes treat important knowledge for the students' empowerment and acquisition of a critical voice in society? RQ2: how is the curricular content of the different VET programmes contextualised in terms of valued future labour positions? The questions are formulated on the basis of democratic rights such as individual enhancement and political participation delineated by Bernstein (2000, xx–xxi), as described in the theory section below.

It should be noted that most vocational education and training students have a working-class background. Thus, “In order to understand schools as agents of cultural transmission, it is necessary to examine them in relation to the existing distribution of power and principles of control” (Mac an Ghaill 1994, 42). This interpretation of vocational education as being for, and taken by, the working class is in line with earlier research and theories presented in this journal (Colley et al. 2003; Jørgensen 2015) and elsewhere (Bernstein 1990; Avis and Orr 2016; Lappalainen, Mietola, and Lahelma 2013). It is also validated by the students' backgrounds, as 33 and 67 percent of students applying for vocational and academic programmes have parents with a long academic background (at least 30 ECTS university credits), respectively (Skolverket 20160819).

	Total		Girls		Boys	
	N=	% of total	N=	% of girls total	N=	% of boys total
National upper secondary school	105 792	100	50 622		55 170	
VET programme	39 520	37	15 908	31	23 612	43
General programmes	66 272	63	34 714	69	31 558	57

Table 1: Applicants to upper secondary school in year 2014/2015 [Sökande till gymnasieskolan till läsåret 2014/2015, efter kön] (Source: Swedish official statistics, SIRIS).

As shown in Table 1, slightly less than a third of the girls, and 43 percent of the boys, chose a vocational programme in the 2014/2015 school year. Thus, more boys than girls take the VET track. Moreover, as shown in Table 1, most of the vocational upper secondary programmes traditionally attract very unequal numbers of boys and girls.’

Programme	Total students in year one 2014/2015	Girls % of programme total	Orientations
<u>Vocational programmes</u>			
Handicrafts	2 426	94	Floristry, Hairdressing, Textile Design. Cabinet-making
Health and Social Care	3 123	81	None
Hotel and Tourism	1 213	80	Hotel and Conference, Tourism and Travel
Natural Resource Use	2 765	67	Animals (ex. horse) Gardens, Agriculture, Forestry
Child and Recreation	2 762	62	Recreation and health, Pedagogical Work, Social Work
Business and Administration	2 746	58	Administrative Services, Commerce Services
Restaurant Management	2 224	58	Kitchen and Serving, Baking and Patisserie, Fresh Foods, Delicatessen and Catering
Vehicle and Transport	3 694	14	Passenger Cars, Lorries and Mobile Machines, Transport, Goods Handling, Bodywork and Paint Spraying
Industrial Technology	1 529	11	Operations and maintenance, Process Technology, Product and Machine Technology, Welding Technology
Building and Construction	4 256	9	House CONSTRUCTION Land and Construction Painting Sheet Metal Plant vehicles
Electricity and Energy	4 943	4	Automation Computers and ICT Electrical Technology Energy Technology
HVAC and Property Maintenance	1 180	3	Property Ventilation Technology HVAC

			Cooling and Heat Pump Technology
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Table 2: Number of students by programme and girls in per cent of programme total.
(Source: Swedish official statistics, SIRIS)

Of 15 602 students taking the five most male-dominated VET programmes (47 percent of the total taking VET programmes) in 2014/15 just 3–14 percent were girls, while the other seven were female-dominated, but to a lower degree (6–42 percent of 17 259 students taking them were boys). The very low numbers of females taking some programmes may be at least partly due to their reluctance to choose occupations traditionally associated with men, such as construction and vehicle maintenance and transport, since those trades has a reputation of being associated with sexism and harassment (Cettner 2008).

Theoretical framework and method

In line with Bernstein, we understand the VET curricula as being products of selective practices, which govern how certain knowledge is made available to, and acquirable by, certain groups in society. These processes of selection, transmission and acquisition produce differentiated forms of ‘consciousness, identity and desire’ (Bernstein 2000, 201). In his model of the pedagogic device, knowledge is recontextualised from a field of production to a field of reproduction (Bernstein 2000: 37). Young and Muller (2014) define different fields of knowledge production as origins of the components of professional knowledge: disciplinary knowledge, applied interdisciplinary knowledge and specialised practical knowledge pertaining to the field of practice.

According to Bernstein, recontextualisation rules constitute specific pedagogic discourses, with two embedded discourses: a discourse of skills and a discourse of social order. Bernstein (2000, 32) argues that there is only one pedagogic discourse,

although it is commonly approached and regarded as two: ‘as if education is about values on the one hand, and about competence on the other’. Thus, given the shift of value (citizenship) components of education to programme-specific subjects by the 2011 reform, the degrees to which knowledge of pertinent values is promoted and transmitted by the VET programmes (and variations in these degrees) clearly warrant attention. This is because, we argue, content recontextualisation (Evans et al. 2010) of workplace knowledge into teaching practices includes the education of both (workplace) values and competences, i.e. there is only one discourse. In order to analyse what the curriculum makes available for the students in terms of important knowledge for the students’ empowerment and acquisition of a critical voice in society (RQ1), we use Bernstein’s (2000, xx-xxi) definitions of democratic rights as presented in Table 3 as a framework.

Table 3

Right	Definition	Capability
Individual enhancement	‘The right to the means of critical understanding and to new possibilities’ (Bernstein 2000, xx)	Confidence
Social inclusion	‘The right to be included socially, intellectually, culturally and personally [including] the right [to be] autonomous’ (Bernstein 2000, xx)	Belonging (in groups)
Political participation	‘The right to participate in the construction, maintenance and transformation of social order’ (Bernstein 2000, xxi)	Civic discussion and action

We also make use of Bernstein’s distinction between vertical and horizontal knowledge discourses. Knowledge that is relevant in an everyday, local context and is segmentally connected has a horizontal organisation. ‘Horizontal discourse’ has practical relevance and is closely related to specific spaces and procedures. It allows us to do things in

specific contexts and to interact with the material world. Because of its close relation to specific contexts, knowledge in horizontal discourses is segmented and not easily transferable to other contexts. By contrast, knowledge in ‘vertical discourse’ is theoretical, abstract, conceptual, based in disciplinary systems of meaning, more general and (hence) can be used to explain and understand broader contexts, and change perceptions of events and processes. The discursive gap between the material and immaterial in vertical discourses enables new ways of thinking, thus providing opportunities to question norms and taken-for-granted states of human affairs and to visualise alternative arrangements (Bernstein, 2000).

The concepts horizontal and vertical knowledge discourses are used by some researchers primarily to analyse *epistemic* relations in different contexts. In such an approach, vertical discourses can be understood inter alia as providers for vertical achievement within education or professions (cf. Gamble 2014; Muller 2009). However, like Bernstein (2000), here we are more interested in the *social* relations that underpin the organisation and distribution of knowledge. Thus, we focus on vertical discourses, what Durkheim (2001) called ‘the sacred’, which provide the possibilities and legitimacy to participate in ‘society’s conversation’ about itself; about what it is, how it can be understood, and possibly transformed (Weelahan, 2010; Young, 2008). We put less emphasis on the implications of different types of knowledge structures for the process of recontextualization than the school that uses these concepts in analyses of epistemic relations.¹ In our study, the concepts horizontal and vertical discourses are used as ‘analytical metaphors’, helping us to define degrees of verticality in knowledge (i.e. the degrees that knowledge is contextualised so students acquire opportunities to see beyond ‘the empirical’, or ‘how it is’). Knowledge organized strictly as ‘doing’ in a specific context is thus defined as highly horizontal, and becomes more vertical the

more it is contextualised in relation to conceptual knowledge, historical or societal contextualisations, or other recontextualising principles that help the student to see beyond, or the contingency of, 'how it is'. Moreover, structural and systematic thinking (the core element of vertical discourse) not only enables participation in society's conversation, it is also a powerful tool to explore alternatives and generate innovation for social change (cf. Gamble 2014; Winch 2014).

In the second part of the analysis, we address the contextualisation of the curricular content of the gendered Swedish VET programmes in terms of valued future labour positions, (RQ2). Here the notions of generalising and particularising pedagogic practices presented by Young (2006) and Hordern (2014) are important, i.e. we examine the degrees to which contextualisation of vocational education is either generalised towards moral issues and issues of citizenship, or particularised towards specific workplace tasks. We also consider how the knowledge contextualised in the curricula is valued. This is equally important since different occupational fields have specific knowledge orientations and forms of regulation, often based on historical understandings and developments (i.e. singular, regions and fields of practice, see Young and Muller 2014). Muller (2009) has shown that this historicity also has implications for conceptual or contextual coherence in curriculum orientations. To further understand the gendered division among VET programmes, we use the concept of 'gender regimes' presented by Connell (1987), based on historical understandings of how gender is constructed through traditional structures in labour and power. Connell's theory offers a four-dimensional understanding of gender as an analytical tool to explore divisions of labour and power, based on: power relations (direct, discursive, colonizing); production, consumption and gendered accumulation; emotional relations; and symbolism, culture, discourse. According to Connell (2009,

72–93), through historical and material understandings of production and consumption, the former has been associated with men and the latter with women. Moreover, production work, and thus men's work, has been more highly valued historically.

Methodology

The study focuses on parts of the Swedish upper secondary curriculum that regulate the organisation, instruction and assessment of knowledge in the 12 VET programmes, which applies to all upper secondary schools, regardless of school type (provided by local authorities, organisation or enterprise) and region. The process of enquiry includes several stages of data collection, analysis and explanation (cf. Carspecken and Apple 1992).

The national curriculum consists of texts setting educational objectives, practices and contents at a hierarchical series of levels. The introductory chapters stipulate general objectives and common goals, e.g. educating active citizens, capable of critical thinking. These chapters are not included in the analysis, since the goals pertain equally to all programmes. At the next level down, the texts set specific 'diploma goals' for each programme, which are supposed to permeate all teaching in it and (hence) are primary concerns of this inquiry. At the next level down the texts lay out subject plans, which state the general purpose of teaching the subject and are broken down in course syllabuses with specified content and criteria for assessing the students' knowledge. The subjects are divided into: 1) foundation subjects, 2) programme-specific subjects and 3) specialist subjects. Successful completion of courses in the subjects provide set numbers of credits (foundation subjects, such as Swedish, English, Mathematics, History, Religion, Social Science, Natural Science, and Physical Education and Health in VET programmes each provide 600 credits), and students must amass a total of 2 500 credits to graduate.

Since the purpose of the study is to compare the 12 VET programmes, the foundation subjects, which at a curriculum level are identical for all VET-programmes, are ignored. Instead, we focus on the core content of each programme, i.e. the diploma goals and programme-specific subjects. The diploma goals and programme specific subjects are also of particular interest since the 2011 reform restructured civic education orientation towards those goals and subjects. The programme-specific subjects are studied by all students, regardless of orientation (all VET students must choose an orientation, or specialization, within their selected programme, except students taking the Health and Care programme, usually in year 2).

The material amounts to approximately 49 000 words in total.² We conducted a qualitative text analysis in two stages. First, the content knowledge and competences stipulated for each programme were analysed to assess how much the knowledge in each VET programme was organised in horizontal and vertical discourses. Then we examined more closely the contextualisation of knowledge – how the texts legitimise the content, and portray the corresponding trade, profession and students' future in work and society. In this respect, the documents are not only carriers of content knowledge, but also constitute the present and future position of the students (Prior 2004).

The results of the analysis are presented in two sections, corresponding to the two research questions. First, we present findings regarding the general degree of conceptual knowledge and knowledge that could potentially assist the students' social inclusion and empower them to exert influence in work-life and society. We say *could* because, as we will show, in some cases the contextualisation largely deprives the knowledge of its potential power. The second section is divided into two parts, since we found that the subject 'entrepreneurship', introduced in the reform of 2011, is very important to understand how gender divisions are maintained. The analysis led to

division of the VET programmes into three groups; one of boy-dominated programmes and two of girl-dominated programmes. Thus, to describe the implications of differences among these programmes, the girl-dominated programmes have been given more space.

Understanding and developing new possibilities

This section relates to RQ1: How do the curriculum texts for girl- and boy-dominated VET programmes treat important knowledge for the students' empowerment and acquisition of a critical voice in society? To address this question, we have sought to identify passages concerning vertically organised knowledge in the exam goals and programme-specific subjects for each programme, and to compare programmes dominated by girls and boys to assess the distribution of such knowledge. Despite all being VET programmes with the same basic structure, the investigated programmes vary substantially in stipulated orientation of knowledge, from primarily context-bound and horizontal content, to more vertical and general content.

Domination of knowledge with a low level of abstraction

Seven of the 12 VET programmes are dominated by a horizontal discourse oriented towards the particular, i.e., no disciplinary subjects are included in the programme-specific subjects, and there are no references to general or critical contextualisations of knowledge in the diploma goals. These seven include both male-dominated (HVAC and Property Maintenance, Building and Construction, and Vehicle and Transportation) and female-dominated (Handicraft, Hotel and Tourism, Business and Administration, and Restaurant Management and Food) VET programmes. In addition to the absence of subjects with a clear connection to disciplinary knowledge, the contextualisation of knowledge in the exam goals and syllabuses for the programme-specific subjects in

these cases is narrowly focused on context-bound abilities and skills. As shown in the examples below from the Vehicle and Transportation and Hotel and Tourism programme curricular texts, the orientation towards a horizontal discourse is manifested by the VET-students being given the possibility to acquire knowledge preparing them for acting and thinking in local contexts. There are few attempts to contextualise content to enable the VET students to see beyond “how it is”; neither through disciplinary connections nor through relating knowledge to societal, historical, political or other contexts that extend it beyond the empirical.

Teaching in the subject of Vehicle Technology should aim at helping students develop technical skills and an interest in technology. Students should be given the opportunity to develop the ability to service and repair vehicles and the ability to handle tools and equipment. Teaching should help students develop knowledge of the main components in vehicles. Teaching should also give students the opportunity to develop a knowledge of disassembly and assembly processes and of handling some of the information systems used to solve work tasks (Vehicle Technology, Aim of the Subject)

Teaching in the subject of Conferences and Events should aim at helping students develop knowledge of the development of the conference industry, different facilities and environments, and the potential for adapting these to customer needs. Teaching should also help students develop the ability to plan and conduct different types of meetings. Teaching should also give students the opportunity to develop the ability to communicate with customers and guests so that meetings are professional and service-oriented. Students should also be given the opportunity to develop versatility and creativity so that activities and equipment can be adapted to customer requirements and financial conditions (Conferences and Events, Aim of subject)

Most practices involve horizontal and vertical discourse, to varying degrees. As pointed out by Young and Gamble (2006), vocational education programs are tied to workplace contexts, but the knowledge that underpins relevant practices is often based in

disciplinary systems of meaning. Given this connection to systematic knowledge, the knowledge that should be conveyed and acquired in the Vehicle and Transport programme (for example) could be contextualised in relation to a vertical discursive logic, rather than largely to the practical goal of enabling students to perform specific tasks or adapt to existing conditions. In the example above, the focus is only on the ‘doing’, but it could be contextualised in relation to the disciplinary knowledge that underpins the practice, the workplace environment in which those practices are performed, positions within and relations between occupations, workplace ethics, use of natural resources and other considerations.

In the next section, we consider more closely VET programmes, which to some extent embrace a higher degree of vertical orientation.

Girl-dominated VET has greater variation of horizontal/vertical discourse

We found several patterns in relations between the programmes’ domination by girls or boys (percentages of enrolled girls) and apparent differences in the organisation of knowledge. The boy-dominated programmes have a more homogenously low degree of vertically oriented knowledge than the girl-dominated programmes, which include two with much more vertically oriented content than all the other VET programmes. Among the programmes dominated by boys, the Electricity and Energy programme was found to have the highest degree of vertical discourse. For instance, unlike the HVAC and Property Maintenance, Vehicle and Transportation, and Building and Construction programmes, the Electricity and Energy programme’s content is explicitly connected to disciplinary knowledge in the diploma goals:

The education should also lead to students understanding the importance of being able to document and systematically solve problems. All electricity, energy, automation and computer expertise is based on scientific principles. The ability to

carry out correct calculations is a prerequisite for professional practice. The education should thus develop students' mathematical knowledge. (Electricity and Energy programme, Diploma Goals).

References to systematic knowledge are also made in the programme-specific subjects:

Teaching in the subject of Mechatronics should aim at helping students develop the ability to build mechatronic systems, and a knowledge of how mechanical structure, electrotechnology and control technology interact in technical systems in people's everyday lives. Teaching should also help students develop knowledge of how to describe scientific principles using mathematical formulae. Teaching should also give students the opportunity to develop a knowledge of how technical systems can be broken down into subsystems. (Mechatronics, Aim of the Subject)

Here, we find knowledge recontextualised from applied interdisciplinary fields of knowledge production (Young and Muller 2014). However, the programme-specific subjects include no disciplinary subjects, not even mathematics, despite the importance subscribed to such knowledge. The programme is an example of how workplace knowledge through content recontextualisation (Evans et al. 2010) is oriented towards applied knowledge rather than general. Thus, following Bernstein (2000:169), it is deprived of its full potential to help the students acquire cognitive abilities to put everyday work into different perspectives, and consequently includes little of what Bernstein refers to as pedagogic rights (see Table 3).

One of the girl-dominated programmes, Natural Resource Use, includes the disciplinary subject Biology in its programme-specific content. However, other content and the contextualisation of knowledge are predominantly context-bound. The two girl-dominated programmes that deviate considerably in terms of degree of vertical discourse from most VET programmes are the Health and Social Care programme and the Child and Recreation programme. Their programme-specific subjects include health, medicine, people, psychiatry, psychology, social studies, special pedagogy, Swedish or

Swedish as a second language, and health and social care – subjects with less context-bound knowledge than subjects in the other VET programmes. Moreover, the diploma goals passage for the Health and care programme state that:

The education should also give students knowledge of the historical development of Health and Social Care. With this as a foundation and with the support of current research, students should develop the ability to critically examine established routines, and be able to propose changes that lead to greater quality in the area. (Health and care programme Diploma goals).

Clearly, the curriculum stipulates a critical and systematic stance towards knowledge and practices in the field, and asks for agency by the student. Moreover, it includes explicit references to disciplinary knowledge and the historicity of structures and discourses of the vocational field that are lacking in diploma goals of all other VET programmes except the Child and Recreation programme, which also state that: ‘The education should give students the opportunity to develop scientific and critical approaches...’. Such opportunity should be provided through the programme-specific subjects: Health pedagogy, Science studies, four Pedagogy courses (Communication, Learning and development, Human environments, Pedagogical leadership), Social science and Swedish or Swedish as a second language. Thus, both programmes could provide access to knowledge that affords a historical perspective on current practices and understanding of the social construction of norms, potentiating awareness that norms can be changed. However, closer examination of the (re-)contextualisation of the knowledge revealed that a discourse centred on the occupational objective (caring for others) dominates the two programmes:

Working with people requires, amongst other things, the ability to be sensitive, creative and use judgement to create optimal conditions for the participation and learning of all people. The education should, thus, give students the opportunity to

develop these skills in particular (Diploma Goals, Child and Recreation programme).

The education should, thus, lead to students developing a holistic view of human beings and an understanding of the importance of lifestyle for health. The education should develop students' ability to deal with people in a professional way, to communicate with respect for the integrity of the individual, and give people opportunities for participating and exercising influence. Students should also be able to develop an understanding of the different needs and conditions people have and face (Diploma Goals, Health and Care programme).

Although both peoples' 'participation and learning' and 'lifestyle for health' could be related to social variables such as socio-economic background and gender, this is not stipulated (or even mentioned) in the respective diploma goals. Through the analytical lens of vertical and horizontal discourse we can conclude that conceptual knowledge is largely deprived of its potential to provide civic understanding by the (re-)contextualisation towards the individual rather than societal structures. Thus, there are clear risks of students regarding perceived problems as unique experiences of individuals rather than consequences of structures of social inequality.³

From the analysis in relation to RQ1, we can divide the programmes into two categories. One includes just two girl-dominated programmes with the potential to provide general knowledge useful for generating social change, but with a content that seldom addresses broader than individual perspectives. The other includes five girl-dominated programmes and five boy-dominated programmes, which appear to offer a low level of abstraction and few possibilities to put specific content into different perspectives. As described above, there is some variation among those 10 programmes in terms of access to knowledge related to civic understandings (see Table 3). However, the similarities are greater than the differences.

Participation, construction, maintenance and transformation of social order

This section relates to research question 2: How is the curriculum content of the different VET programmes contextualised in terms of valued future labour positions?

Here, we exemplify findings regarding the programmes' potential to empower individuals to enhance not only their personal prospects through the acquisition of critical knowledge, but also their social inclusion and political participation.

Ascribing legitimacy to the boy-dominated programmes

There are clear differences between the girl-dominated and boy-dominated VET programmes in terms of approach to participation, construction and maintenance of social order. In the boy-dominated programmes, the future trade and vocation are contextualised and legitimised through references to the maintenance, construction and foundation of essential societal structures. For example, the Electricity and Energy programme stresses the importance of the vocation for societies' infrastructure:

The education should develop students' knowledge for supporting and assisting basic important functions in society such as the production, installation and distribution of electricity, energy and water systems. (Electricity and Energy programme, Diploma Goals)

In the Building and Construction programme's diploma goals there are references to broader contexts of social and economic structures:

Since work in building and construction affects society's infrastructure and environments which people frequent, the education should provide a knowledge of rational, safe and environmentally sustainable construction. [...] The building and construction industry deals with large amounts of capital. [...] The education should develop students' understanding both of their own and the profession's importance in working and societal life. (Building and Construction programme, Diploma Goals)

Although formulating similar legitimations for the social (health and educational) contributions of occupations linked to the Health and Care programme and Child and Recreation programme would be easy, there is no such contextualisation in the diploma goals of the girl-dominated programmes. Bernstein (2000, xxi) emphasised the importance of people having ‘a stake in society’ for effective democracy, in terms of being concerned not only to receive but also to *give* something. In the curriculum, the discourses regarding vocations associated with the boy-dominated programmes convey a message to the students that they do have a stake, which narrows the step to ‘participate in the construction, maintenance and transformation of social order’ (Bernstein 2000, xxi).

Connell (2009) and other feminist researchers (cf. Odih 2007) make a gender distinction between consumption and production based on historical and material analyses. While admitting that it gives simplistic concepts and generalisations, she finds this distinction can be used to discuss what is valued in relation to gendered accumulation. She continues by claiming that although domestic work, which is usually associated with women, includes lots of production work, it is associated with consumption. In the last century, large elements of domestic work in the health services and child care domains have been transferred to the public sector, but these domains are still seen and valued as consumption work. In that respect, consumption work is less valued than production work connected to industry. Through discourses of production and maintenance in the male-dominated programmes, illustrated above, those educational tracks, the future vocation, and the workers, are associated with strong positive values. In contrast, the Child and Recreation and Health and Social Care counterparts are constituted in relation to domestic work (consumption), and thus less valued in these terms. The discourses constituting these values might be understood in

relation to structures in society at large. Moreover, such structures may be reinforced by discourses in the curriculum, which seems to use phrases indicating that occupations associated with men physically building social infrastructure (construction, repair, production) have higher value than consumption- or care-related occupations associated with women.

Agency for students in girl-dominated programmes – in the empty form of ‘entrepreneurship’

A strong democracy requires active civil engagement by its citizens. Hence it is important to provide students with educational opportunities to develop both the abilities and knowledge required for agency in order to promote their democratic engagement (Table 3, and Bernstein 2000). In contrast to this ideal, the VET programmes generally focus on adapting the students to the culture of the vocation and the employers’ needs. However, a discourse of agency is present in the form of ‘Entrepreneurship’ – an overall goal of the national curriculum and a particular subject in upper secondary school.

The school should contribute to students developing knowledge and attitudes that promote entrepreneurship, enterprise and innovative thinking. As a result, the opportunities for students to start and run a business will increase. Entrepreneurial skills are valuable in working and societal life and for further studies. (Curriculum for the Upper Secondary School, Fundamental Values and Tasks for the School)

This entrepreneurship discourse promotes both a certain orientation of activity, and development of a particular type of individual with supposedly desirable attitudes and behaviour.

Teaching should contribute to students developing confidence in their personal resources, and stimulate their creativity and desire to accept challenges and take responsibility for putting ideas into practice. [...] In connection with work

processes, teaching should help students develop the ability to work purposefully, solve problems, take personal responsibility and co-operate with others. Students should also be given the opportunity to reflect on their experiences in order to learn from them. (Entrepreneurship, Aim of the Subject)

In the VET programmes, the subject is only included in the programme-specific subjects of all but two of the female-dominated programmes (Business and Administration, Handicraft, Hotel and Tourism, Restaurant Management and Food, and Natural Resources Use; not the Child and Recreation or Health and Social Care programmes). This is interesting, especially considering that entrepreneurship is a concept that many educational researchers see as empty of knowledge (see also Niemi and Rosvall 2013; Spenceley 2006), because it is not constructed or conceptualised towards a discipline or disciplines with a shared paradigm of shared concepts. Nor has it the historicity and regulations of disciplines with high paradigmicity (cf. Muller 2009). Thus, Entrepreneurship has a weak socially and historically accepted knowledge base. The meaning system of entrepreneurship derives primarily from the logic of a market economy rather than from a disciplinary field of knowledge or as a political subject of a democratic society. The lack of a shared paradigm around entrepreneurship is illuminated by findings that teachers and school leaders have diverse interpretations of entrepreneurship in terms of its content, and as a subject Wallin (2014; Lindster-Norberg 2016). The entrepreneurship discourse is particularly emphasised in diploma goals of the female-dominated Handicraft, Hotel and Tourism, and Restaurant Management and Food programmes:

Irrespective of whether one is employed or running one's own company, the ability to take initiatives, develop ideas, and self-motivation are required. The education should give knowledge about entrepreneurship and business. (Restaurant Management and Food programme, Diploma Goal)

Irrespective of whether one is employed or running one's own company, what is required is the ability to take initiatives, develop ideas, independence, personal responsibility, the ability to cooperate, and self-motivation. For this reason, the education should provide knowledge about entrepreneurship and running one's own business, from basic business economics and marketing to creating and retaining customers. (Handicraft programme, Diploma Goal)

In other words, the above programmes do not give access to disciplinary, conceptual and systematic knowledge in the same way as the Health and Social Care or Child and Recreation programmes (however limited, as previously described). Nor do they include courses with content contextualised towards production or consumption, but rather undefined, weakly classified subjects with low legitimacy. For example, a course in Vehicle Technology is more related to recognised regions and fields of practice than entrepreneurship. This could easily be amended, since the subject of entrepreneurship includes elements of business, economics, accounting and law (contract and market), which are historically highly valued and if the subject of entrepreneurship was replaced with business and economics etc. it would certainly increase the value of the subject/s and the programmes as a whole.

Discussion

Our findings provide nuanced indications of the likelihood of the curriculum of the Swedish VET programmes challenging or reinforcing gender patterns, in Bernstein's terms. It seems to offer more opportunities to acquire useful conceptual, disciplinary knowledge for understanding the social order within and outside workplaces in girl-dominated programmes than in boy-dominated programmes. However, the future vocations of boy-dominated programmes are more deeply contextualised as important contributors to a larger social and economic system in which the students, as agents of certain trades, have a stake. We have focused our analysis on the curriculum texts.

However, policy texts are neither produced nor exist in a vacuum, and need to be understood in relation to the wider society. Showing that programmes associated with boys are linked to more highly valued positions is not straightforward, but a year after their final exams graduates of the five strongly boy-dominated programmes in full-time employment earn considerably more than graduates of the other programmes.⁴ In addition, demands for higher (university level) education in occupations traditionally associated with women, such as working in a preschool or nursing assistant, have increased in recent decades. Where it was previously possible to acquire a position in child care with an upper secondary education, a university-level qualification in preschool pedagogy is now required to obtain a permanent post. However, university studies to become a preschool teacher or a nurse have a negative impact on individuals' life course wages compared to those who start work immediately after upper secondary school (Ljunglöf 2011), like many vehicle mechanics or construction workers (cf. Francis 2002). Thus, trends that superficially appear to be gender-equalizing rather seem to have the opposite effect.

The VET programmes generally have a stipulated content knowledge that is primarily organised in what can be described as a horizontal discourse. Nevertheless, two of the girl-dominated programmes (Health and Care, and Child and Recreation), afford opportunities for students to acquire useful vertical and conceptual knowledge to participate in social conversation and change. This form of knowledge represents 'individual enhancement' and functions as a 'means of gaining critical understanding and new possibilities'. However, knowledge discourses in those two programmes are often presented at an individual level, hindering extension of the knowledge to group or societal levels. In terms of conceptualization by Skeggs (1997), it enables 'psychologisation' of one's own position, but provides limited opportunity to critically

understand and challenge the societal order. Moreover, in terms of influence, the curriculum for the Health and Care programme emphasises giving influence to someone else (the patient), which signals the student's position in society.

Regarding the value of associated occupations, those linked to boy-dominated programmes are ascribed clear importance for the wider society through their highlighted roles in the construction, repair and servicing of crucial infrastructure and equipment (cf. Connell 2009; Odih 2007). There are no equivalent legitimations of the future vocations of the female-dominated trades in the curriculum texts, although they could be easily portrayed.

Courses in boy-dominated programmes are supposed to convey knowledge that can be relatively clearly classified in recognised vocational domains, but also substantial proportions in historically valued disciplinary domains. In contrast, the girl-dominated programmes include courses of undefined knowledge (such as developing one's own identity, creativity and entrepreneurship), which are not clearly connected to either historically valued disciplines or issues of civic understandings. The long-standing basic commitment to a universal educational system of a comprehensive nature with a strong component of general education was a pillar of the social justice ethos in the post-war era, but this was rapidly replaced by a (neo-) liberal market/employer-oriented ethos in the reform of 2011. The resulting shift in orientation ushered in concepts such as entrepreneurship, which was strongly promoted by the European Commission as a part of lifelong learning (Lindster-Norberg 2016; Pépin 2007). The concept was introduced in the introductory pages of the 2011 curriculum and a few diploma goals, but only implemented as an obligatory subject in four female-dominated VET programmes. Many occupations in those programmes (floristry, tourism, horse farming, and commercial services) involve problematic issues, such as a prevalence of

uncertain and/or part-time employment, and some are considered to be ‘youth work’ (Skolverket 2016b). Moreover, in educational contexts the value of entrepreneurship has been questioned because of its vague definition, which has led to diverse pedagogic practices in entrepreneurship courses, and employers having little idea of the knowledge that students gain from them (Lindster-Norberg 2016). Those programmes are associated with regions that Muller (2009) describes as ‘fourth generation professions’ that lack ‘disciplinary robustness’, i.e. ‘the core knowledge base has not yet shaken down into a stable, generally accepted, incremental body of knowledge’ (214). Thus, recontextualising workplace knowledge by including subjects such as entrepreneurship with questioned value, rather than clearly valued subjects with a more standardised curriculum and understanding (such as business law, economics, sociology and psychology), may devalue female-dominated programmes rather than adding to their prestige.

Concluding remarks

Production, care and consumption refer to symbolic values in society, which, through the vocational programmes’ specific curricula, uphold a gendered accumulation. The educational policy of the Gyl1 reform does not challenge existing gender structures in the labour market or society at large. Rather, it reinforces the existing gender order. In addition, male-dominated vocations are more strongly related to a near future with full-time employment, which enhances possibilities to exert influence in the wider life course. In an English context, Evans (2006) attributes similar patterns to ‘gender blindness’. However, in a historical perspective, we conclude that Swedish vocational education policy has not exactly been ‘gender blind’ but has continued to blindly embrace gender discrimination, due to its conformation with wider norms.

Notes

1. Bernstein's (2000) theory of the pedagogic device builds on three sets of rules. First, *distributive rules*, concerning how different types of knowledge and consciousness are distributed between different social groups. Second, *recontextualising rules*, concerning the construction of pedagogic discourse through the recontextualisation of knowledge from a field outside education to 'school knowledge'. Third, *evaluative rules*, concerning the criteria for assessment or evaluation of the texts produced. Though touching on all three aspects in this study, we focus primarily on the distributive rules, in contrast to the tradition primarily concerned with epistemic relations, which generally focuses on the recontextualising rules.
2. e.g. the diploma goals, subject plans and course syllabi for the Restaurant and Management programme consists of 4 182 words.
3. Interestingly, a discourse of perspective-taking and intercultural competence, resembling the 'caring for others' discourse, is present in curricula for several of the boy-dominated programmes. E.g. "The education should thus develop students' ability to work both independently, and in teams where people with different knowledge and cultural backgrounds cooperate to solve problems." (Vehicle and Transport programme, Diploma goals). "Students should thus in all subjects work on developing their language skills and get opportunities of meeting and discussing different perspectives on people's living conditions in society." (Building and Construction programme, Diploma goals). "The education should develop students' ability to cooperate with others irrespective of e.g. gender, cultural background, age, position or competence, since working groups in industry are often heterogeneous." (Industrial Technology programme, Diploma goals). However, as with the caring discourse in the Health and Care, and Child and Recreation, programme curricular texts, the discourse is legitimised through the perspectives of the vocation and the employers, rather than from the perspective of the students' citizenship education.
4. Table 4. Percentages of graduates in full- and part-time employment, and percentages of girls enrolled, in each vocational programme

5. Programme	Full-time employment one year after completed exam	Part-time employment one year after completed exam	Girls % of programme total
Vocational programmes			
Handicrafts	30	70	94
Health and social care	51	49	81
Hotel and tourism	49	51	80

Natural resource use	62	38	67
Child and recreation	54	46	62
Business and administration	33	67	58
Restaurant management	52	48	58
Vehicle and transport	86	14	14
Industrial technology	96	4	11
Building and construction	92	8	9
Electricity and energy	81	19	4
HVAC and property maintenance	83	17	3

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