

Curriculum Making Across Sites of Activity in Upper Secondary School Vocational Education and Training: A Review of the Research in Sweden

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Abstract

Purpose: This paper presents a qualitative systematic review of Swedish research on vocational education and training (VET) at the upper secondary school level over the past 20 years. The review is based on a theoretical model on curriculum making as social practice that may serve as model for comparative studies between countries. By introducing the model, the ambition is to open for new perspectives on VET curriculum in policy and practice. Questions regarding key themes and the interplay of discourses and processes across multiple sites in the education system have not been addressed in previous systematic reviews of Swedish VET research.

Methods: The methodological approach in the present paper is a qualitative systematic research review with an integrative and interpretative purpose and research design. The qualitative review is based on the conceptual model of curriculum making as social practice, seeking to capture the inherent complexity and porous boundaries of education systems and movements of ideas, discourses and actors between sites of activity. The model is used for mapping the research, and a content analysis for identifying main themes and emphases and exploring and discussing the potential gaps that may inform future international research studies.

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Findings: The results show that the research is focused on the micro and nano sites of curriculum making, with connections to macro site activities of national curriculum policy enactment. Research focusing on the macro site of activity has an emphasis on national policy and policymaking regarding the relationship between academic and vocational knowledge/programmes and apprenticeship and employability. In the micro and nano sites of activity – which comprise the majority of the research – the main themes are vocational knowing and identity, teaching, learning and assessment practices and work-based learning.

Conclusion: An observation is the absence of principals and middle leaders as actors and informants in the studies. There is little evidence of actors moving between sites of activity and the meso site of activity only comprise a very small part of the research. In this respect, there is a potential gap to be explored, not least regarding how local curricula and syllabi are made and shaped in terms of the influence of representatives from local authorities, companies, trade unions, employer associations, universities and regional agencies. Curriculum making as social practice has the potential to be used for comparative international studies and as a framework that takes national differences in VET education systems into account.

Keywords: Curriculum Making, VET, Vocational Education and Training, Qualitative Research Review

1 Introduction

Following the increased attention to learner-focused and competence-based curricula across the globe (Priestley & Sinnema, 2014; Young, 2008), vocational education and training (VET) has been a recurring theme in discussions within the field of curriculum studies over the past few decades (Allais & Shalem, 2018; Bathmaker, 2013; Muller & Young, 2019; Wheelahan, 2007, 2015). Considering its importance for the economy, the labour market, competence provision and technological development, questions regarding VET also cut across different sectors of society, making it a high priority issue on the policy agenda (Cedefop, 2018; Misra, 2011). A key argument—one vigorously championed by the Organisation for Economic Co-operation and Development (OECD) and the European Union (EU)—is that education systems and curricula must address challenges raised by the dynamics of globalisation and prepare students with competencies and skills for democratic society and the future labour market (Priestley & Philippou, 2018; Robertson & Dale, 2015).

Vocations are at the heart of society and human culture, deeply engrained and integrated in the history of mankind. In the modern age – and not least the social, political and technological advancement and changes of society during the 20th and 21st centuries – questions of vocational knowing, learning and identity as well as the organisation of VET in various parts of the world have emerged. The inherent complexity of VET based on for example the

close connection between school and workplace or passing on tacit dimensions of knowledge has entailed that it commonly is described as a multifarious and interdisciplinary international research field. Over the years, several works have sought to bring different perspectives together and open new horizons for research (Guile & Unwin, 2019; McGrath et al., 2019; Rauner & MacLean, 2008). In the present paper, an analytical framework for a qualitative systematic review of Swedish research on VET in upper secondary school (16–19 year-olds) is introduced and employed by using the concept of 'curriculum making as social practice' (Priestley et al., 2021). In recent years, scholars have explored constructive ways of grappling with questions regarding curriculum and teacher agency by viewing it as multilayered social practices (Priestley et al., 2023). This means that curriculum making is something that occurs "across multiple sites, in interaction and intersection with one another, in often unpredictable and context-specific ways, producing unique social practices, in constant and complex interplay, wherein power flows in non-linear ways, thus blurring boundaries between these multiple sites" (Priestley & Philippou, 2018, p. 154).

From the point of view of curriculum making as social practice, teachers are considered as makers—not deliverers—of curriculum together with other actors in various contexts (cf. Doyle, 1992; Hudson, 2007; Lambert & Biddulph, 2015; Priestley et al., 2021). Teachers have a pivotal role for interpreting, enacting and transforming goals, aims and assessment in curricula in both collaboration with colleagues and in classroom interaction with students. This includes creation of teaching material and resources for learning (Alvunger, 2018). The model will be further developed in the theoretical section. The model will be further developed in the theoretical section but has through its inclusive and multi-layered design the potential to serve as a framework for comparative research across VET systems and contexts in different countries. For example, the model has been used and proved to be fruitful for such analyses regarding compulsory schooling on primary and secondary level in countries across Europe (Priestley et al., 2021). Swedish VET research on curriculum making in upper secondary school is used as a case because it provides a limited context of empirical examples of such multi-layered practices.

There is a growing number of studies aimed at identifying general patterns of and synthesising perspectives on Swedish VET. These are generally anthologies and overviews rather than systematic research reviews. To date, Lindberg's (2003) literature review of Swedish research on vocational education remains a comprehensive overlook of research before 2000. In another and more recent book, Lindberg, together with Fejes and Wärvik (2017), argue that Swedish research on VET has long been limited to historical studies of the emergence and development of VET, how teachers and students have perceived specific VET programmes or certain aspects of VET and studies on the employment rates among young people after having finished upper secondary school. Changes in VET curricula and the question of vocational didactics have been topical issues since the turn of the

millennium, not least since the introduction of a new VET curriculum for upper secondary school in 2011. This curriculum has also opened up a dual training system with apprenticeship education, which spurred the interest in vocational learning and identity, work-based learning and the relationship between school and work. In their anthology that consists of contributions from researchers in vocational didactics, Fejes et al. (2017) conclude that the last 10 years of research has had a strong focus on vocational didactics, vocational learning and identity, work-based learning, assessment and methodological aspects such as ethnography (cf. Muhrman, 2021).

As in the case of international research on VET, the research field of Swedish VET is interdisciplinary and rooted in different disciplines. This makes it difficult to provide an overview of the field (Muhrman, 2021). Considering the increase in Swedish VET research since 2000, we need a systematic and comprehensive view of the dominating themes in the field. This is also why the present review covers research from the turn of the millennium up to this date. Furthermore, questions regarding key themes and the interplay of discourses and processes across multiple sites in the education system have not been addressed in previous systematic reviews of Swedish VET research. The metaphor of curriculum making as what actors do and as something that "concerns the multiple layers or sites of education systems, across which curriculum is made in its various forms" (Priestley et al., 2021, p. 8) is useful for an analysis in many ways. First, it embraces the perspectives and conceptual distinctions between the Anglo-American curriculum tradition and northern and continental European tradition of *Bildung*-centred didactics (Hopmann, 2007; Hudson, 2007; Moreno Herrera, 2015). This opens for a discussion on potential comparative perspectives and how the results in the present paper can be interpreted and seen from conditions and particularities in other national contexts. Second, it allows for seeing beyond institutional levels and focusing on the specific texture and granularity of processes and actors on the sites of social activity across education systems. In this respect, it is worth noting Billet's (2006) conceptualisation of a workplace curriculum that cannot be confined to education systems but that might appear in "many kinds of social practice, in community organisations, homes or other settings where social practices and individuals interact" (p. 45). Third—and finally—with the focus on practices associated with the curriculum, the model provides an analytical tool for studying multiple conditions and the inherent complexity of VET. This could be helpful to guide future studies in an international research context.

Against this backdrop, curriculum making as a social practice, here as developed by Priestley et al. (2021), is used as a framework for mapping the research and exploring and discussing the potential gaps in Swedish curriculum research on upper secondary school VET over the past 20 years. The following research questions will guide the mapping and analysis:

- Which dominating sites of activity, actors and processes emerge in Swedish research on VET curriculum making? How do the sites, with their activities and actors, relate to one another?
- What are the main themes and emphases in the research?
- What potential gaps can be identified in the research, and how may these inform future studies on VET curriculum making?

1.1 Vocational Education and Training in Sweden – Reforms and Changes in Curricula From 2000

In the late 1960s, VET became an integrated part of the Swedish upper secondary school system and the traditional apprenticeship model was abandoned. The system with vocational lines (as they were called) was quite consistent until 1994 when a new programme-based upper secondary school system and curriculum were implemented. This curriculum emphasised that students should be prepared for future work and all programmes were extended from two to three years of study, granting eligibility for higher education. Vocational subjects were replaced by 'character subjects' organised in separate courses and the placement part of the programmes was reduced (Lindberg & Wärvik, 2017). However, due to an increase in the drop-out rate from the VET programmes, less interest among students to choose a vocational pathway and growing youth employment, the organisation and curriculum of upper secondary VET were questioned. In 2011 a new curriculum was introduced, aiming to align vocational programs and to increase students' employability, leading to a vocational exam and thus making a clearer distinction towards the programmes preparing for studying higher education. Vocational subjects were re-introduced (Ministry of Education, 2010). The new curriculum also opened for the return of an apprenticeship model and even if education predominantly continued within the school-based model (with simulated workplace environments like restaurants or salons), both the school-based and apprenticeship model required closer collaboration with employers and workplaces. Students were to be prepared for further studies and collaboration between common general and vocational was underlined. Thus, the reform of 2011 underscored the intricate nature of vocational subjects and the necessity for vocational teachers to be firmly rooted in both the general aims of the curriculum and workplace demands (Nylund & Gudmundson, 2017). Today, Swedish upper secondary education has 12 vocational programmes. VET is provided by both public and private schools. More advanced and specialised VET or competence development is carried out by educations that are approved by the Swedish National Agency for Higher Vocational Education (Kuczera & Jeon, 2019).

1.2 Curriculum Making as Social Practice—An Explorative and Analytical Framework

The concept of 'curriculum making' has a long history, and its meanings have shifted and transformed over time (Craig et al., 2008; Doyle, 1992; Westbury, 2008). The concept originally emphasised academic content knowledge and subject matter as the foundation of curriculum making because of the push for social and economic needs via 'scientification' and a technical-managerial paradigm of expert rule and prescriptive schemes. However, this implementation-focused and hierarchical view of curriculum making was increasingly called into question (Priestley et al., 2021). Instead of perceiving teachers as passive objects of reform and deliverers of curriculum, curriculum theorising has suggested that teachers—together with school leaders, students and so on—should be regarded as 'curriculum makers' (Clandinin & Connelly, 1992; Priestley et al., 2021). In his works, Doyle (1992) argues that the teacher creates 'curriculum events' in the transformation of curriculum text content into actual teaching content in the classroom to develop students' knowledge and abilities. In this interactional space of the classroom, students act as 'coauthors'. In a similar vein, Lambert and Biddulph (2015) claim there is a 'dialogic space' between curriculum and pedagogy, as well as between disciplinary knowledge and experience-based knowledge—where the teacher is a 'boundary worker'. In classroom curriculum making, the teacher must consider the key concepts of the subject matter, the capability to think about a subject (epistemic knowledge), the appropriate learning activities and, finally, how knowledge may help the students go beyond what is already known (cf. Lambert, 2011).

The analytical framework for the research review in the present paper draws from an understanding of curriculum making across intertwined 'sites of activity' seeking to expand beyond institutional models and conceptions of curriculum (Priestley et al., 2021). To a large extent, it builds on a similar terminology of layers, domains and levels and approaches used by, for example, Doyle (1992), Goodlad (1979) and Thijs and van den Akker (2009) but that seeks to capture the inherent complexity and porous boundaries of education systems and movements of ideas, discourses and actors (cf. Figure 1). Curriculum work involves highly dynamic processes of interpretation, mediation, negotiation and translation across multiple layers or sites of education systems and is characterised by "an interplay between different actors, contested spaces and power relations, framed by particularities and contextual factors of social practices, shaping unique settings, and producing multifarious meanings of what curriculum is and for whom it is made" (Alvunger et al., 2021, p. 274). Figure 1 illustrates how discourses, policy flows, ideas and actors may move across different sites of activity.

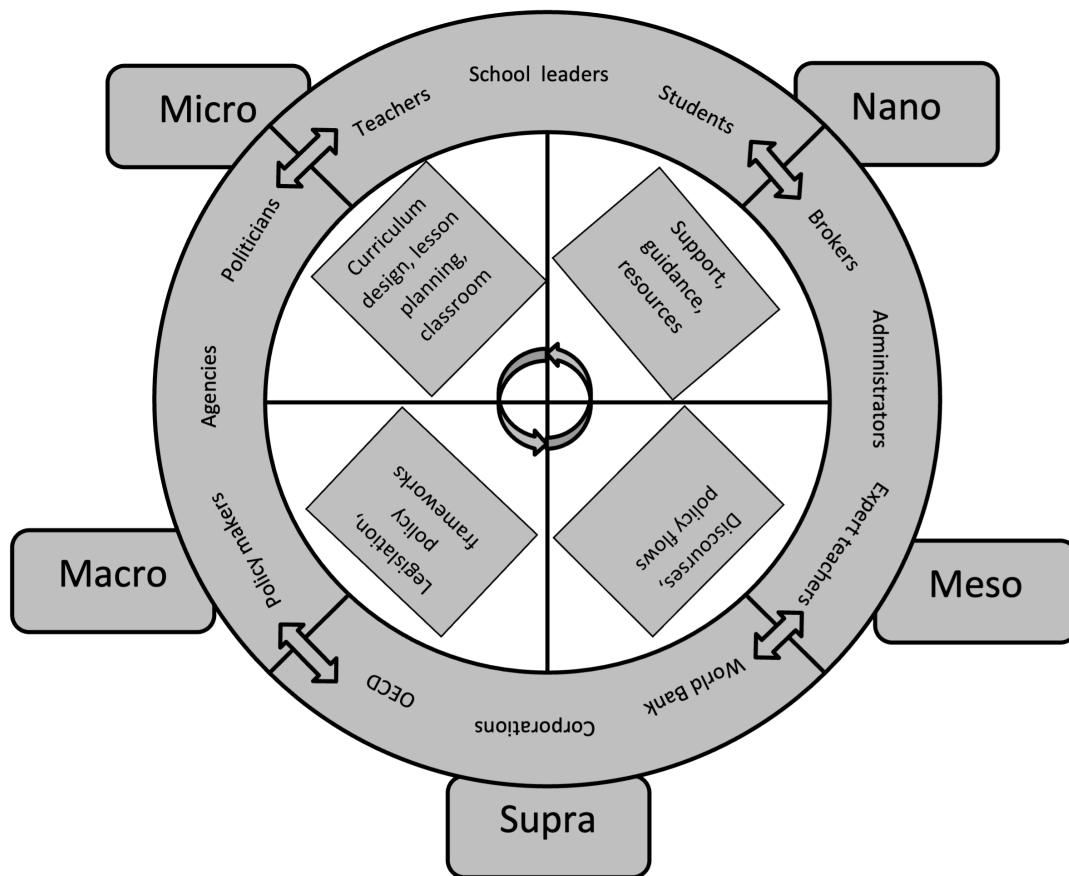


Figure 1: Curriculum Making as Social Practice (Alvunger et al., 2021, p. 271)

In brief, this perspective comprises the notion of curriculum as a multilayered and situated social practice—that is, something 'made' by teachers and students, schools and district offices, national agencies and policymakers in interaction across the education system:

- On the supra site of activity, curriculum making occurs through transnational curricular discourse generation, policy borrowing and lending and policy learning mediated through actors like the OECD, World Bank, UNESCO and the EU. These transnational and international actors compile reports on the state of different national education systems and conduct tests and assessments programmes for comparative studies of students results, attainment (for example, the Programme for International Student Assessment by the OECD) with recommendations for changes in policy and curricula for different countries. Based on such studies, policy and curriculum frameworks and strategies are developed, or as in the case of the EU, decided upon as policy guidelines for the member states.

- National governments and curriculum agencies develop curriculum policy frameworks and legislation to establish agencies and infrastructure on the macro site of activity. These processes of interpretation and formulation of curriculum might be influenced by, for example, actors on the supra site or micro site.
- Depending on the character of the education system, national governments and curriculum agencies might act at the meso site of activity. However, on this site, we commonly find actors such as representatives of district authorities, curriculum brokers and subject-area counsellors. Common activities comprise the production of guidance, leadership of and support for local curriculum making and production of resources.
- Official curriculum documents are the products of interpretation and translation. When adapted to local contexts in schools on the micro site of activity, they are again transformed and recontextualised in cycles of interpretation through school-level curriculum making, programme design and lesson planning by principals, senior leaders, middle leaders and teachers.
- In classrooms—the nano site of activity—teachers and students negotiate and produce curriculum events via daily pedagogic transactions. This site includes teacher-led activities—lecturing, instruction, dialogue and discussion and recitation—or student-led activities—group or individual work, dialogue and discussion (Alvunger, 2022). As a result, the approach of curriculum making as a social practice entails an extended and inclusive view on the practices associated with the curriculum, including classroom and teacher arenas regarding the selection of content and knowledge emphases, approaches to teaching, timetabling and teaching organisation and supportive infrastructure and resources for curriculum making in schools (Priestley et al., 2021). The five points mentioned above will be used as inclusion criteria for identifying sites of activity, ideas, processes and actors. By applying the framework as sites of activity, it becomes possible to map and categorise the literature on upper secondary school VET curriculum making in Sweden over the past 20 years. The methodological implications of this perspective will be further developed in the following section.

1.3 Methodological Considerations and Analysis of Data

The methodological approach in the present paper is a qualitative systematic research review with an integrative and interpretative purpose and research design (Gough et al., 2017). The review focuses on upper secondary school VET, a school form that is generally for students between 16 and 19 years old. However, studies of adult education are included in the sample because adult education has similar requirements as the upper secondary VET curriculum

and syllabi in the vocational programmes (Swedish National Agency for Education [SNAE], 2022). The search is limited to publications dating back to 2000, which dates to the increase in Swedish VET research since the turn of the millennium. The selection process followed three steps, which are described in Figure 2.

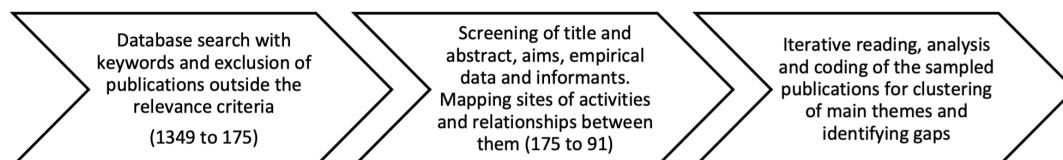


Figure 2: Process for Selecting and Identifying Empirical Data and Coding

The first step was a search for articles in peer-reviewed journals, dissertations, monographies/anthologies and proceedings in the databases EbscoHost Education Resources Information Center (ERIC) and SwePub. The search words were as follows: Vocational education AND curriculum OR didactics AND vocational teachers AND vocational learning AND vocational knowledge AND vocational students AND Sweden NOT continuing education. This rendered 1,349 results. The relevance criteria for exclusion and inclusion were set up to limit the number of publications. Even though the search was directed at Sweden, there were many hits on publications in other countries, topics concerning areas such as agriculture, arts education, higher education and continuing education. These posts were removed. This also implied that publications focusing on socio-economic factors and conditions, labour market and financial questions, class, gender and ethnicity without connection to education policy, teaching, learning and assessment were all ruled out. Comparative studies in which one or more countries other than Sweden were mentioned were included.

To further limit the sample of publications, screening of title and abstract together with a close reading of the scope of empirical data and informants was made in the second step to find publications matching the inclusion criteria (Brunton et al., 2017). The inclusion criteria are based on actors, practices and documents on the sites of activity in the theoretical model of curriculum making (above). By looking into actors and contexts of policy and institutional perspectives, knowledge and content for teaching, pedagogical approaches, organisation of teaching, the production of resources and infrastructure for supporting curriculum making in schools, the publications were sorted from sites of activity and relationships between the different sites. The starting point from the theoretical model provided a map of the most common sites and most frequent relationships

between them. This narrowed the number of publications to 91. Articles showed to be the dominant category among the total of the publications.

The third step consisted of a close reading and rereading and content analysis (Bryman, 2021) of the publications, with a coding process and clustering of themes. The coding was guided by Braun and Clarke (2006) who argue that thematic coding provides a flexibility and freedom to systematically explore the empirical data while at the same time acknowledging the active role of the researcher. The first readings aimed at making acquaintance with the content of the data. Then initial codes were created to which data was connected, in this case by identifying actors and ideas on the sites of activity (which had been sorted in an earlier step). In the further process, the codes were sorted in themes where it was essential not to be too limited to the primary identified themes but to continuously test them against the initial coding and eventually new categories. Through this iterative process, the coding was refined so that the categorised themes became stable and open for analysis from the analytical framework (Braun & Clarke, 2006). In the final phase, the research question of potential gaps that could be identified was employed.

2 Mapping the Landscape of Swedish Research on Upper Secondary VET Curriculum Making

In the analysis of publications, the sites of activity emerging as the most common in Swedish research on upper secondary-level VET curriculum making over the entire period are the macro, micro and nano sites, with an emphasis on the two latter ones. An important observation is that these sites of activity and their associated processes, actors and ideas in no way are exclusively limited but instead merge and relate to one another. This shows the fluent and porous boundaries between the sites and multilayered social practices through which education is structured, enacted and evaluated. In Figure 3, a graphic description of the overall results is provided, showing the most frequent sites of activity (ovals with bold lines) and the most significant connections (arrow density). The number of studies identified on each site of activity is included. Because studies move across boundaries, the total amount of publications found in each of the ovals in Figure 3 is larger than the total amount for the review.

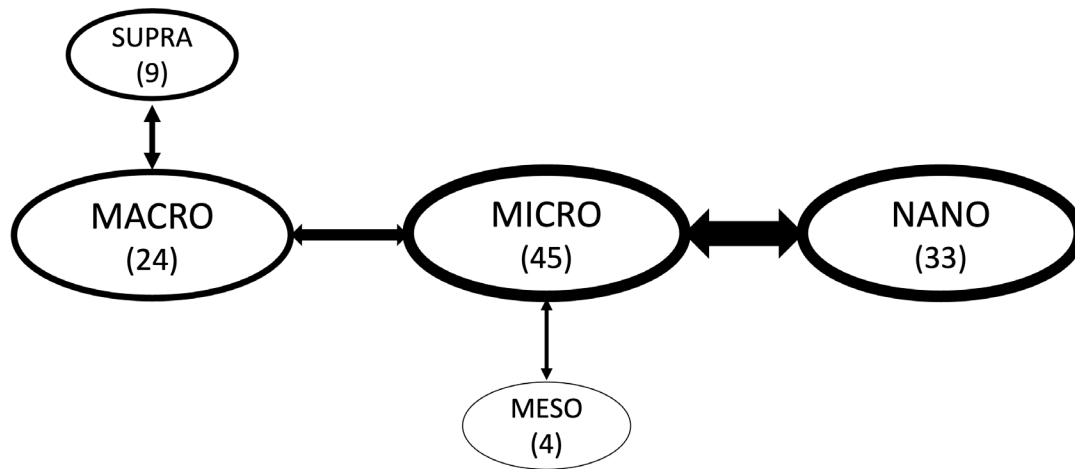


Figure 3: Sites of Activity and Their Most Significant Relationships

In the following, the findings from the analysis of the sites of activities and actors, together with the main themes and emphases in the research will be presented.

2.1 The Academic–Vocational Knowledge Divide and Apprenticeship and Employability: Macro Curriculum Making

Research focusing on the macro site of activity has an emphasis on national policy and policymaking regarding ideological, epistemological and content-related aspects of VET curricula. Two main clusters of this research emerge: 1) The relationship between academic and vocational knowledge/programmes and its implications for social stratification and access to knowledge and 2) apprenticeship and employability.

Considering the cluster on academic–vocational knowledge and social implications, the making of VET curricula is described by Nylund (2010, 2012, 2013) as being shaped by a political discourse of social efficacy that reinforces the distinction between academic and vocational pathways and reproduces class inequalities, while the significance of class is ignored. This distinction is further elaborated by Nylund et al. (2017), who argue that policymakers' intentions with the national VET curricula of 2011 are imbued with neoliberal ideas and values. Their policy analysis of educational content in VET programmes and programmes leading to higher education shows that VET curricula is characterised by 'doing' and 'adapting', as rooted in notions of competitiveness, employer influence and employability. A similar conclusion but from the perspective of organisation of knowledge in VET curriculum making is presented in Nylund and Rosvall (2019). The way in which VET curriculum is constructed and how it expresses the purpose of education severely limits students'

possibilities for gaining access to knowledge for developing democratic values and citizenship and preparing for and moving on to higher education (cf. Nylund, 2013; Nylund & Rosvall, 2011).

The second cluster of research on curriculum making in the macro site of activity is characterised by analyses of policy flows highlighting the centrality of 'employability' in discourses on VET and organisational aspects of VET programmes regarding school and work transitions and models. Nylund and Virolainen (2019) explore how the arguments for general studies as a part of VET upper secondary curricula among policymakers have changed and been redefined between the early 1990s and around the year 2010. They argue that a market logic has been prevalent throughout this period but has transformed to focus on flexibility and life-long learning. Similar implications can be seen regarding vocational didactics as a means for employability (Johansson, 2009), where the role of stakeholders operating as actors in the macro site of activity influence national VET curriculum making are put in the forefront (Andersson et al., 2015; Lindell, 2004). A theme emerging from this research is publications that stress the formation of apprenticeship curricula (Fjellström & Kristmansson, 2016; Kristmansson, 2016) and significant perspectives concerning the integration of school and work from a historical perspective provided by Choy et al. (2018). In recent years, research has specifically examined at actors that influence higher vocational education curricula (Köpsén, 2021, 2022a, 2022b). Köpsén argues that higher vocational education in Sweden is based on the idea of government regulations (a global discourse) parallel to a market-oriented view with autonomy and flexibility for the needs of employers. At the same time, education becomes too narrow and reduced to local concerns, with local variations of quality (Köpsén, 2022a).

As described in Figure 3, there is research that investigates the activities between the macro and supra sites. In this respect, the macro site of activity is highlighted by relating to processes and ideas that transcend the national context and comparative analyses with either the neighbouring Nordic countries (Jørgensen et al., 2018; Nylund & Rosvall, 2019; Nylund & Virolainen, 2019; Persson Thunqvist et al., 2019) or Western European countries (Gessler & Moreno Herrera, 2015; Misra, 2011). These are generally focused on institutional and policy/content-related issues rather than actor-oriented perspectives. Identified actors are transnational organisations such as the OECD and international organisations affiliated with the UN and European Centre for the Development of Vocational Training (CEDEFOP). The main emphasis is on policy ideas and how they influence official national documents and curriculum frameworks (for an example of entrepreneurship, see Wallin, 2014). These publications generally contain comparative perspectives on curricula that include differences in the policy and institutional organisation of VET pathways (Berglund & Henning-Loeb, 2013; Nylund & Rosvall, 2016; Persson Thunqvist, 2015).

2.2 Vocational Knowing and Identity: Micro and Nano Curriculum Making (I)

Research during the past 20 years has, to a great extent, focused on activities and actors at the micro and nano sites of curriculum making. In the context of VET, this concerns school-based teaching in classrooms and facilities for practical training or workplaces and actors such as teachers, students and supervisors for students during work placement and apprenticeship. It is worth noting that principals and school leaders—although being central actors on the micro site of activity—are almost invisible and are not represented in research. Thematically, the research interest on the micro and nano sites of activity can be divided into three major themes: 1) Vocational knowing, identity and strategies for learning; 2) teaching, learning and assessment practices; and 3) work-based learning and school–work relationships.

Within the theme of vocational knowing and vocational identity formation, Fejes and Köpsén (2014) and Köpsén and Andersson (2015) have used the concept of 'dual professionalism' to characterise the complex identity of VET teachers. This identity plays an essential role in how teachers plan and enact teaching. The boundary-crossing between knowledge and experiences from the previous occupational community and teacher community is important (Fejes & Köpsén, 2014). Teacher–student relationships and the ambition to prepare students for future life and work to make them a part of an occupational community stand out as a significant dimension of how VET teachers characterise their identity (Köpsén, 2014; cf. Andersson & Köpsén, 2019; von Schantz Lundgren et al., 2013). Thus, vocational knowing constitutes a core notion in VET teachers' curriculum making (Gåfväls, 2018; Lindberg, 2003; Lundgren & von Schantz Lundgren, 2012; Rehn & Eliasson, 2015).

The interaction between VET teachers and VET students and the ways in which they are engaged in and partake in 'curriculum events' (Doyle, 1992) in nano curriculum making have a central role in students' identity formation, their sense of becoming and how they learn (Wyszynska Johansson, 2018). Drawing from a study of vocational students in the industry programme, Ferm et al. (2017) have shown that students employ five different learning strategies to become a part of the work community in the development of vocational identity: The use of role models in the workplace, taking personal responsibility for learning, accommodating language idioms and jokes, being curious and asking questions and seeking to position oneself in the work community. Overall, the students' strategies reflect adapting to the vocational culture and social structures of the workplace (Ferm et al., 2017). Other studies have explored, for example, how male students in the construction programme conceive of studying general subjects and how they represent a counterculture towards what they regard as an academic culture. This resistance is an important aspect of the students' sense of self (Högberg, 2009). A conclusion drawn by Kärnebro (2013) is that norms on heterosexuality and masculinity shape both male and female students' views on general subjects and

the divide between theoretical and practical knowledge in the vehicle programme. However, female students use language practices for being defiant, provocative and independent more than their male peers (Kärnebro, 2013; cf. Kontio, 2016).

Another illustrative example is Klope's studies (2015, 2020) on students in the handicraft hairdressing programme. Klope shows how the female students' conceptualisation and positioning of themselves as professional hairdressers are shaped by beauty ideals that are subject to class and gender norms. These norms are both strongly femininely coded—to be mindful of appearance—and imbued with a work ethics that accentuates entrepreneurship, diligence and striving for perfection. Thus, the vocational identity of hairdressing students is formed by both values of being competitive and independent and nurturing and caring (Klope, 2020; cf. Bredlöv, 2018). Similar patterns of femininely coded values are reported by Ledman et al. (2021), who claim that girls in the VET programmes restaurant management and food, health and social care and vehicle and transport are mainly positioned from a discourse of caring, even in a masculinely coded occupation such as auto mechanic.

2.3 Teaching, Learning and Assessment Practices: Micro and Nano Curriculum Making (II)

A major part of VET research on curriculum making in the micro and nano sites of activity concerns teaching, learning and assessment practices. Studies generally focus on how teachers choose content and enact teaching through certain teaching repertoires, methods and tasks. For example, Lindberg (2003) explores content, form and tasks in both VET teachers' and upper secondary teachers' teaching—the latter of which is connected to infusion of general subject matter in vocational subjects (see below). She identifies 'vocational tasks', 'simulated tasks' and 'school tasks' introduced for different purposes. This interest in tasks and practical dimensions of teaching and on the basis of vocational knowing can be found in several studies. Asplund et al. (2021) have investigated vocational teaching and learning through workshops in the sanitary, heating and property maintenance programme; they stress the importance of placing specific vocational knowledge content in a wider context for promoting student meaning-making and problem-solving. In a similar study (Asplund et al., 2022) including the handicraft programme, electricity and energy programme and the construction and installation programme, the authors highlight the spontaneous and emergent character of how teachers teach students to use tools and machines. Welding is also used as an example for visualising practical tasks and problem-solving in teaching (Asplund & Kilbrink, 2018; Kilbrink & Asplund, 2020a, 2020b).

The studies mentioned above exclusively look at teachers as the main actors. An interesting exception is a study by Kilbrink et al. (2014), who include workplace supervisors. They study what educational content teachers and workplace supervisors regard as the most

important for students to learn, concluding that students need basic knowledge, assessment, motivation and interest and to understand the integration between theory and practice (cf. Kilbrink & Bjurulf, 2013). The role of simulators in teaching in the vehicle programme is discussed by Gustavsson et al. (2020), who especially underline the importance of the teacher's prior knowledge and experience and ability to master digital technology as crucial for successful curriculum making. In vocational programmes that build on service and human interactions, there are also examples of interventions for boundary-crossing and knowledge transfer (Eliasson, 2019).

Considering the academic–vocational divide and questions of social stratification that stand out as a theme in the macro site of curriculum making, scholars have studied the implications of the VET curricula of 2011 in micro and nano curriculum making regarding how students conceptualise citizenship and societal issues. Nylund et al. (2020) claim that questions concerning social problems and responsibilities as a citizen are rarely addressed in vocational subject teaching. Instead, a major part of the teaching is concentrated on types of knowledge and socialisation processes relating to the future occupation. In this respect, teaching could limit or enable conversations that would help the students see themselves as democratic citizens and as part of societal discourses (Rosvall & Nylund, 2022; cf. Rönnlund et al., 2019). A reason for this is not only the contextual, social and cultural factors tied to the history of the vocations and a discourse on vocational educations that maintains a social reproduction in terms of, for example, class and gender, but the conflicting goals of civic engagement and ethical and societal issues and employability that prevails within vocational education programmes (Eiríksdóttir & Rosvall, 2019).

Another common phenomenon is subject integration or infusion as a dimension of teaching and learning in the micro and nano sites. Several studies have looked at the integration of mathematics in vocational education (Lindberg, 2003, 2010a; Lindberg & Grevholm, 2013; Muhrman, 2016; Rosvall et al., 2017). Muhrman's (2016) thesis on mathematics in the natural resources programme combines an analysis of ideas and actors on the macro, micro and nano sites of activity. She analyses the main ideas in the VET curriculum and interviews VET teachers, teachers in mathematics, VET students and farmers. Even if the analysis of the VET curriculum is not at the forefront, Muhrman describes how policy notions of mathematics for the VET programme are interpreted and translated among the teachers of general and vocational subjects and what meanings and affordances farmers ascribe mathematical knowledge in relation to occupational needs. The students' ability to transform and make meaning of mathematical content in relation to agriculture depends on the degree of integration between the vocational subjects and mathematics at the schools (cf. Lindberg & Grevholm, 2013). Cooperation between the mathematics teacher and vocational teacher has been shown to be conducive to student learning and vital for teachers' professional development (Lindberg, 2010a). Within this category of subject integration, there are also examples

of studies of the integration between content in vocational subjects. By integrating vocational content from different areas, Christidis (2019) shows how students developed vocational literacy and could contextualise the content, which supports students' vocational knowing (cf. Christidis & Lindberg, 2019).

Research on assessment practices as part of micro and nano curriculum making has been relatively scarce compared with studies of teaching and learning. A general aspect raised in research is the specific character and contextual aspects of vocational learning and knowing as embodied knowing and questions regarding judgement, best practice and requirements based on the crafts and vocational traditions (Carlsson et al., 2007). In a study focusing on teachers in the hotel and restaurant programme, Tsagalidis (2008) illustrates that social-communicative and customer-related skills are highly valued along with the students' abilities to work fast, independently and take their own initiatives to solve problems. Regarding subject-specific knowledge on work techniques and hygiene, these tend to be assessed using tasks and lower-level abilities, while higher grades and key qualifications such as mastery and a holistic view on the vocation are based on the vocational culture of the teachers. This can be compared with Berglund and Lindberg (2012), who, from the example of apprenticeship as a pathway for upper secondary VET, show that the trilateral assessment talks between teacher, supervisor and apprentice tend to concentrate more on the apprentice's behaviour and social and communicational abilities and less on the dimensions of vocational knowing and parts of the curriculum that are to be assessed. Factors that influence the emphasis on vocational knowing are the teacher's vocational and pedagogical qualifications, the structure of the workplace and local conditions. A similar observation regarding the focus on social and behavioural aspects is made by Asgahri and Kilbrink (2018) in a study on teachers' assessment practices in the industry programme. Their study reveals that, to a minor extent, the teachers use the criteria and knowledge requirements for assessment in the syllabi. Instead, they construct informal assessment criteria for passing a grade based on, for example, competition and prize awarding, a grade as a 'last chance' or if the student is a decent and 'okay' person. Thus, a social relationship between the student and teacher is essential.

A few rather recent studies have highlighted the relationship between embodied and vocational knowing and assessment practices between teachers and students in classroom interaction. Öhman (2017, 2018) has explored the importance of artefacts and how teachers and students interact through embodied communication. Her main point is that the ways in which the teacher uses the body and gives way for the students to reflect and give feedback provides a space to unpack the tacit dimension of hairdressing. In this respect, feedback and assessment are something that is coproduced in a participatory practice (see also Öhman & Tanner, 2017). A comparable perspective is introduced by Gåfväls (2016), who argues that teachers stress the ability of students to look at floristry from a holistic view as a basis for their assessment. This includes the ways in which the students can deliberate on aesthetic

standards and provide alternative solutions, the ability to visualise and make changes based on the context and customer requirements and knowing about financial aspects regarding flowers.

2.4 Work-Based Learning and School–Work Relationships: Micro and Nano Curriculum Making (III)

A longstanding question in Swedish research is the relationship between school-based education and work-based education. In Sweden, school-based VET programmes must contain periods of work placement, and in the apprenticeship model—which is another model of VET—the apprentice spends a substantial proportion of time at a workplace with a supervisor. A general argument is that micro and nano curriculum making that occurs between school and workplace contexts is characterised by conflicting goals, aims and values (Andersson, 2018; Berglund, 2009; Berner, 2010; Fjellström, 2014; Fjellström, 2017; Fjellström & Kristmansson, 2016; Mårtensson, 2021; Rönnlund & Rosvall, 2021; Tyson, 2016). These tensions may come from the strong interests of industries and companies that put pressure on schools to adapt their organisation, curriculum and syllabi. In this respect, vocational teachers can be the driving forces because they feel solidarity, loyalty and community with their previous occupation and do not wish to cause friction in their relationships with enterprises because this also might impact the students' work-based learning (Fjellström & Kristmansson, 2016; Mårtensson et al., 2019). Some of the risks with too compelling an influence of workplace interests in micro and nano curriculum making is that students fail to develop the required competences or may drop out because of lack of motivation (Fjellström, 2014, 2017).

In trying to deal with conflicting interests between school and work, researchers have identified the potential practices and models for boundary-crossing in curriculum making. Berner (2010) emphasises that teachers commit to a boundary-work comprised by sense-making of school-based everyday activities, on the one hand, and a 'reaffirmation' of the boundaries between school and work while reconstructing workplace experiences and using them for teaching practices, on the other hand. Andersson (2018) points at the tripartite conversation between teacher, student/apprentice and supervisor as a key boundary-crossing tool for curriculum making, creating coherence and negotiation between school and workplace learning. The assessment actions of VET teachers can be described as border work for supporting students' transitions between school and the workplace (Berglund, 2020). This can be connected to Mårtensson (2021), who, in her thesis, shows the importance of networks and good relationships between vocational teachers and supervisors at the nano and micro sites of curriculum making. According to Mårtensson, teachers act as 'match-makers' trying to find proper placements for their students. Teachers also need to act as 'firefighters' when

conflicts or disturbances occur during work-based learning placements. This requires taking the role of being a 'broker' and balancing between the interests of the workplace community and obligations of the school to support and guide students (Mårtensson et al., 2019). Other examples of tools and practices for boundary-crossing are digital portfolios supporting the conversations between teacher, student and supervisor (Berg Christoffersson, 2015) or providing students access to digital documentation systems at workplaces for developing their vocational digital literacy (Paul, 2017; cf. Christidis & Lindberg, 2019).

2.5 VET Curriculum Making at the Meso Site of Activity

Based on the sample of Swedish research, little has been reported regarding VET curriculum making at the meso site of activity. In recent years, there has been an increased focus on school-industry partnerships and vocational colleges that involve upper secondary VET schools, mainly concerning the structural and organisational aspects in the local socio-economical context (Fredriksson & Stier, 2014; Olofsson, 2015; Persson & Hermelin, 2022; Rusten & Hermelin, 2017). Studies have highlighted the tensions of different interests between schools and industry (Olofsson, 2015), the vulnerability of cooperations in terms of recession and economic crises (Persson & Hermelin, 2022) and the risk of lock-in effects because of short-term perspectives and too specialised and narrow educations (Hermelin & Rusten, 2016). In this respect, research on the meso site of activity tends to relate to the micro site of activity because VET teachers in schools are included.

In a study on how upper secondary vocational students within the industry programme are prepared for working in the industrial sector, Persson Thunqvist and Gustavsson (2021) point at how vocational education is shaped by ideas and views from local industries, both large companies and small- and medium-sized enterprises. They show the impact on students' vocational learning and how local competence needs interplay or collide with the students' needs. What makes their study especially interesting is that development leaders from the local district authority are included as informants. Development leaders are important actors for understanding the intersection of needs and ideas between schools and local companies. The authors also provide insights on the role of vocational colleges, such as the national organisation with technical colleges and, not least, vocational teachers' networks and familiarity with local companies (Persson Thunqvist & Gustavsson, 2021). An observation is that these actors and principals, together with the influence of nationally organised colleges with their local branches, are rarely part of studies of VET curriculum making, which will be discussed further in the closing part of the paper.

In line with the growing attention to local curriculum making over the past few years, there are studies that focus on adult vocational education and higher vocational education curricula. Andersson and Muhrman (2021) claim that the integration of immigrants and

employability stand out as dominant arguments for providing adult VET. It is also clear that adult VET is organised in different ways and with various providers of education. Andersson and Muhrman (2021) include local politicians, heads of adult education and educational counsellors as informants, which offers perspectives on the importance of regional cooperation and flexibility in the organisation of local adult VET. Similar results are reported by Köpsén (2021, 2022a, 2022b) regarding the organisation of higher vocational education. Köpsén argues that higher vocational education in Sweden is based on the idea of government regulations (a global discourse) parallel to a market-oriented view with autonomy and flexibility for the needs of employers. At the same time, education becomes too narrow and reduced to local concerns, with local variations of quality (Köpsén, 2022a).

3 Concluding Discussion

In this final part of the current paper, the main findings of the review of Swedish research on curriculum making in VET in upper secondary schools are concluded. The section begins by summarising the dominant sites of activity and actors and the major themes and emphases before then turning to the question of potential gaps that can be identified in the research and in what ways these may inform future research on VET curriculum making. In relation to this, practical implications concerning VET curriculum making in policy and practice and for policy transfer in the field of curriculum design and development are addressed more explicitly. Finally, there will be some reflections on methodological limitations and possibilities with the model of *curriculum making as social practice* and a discussion of the potential and added value for comparative research perspectives.

As described earlier, the research is mainly focused on the micro and nano sites of curriculum making. There are often connections to the macro site of activity concerning how national curriculum policy is enacted and interpreted by VET teachers, how notions such as citizenship and democracy are conceptualised and access to knowledge or subject integration. A similar movement of policy ideas between the supra and macro sites of activities can be seen in comparative research studying VET curriculum policy, frameworks and models. However, there is little evidence of actors moving between the sites of activity, apart from the micro and nano sites of curriculum making. This most likely reflects the upsurge in classroom studies and ethnography that can be seen over the past ten years in Swedish VET research. Another reason for this is the interest in teaching, learning and assessment during work placements, which includes VET teachers, supervisors and students. This can, in turn, be connected to the introduction of a dual VET system with school-based and work-based apprenticeship education. In Table 1 below, the identified activities with the main themes and actors on the different sites are summarised:

Table 1: Activities and Actors Identified in Swedish Research on Upper Secondary-Level VET Curricula

Site of activity	Activity	Actors
Supra	VET curriculum policy, frameworks, and models; Policy flows; Comparative perspectives; Conceptualisations of vocational didactics	OECD; EU/Cedefop; National governments
Macro	Academic and vocational programmes—implications for social stratification and access to knowledge; Apprenticeship, employability and organisational aspects regarding school and work transition models	National government; Policymakers; National Agency of Education; Swedish National Agency for Higher Vocational Education; Trade unions; Employer and industry associations
Meso	School–industry partnerships; Adult education	Local authorities and politicians; Development leaders; Educational counsellors; Companies and local industry
Micro	Vocational knowing and teacher identity; Teaching and learning strategies; Assessment practices; Work-based learning and school–work relationships	Teachers; Workplace supervisors
Nano	Vocational learning and strategies for learning; Vocational identity formation; Students' experiences of teaching, learning and assessment; Digital platforms and portfolios	Teachers; Students; Workplace supervisors

A point that can be made regarding potential research is related to the absence of studies on the micro site of activity, including principals, school leaders and middle leaders as actors. The principal is almost invisible, and there are few studies that have them among its informants. This is an interesting observation considering the heavy responsibility placed on principals in the Education Act (Svensk Författningssamling 2010:800). The principal is obliged to lead, coordinate and organise the education and development of the school, to allocate resources and manage staffing and teachers' professional development, to organise groups and classes and to handle agreements with external partners. Based on the observation that principals rarely are included in research, a practical implication of this study is that by including principals in future studies of VET curriculum making, it would be possible to acquire a more thorough and comprehensive view on educational leadership practices and in what ways these may influence VET teachers' professional development, systematic quality assurance, issues regarding teaching and instruction and the organisation of vocational programmes in relation to other programmes or relationships to companies and public institutions that provide placements for work-based learning.

Another aspect is the lack of studies of middle leaders or teachers who are appointed as 'first teachers'. First teachers were introduced as a career pathway in 2013 and could be assigned to, for example, lead other teachers in general or subject-specific development of teaching and learning and support the principal in leading projects (Alvunger, 2015). VET teachers who were appointed first teachers acted as process leaders for creating a culture built on mutual trust; they handled assessment and the relationship between school and

workplaces or served as 'brokers' between school management and their colleagues (Alvunger, 2016). An implication of this paper is that there is an obvious opportunity for VET research to study vocational teachers as middle leaders and/or central actors in meso and micro curriculum making, leading other teachers in projects for cross-disciplinary collaboration or subject-specific development.

Ideas, actors and processes on the meso site of activity only comprise a very small part of the research. In this respect, there is a potential gap to be explored, not least regarding how local curricula and syllabi are made and shaped in terms of the influence of representatives from local authorities, companies, trade unions, employer associations, universities and regional agencies. This observation is important when it comes to implications for VET curriculum making and how ideas and political interests in a local context may impact curriculum design and development. In a Swedish context, these actors are to be found within local and regional cooperations of technical colleges and health and social care colleges. These colleges are governed by national organisations that issue specific certificates based on quality criteria for upper secondary schools to be affiliated. The VET students who enrol are awarded diplomas after finishing their exam. Thus, these colleges have a central role in meso curriculum making that, up until this day, has not been thoroughly explored (Alvunger & Klope, 2023).

By including actors and processes on the meso site of activity, this could provide significant insights and deepen our understanding of cooperations within the frame of, for example, vocational colleges as an arena for—sometimes conflicting—interests that, in a decisive way, influences the educational pathways of young people and adults (Johansson, 2019; Jørgensen, 2004). Moreover, it would contribute to what role actors in the local public authority and local community play in relation to actors such as principals, teachers, students and supervisors in the micro and nano sites of curriculum making. In brief, this study highlights the importance of including a variety of actors engaged policy and curriculum making to understand issues of transfer and how policy ideas travel in the field of curriculum design and development.

By applying the theoretical multi-layered model on curriculum making as social practice, there is potential to unlock new features and characteristics in the research of VET curriculum in policy and practice. However, there are also methodological challenges with employing the model because it might be hard to limit the inclusion criteria and searches may result in many studies. Viewing curriculum as more than just a policy document and including the different practices and resources that support curriculum making raises questions regarding for example educational leadership and professional development as categories. Further discussions on limitations are thus necessary, and this methodological concern is something to bear in mind for future studies. At the same time, this challenge with the model is also a possibility from an international comparative perspective. It allows

a relatively open and heuristic approach that may take national variations of VET systems and its actors and processes into account. Therefore, a natural next step for continued research is to expand the focus and include country cases of VET curriculum making across sites of activity from European/global perspectives.

Ethics Statement

This paper fully complies with the principles and guidelines for IJRNETs Ethical Statement for publications and has been performed based on The Swedish Research Council's guidelines for good research ethics. The conducted research did not include human participants whereas informed consent was not necessary.

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