

Tracing the moving 'target' in Didaktik of vocational classroom instruction

Martina Wyszynska Johansson

To cite this article: Martina Wyszynska Johansson (2020): Tracing the moving 'target' in Didaktik of vocational classroom instruction, Journal of Curriculum Studies, DOI: [10.1080/00220272.2020.1795270](https://doi.org/10.1080/00220272.2020.1795270)

To link to this article: <https://doi.org/10.1080/00220272.2020.1795270>



© 2020 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 20 Jul 2020.



Submit your article to this journal [↗](#)



Article views: 5



View related articles [↗](#)



View Crossmark data [↗](#)

Tracing the moving 'target' in Didaktik of vocational classroom instruction

Martina Wyszynska Johansson 

Department of Education and Special Education, University of Gothenburg, Gothenburg, Sweden

ABSTRACT

Reconciling broad educational goals of job-readiness with specific work task-related qualifications or competences poses challenges for vocational teachers. To assist efforts to address these challenges, this article explores knowledge practices of project-based vocational instruction in Swedish upper secondary vocational education and training, particularly how the teacher's intentionality (expressed through choice of a *target*) responds to needs to develop integrative knowledge. Two specific research questions are addressed, using a conceptual framework incorporating Didaktik and Legitimation Code Theory. First, how do vocational teachers in this setting repurpose vocational knowledge during project work? Second, what educational goals do they target during project work? Secondary analysis of participant observation data indicates that fragmentation of occupation-specific knowledge into disparate work processes and work products resulted in a split target. Pursuing the split target, observed teachers enacted knowledge practices centred on student accountability for generic but highly restricted work processes. For example, the tangible task *Devising a safety and security plan* was recast as the more intangible task of social collaboration in group work. Targeting collaboration appeared to provide limited integrative knowledge-building opportunities, raising concern that qualifications-based curricula may offer insufficient structure for vocational teachers to plan their instruction accordingly, at least in the observed setting.

KEYWORDS

VET; target; upper secondary vocational programme; didactic theory and practice; legitimation code theory

Introduction

Reconciling broad educational goals of job-readiness with specific work task-related qualifications or competences poses challenges for vocational teachers (Wheelahan, 2019). Framed in an outcome-based curriculum, the need to develop work task-based knowledge while simultaneously facilitating the integration of vocational knowledge is particularly problematic. In upper secondary vocational education and training (USVET), broad educational goals of job-readiness should generally be reconciled with specific work task-related qualifications in final project work. Thus, project work should cut across the practice/theory division by capturing vocational knowledge as a region (Bernstein, 1996/2000), drawing on resources in school as well as in workplaces. However, this presupposes successful targeting in the vocational instruction (Maton & Howard, 2018). The purpose of this paper is to assist efforts to meet the mentioned challenges, by examining in detail the targeting in vocational classroom instruction in Swedish USVET, which is mainly school-based with some elements of workplace-based learning.

CONTACT Martina Wyszynska Johansson  martina.wyszynska.johansson@gu.se  Department of Education and Special Education, University of Gothenburg, Gothenburg 405 30, Sweden

© 2020 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group. This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

A theoretical framework combining elements of both continental (European) Didaktik, with roots in pedagogy (Westbury, 2000) and sociology of knowledge (Maton & Moore, 2010) is applied to address how forms of knowledge change and are brought together in observed educational practices of vocational classroom instruction. This combination of interpretative (Didaktik) approach and the social realist approach in Legitimation Code Theory (LCT) enables exploration of the teacher's intentionality in relation to the curricular content. Thus, it was selected to enable deep exploration of educational practices in VET governed by an outcome-based curriculum.¹

The teacher's intentionality in continental Didaktik

In continental Didaktik, teachers' intentionality is intertwined with the content of instruction, as it is manifested in the choice of content and learning activities.

However, the content of instruction is dealt with differently in curriculum theory and Didaktik (Lilliedahl, 2015) as two distinctive schools of thought on education (Hudson & Meyer, 2011; Riquarts & Hopmann, 1995; Westbury, 2000). In the former, the curriculum seems 'given', while in Didaktik the content is treated semantically, that is as meaning-making of curricular content (Janik et al., 2019; Willbergh, 2015). Didaktik also recognizes a fundamental difference between matter (*Bildungsinhalt*) and educative substance or meaning (*Bildungsgehalt*) (Hopmann, 2007; Klafki, 2000). Thus, vocational teachers exercise intentionality by determining what educative substance can emerge through dealing with instructional matter (Hopmann, 2007). Therefore, any instructional task, e.g., miming an occupational work task, undergoes a transformation into new matter that may generate novel and unpredictable meanings (Willbergh, 2015). In Didaktik, an instructional object such as an occupation-specific work task is 'bracketed' or indicated as something else, e.g., occupational meaning (Wheelahan, 2019; Willbergh, 2015; Wyszynska Johansson, 2018). The teachers' intentionality, that is their purposeful choice-making and decision-making about positioning the matter so that an educative substance can unfold, is an expression of a 'pedagogical freedom' (Hopmann, 2007, p. 113). However, the choices and decisions manifesting expressions of the teacher's intentionality also legitimize a given frame of curriculum, e.g., outcome-based curriculum. To summarize, how the matter/meaning difference unfolds in instruction is contingent on the teacher's intentionality.

Swedish USVET students can train to qualify as security officers in institutionalized, mainly school-based settings (Jørgensen et al., 2018). The curriculum prescribes the knowledge that prospective security officers should get access to in terms of learning results or outcomes mediated by classroom instruction, i. e., by various purposes that the teacher intentionally delineates. However, the teacher's scope of purpose is circumscribed by a 'curriculum of preparation for work' (Allais & Shalem, 2018a). For instance, in qualifications-based curriculum, the ability to carry out work tasks is emphasized (Westbury, 2000).

The key issue explored here is how the teacher's intentionality, as expressed through choices of focal matter (*targets*) in instruction in the delivery of outcome-based curriculum responds to the students' needs to develop integrative knowledge (Maton & Howard, 2018). Thus, *target* is treated here as both a verb (the teacher's purposeful selection of focal matter) and a noun (selected focal matter).

Viewing intentionality as expressed by the teacher's actions to select and pursue a target (Maton & Howard, 2018) in the light of Didaktik may contribute to further theorization of the concept of the target in LCT (cf. Westbury, 2000). Therefore, a combination of Didaktik theory and methodology of autonomy codes can be fruitfully used as a heuristic to investigate educational practices in the delivery of outcome-based curricula of vocational instruction, and the foundational relations between vocational instruction in school and learning in workplaces (Guile & Unwin, 2019a). Thus, this combination has been applied to address the following questions.

Research Questions

- (1) How do vocational teachers repurpose vocational knowledge during project work in upper secondary school?

- (2) What educational goals do vocational teachers target during project work in upper secondary school?

In the following section, the issue of vocational knowledge as framed in curricula is introduced. Then, the context of this study (USVET in Sweden) is briefly presented and this is followed by a section on the method and data analysis. Then, a target (Maton & Howard, 2018) is crystallized together with the results elaborated on, illustrated by typical excerpts and followed by a discussion and a conclusion.

Vocational knowledge for curricular work tasks

Vocational knowledge originates in diverse cultural sources and contexts as it is prominently embedded in work, artefacts and workplace practices. Thus, in curriculum vocational knowledge has a 'regionalised' rather than 'singular' 'knowledge structure' (Bernstein, 1996/2000) as it draws on multiple sources, such as occupational praxis in workplaces, as well as academic disciplines, e.g., law. Hence, knowledge in the USVET context relies on, and is nourished by, a symbiotic relationship with workplaces through (for example) work tasks that students train to undertake in prospective workplaces (Guile & Unwin, 2019a). Through such dynamics of looking both inwards and outwards, integrative knowledge-building in vocational curriculum can be described in terms of 'recontextualised regions' (Shay & Steyn, 2016, p. 141). This foundational relationship is not straightforward or a linear process of the students preparing in school then practicing in workplace settings. Instead, vocational instruction has to cater for a 'fusion of the practical and the theoretical domains' (Guile & Unwin, 2019b, p. 28) simultaneously, informing the teacher's intentionality.

To study how vocational knowledge was transformed into teachable content of vocational instruction in the observed practices, LCT (Maton, 2014) is employed. Drawing, *inter alia*, on the model of knowledge structures presented by Bernstein (1996/2000), LCT provides a theoretical multi-dimensional framework for researching and changing practice. The Autonomy dimension (Maton & Howard, 2018) refers, here, to the internal and external degree of autonomy of instructional practices in educational settings in relation to other social practices, e.g., workplace-based learning. The LCT autonomy dimension has been applied in studies of classroom instruction of various school subjects, e.g., History (Maton & Howard, 2018). However, application of the analytic concept of Autonomy in LCT-based analyses can be challenging, as instruction in USVET is sensitive to diverse contextual elements of both schools and workplaces.

The USVET curriculum encompasses instrumental, emergent and situated but also learner-sensitive characteristics of vocational knowledge (Bagnall & Hodge, 2018). Through USVET, students gain qualifications, that is knowledge, skills and dispositions required to carry out work tasks according to the interests of various stakeholders in the labour market, e.g., prospective employers and education providers (Bathmaker, 2013). The prioritization of this learning to obtain qualifications has increased due to economic pressures, notably to improve matches between education and work (Bohlinger, 2012; Mulder, 2019; OECD, 2007), but it has also been strongly criticized for several reasons. One is that the relationship between the needs of the labour market and workplaces where work tasks are carried out is not straightforward (Berg, 2018; Broady, 1983). As noted by Broady (1983), qualifications operate in a commodity exchange of the labour market. It is not clear whether education as qualification provision caters primarily for needs of the labour market, needs of workplaces or, generally, to what degree these two needs are conflated in the foundations of VET curriculum.

Representing a move away from content-based education, a gap between general goal or outcome descriptions and specific subject matter has led to difficulties in pinning down desirable educational results in qualifications- or competence-based education (Allais, 2014, p. 35; Willbergh, 2015). Another point of contention is whether curriculum geared towards ability to perform work tasks can give students access to the principled and integrative knowledge-building they need in order to participate in their occupational fields (Wheelahan, 2019). A broad view of occupation for young students includes work as a source of identity and meaning, accumulation of various forms of

knowledge and interconnected sets of cultural practices (Allais & Shalem, 2018b; Wyszynska Johansson, 2018). Accordingly, excessive focus on specific work tasks as a curricular principle may obscure young students' view of work through an occupational lens.

Vocational programmes in Swedish upper secondary school

Most young people in Sweden aged 16 to 20 years attend one of 18 national 3-year programmes in upper secondary school. Approximately, a third of the cohort choose one of 12 vocational programmes intended to lead to employability, e.g., as a security officer, and further vocational education after obtaining a vocational diploma (Skolverket, 2011). Students in the Child & Recreation Programme are offered an opportunity to become security officers in collaboration with the security industry. This occupational path is embedded in a programme geared towards preparing students for employment in pedagogical, social, recreational and health-care sectors, for instance, as nursery nurses, sports facilities personnel and carers for disabled people (Skolverket, 2012).

Student attainment of learning outcomes is generally graded according to syllabus-specific knowledge requirements (*kunskapskrav*). However, this does not apply to a 100-credit project that students must complete (Pass or Fail) to obtain a vocational diploma,² which focuses on broad abilities to perform recurrent work tasks in an occupational area (Government Bill 2008/09:199). Hence, a Diploma project in the Child & Recreation Program is supposed to hone and test knowledge of the social context the task involves, for instance, laws and provisions as well as skills for work in a professional manner (Skolverket, 2012). Students' capacities for practical problem-solving both individually and in cooperation with others along with planning and evaluation are also targeted (Skolverket, 2019).

A diploma project in USVET

A predecessor of today's Diploma project was introduced in 2000 (Gy 2000:20, 2001) as loosely defined and student-driven, independent project work, intended to serve as a quality insurance instrument to show that goals of vocational programmes had been achieved. These intentions were further strengthened by the introduction of obligations to complete a Diploma project emphatically oriented towards qualification for employability (Government Bill 2008/09:199, p. 118). Close cooperation with industries in identifying work tasks suitable for qualification is encouraged, although the project should also incorporate elements of broad 'holistic'³ education (Government Bill 2008/09:199, p. 119). However, according to the Swedish Schools Inspectorate, achieving well-rounded job-readiness grounded in an interplay between situated and principled vocational knowledge through a Diploma project is apparently problematic (Skolinspektionen, 2017).

Empirical studies on diploma projects

Independent project work was introduced as a requirement for USVET students as part of a major restructuring and decentralization of the Swedish education system (Österlind, 2008). This was accompanied by change to a steering through goals regime, growing emphasis on self-regulated learning (Österlind, 2008) and greater collaboration with industry stakeholders (Gerrevall & Håkansson, 2005). However, the relative attention that should be paid to work processes and work results in the projects (and their assessment) was unclear, as the objective of the project work could be seen as primary familiarization with group work methods, proof of qualification for working life, and/or exploration of individual interests (Gerrevall & Håkansson, 2005). Accordingly, setting the relative importance of work processes and work results both during the projects and in their assessment has been problematic as the form (group work) has been conflated with the content (Österlind, 2008).

Previous research on Diploma projects has revealed variation in teacher support for students' independent learning and work processes (Gerrevall & Håkansson, 2005). Previous studies have also

shown that student-led project work poses considerable challenges as it calls for students' self-regulation in terms of planning, execution and assessment (Eklöf, 2013; Österlind, 2008). However, few empirical studies have examined how the intentions of projects geared towards Diploma goals have played out in instruction, and they have been limited to higher education preparatory rather than vocational programmes (Eklöf et al., 2017; Svärdemo Åberg et al., 2018). This gap is addressed here, by analysing practices observed in a Swedish USVET setting, as described in the following section.

Method & sample

To examine how knowledge is repurposed and brought together in vocational instruction, I have subjected data obtained during my doctoral studies (Wyszynska Johansson, 2018) to secondary analysis. The primary data were generated through participant observations of classroom instruction (about 90 hours in total, in two schools with 34 second and third graders) and focus group interviews with the students. The study presented here is based on secondary analysis of limited data from participant observations of instruction with 24 second and third graders in one school, between February and May 2016. These observations were of parts of instruction linked to mixed-grade⁴ group work for a Diploma project in which the students prepared a safety and security plan for a real public event (an international fair called here Star Challenge⁵) under the supervision of two teachers.

The data produced through participant observation of classroom instruction were mainly recorded in the form of (computer-written) field notes (Wyszynska Johansson, 2018). One of the shortcomings of recording by hand, as opposed to audio- and video-recording, is the restricted ability to faithfully capture the richness of interaction. However, in my field notes, I strove to differentiate direct quotations (here indicated by quotation marks or italics) in the context of interaction.

Data analysis

The analysis of the data involves use of methodology rooted in LCT, particularly coding of data on Cartesian planes of various analytical dimensions proposed to explain the dynamics of knowledge practices. The focus here is on the LCT autonomy dimension (other dimensions are not addressed), expressed as *autonomy codes* (explained further on). Autonomy codes are generated according to a basic premise of a relationship between positional autonomy (PA) and relational autonomy (RA). Briefly, this distinction enables exploration of the 'boundaries that practices establish around their constituents and the boundaries they establish around how those constituents are related together' (Maton & Howard, 2018, p. 6).

Stronger positional autonomy (PA+) means that constituents of a context, for instance, classroom interaction, are insulated from other contexts (e.g., interaction in workplaces). Therefore, capturing the evaluation of many products or services in terms of grades (marks) makes little sense in settings such as a workshop (although it may be crucial in some cases, for example, manufacture of hand-crafted products). In contrast, strong relational autonomy (RA+) indicates that strong relations between these constituents are inherent elements of the specific practices (purposes, ways of working). Thus, evaluating the quality of student achievements through tests, learning outcomes or grades 'makes sense' in the vocational classroom. Conversely, principles governing how constituents coexist that are 'drawn from or shared with other sets of practices, i.e. purposes, aims, ways of working' may be considered heteronomous (RA-) (Maton & Howard, 2018, p. 6). For example, the rationale for school assessment is primarily grading of individual achievements, while in workplaces assessment is generally connected to production demands.

As illustrated in Figure 1, four principal autonomy codes can be identified and visualized in relation to the axes of the autonomy plane (Maton & Howard, 2018, pp. 6–7): sovereign code (PA+, RA+), exotic code (RA-, PA-), introjected code (RA+, PA-) and projected code (RA-, PA+). This enables studies of

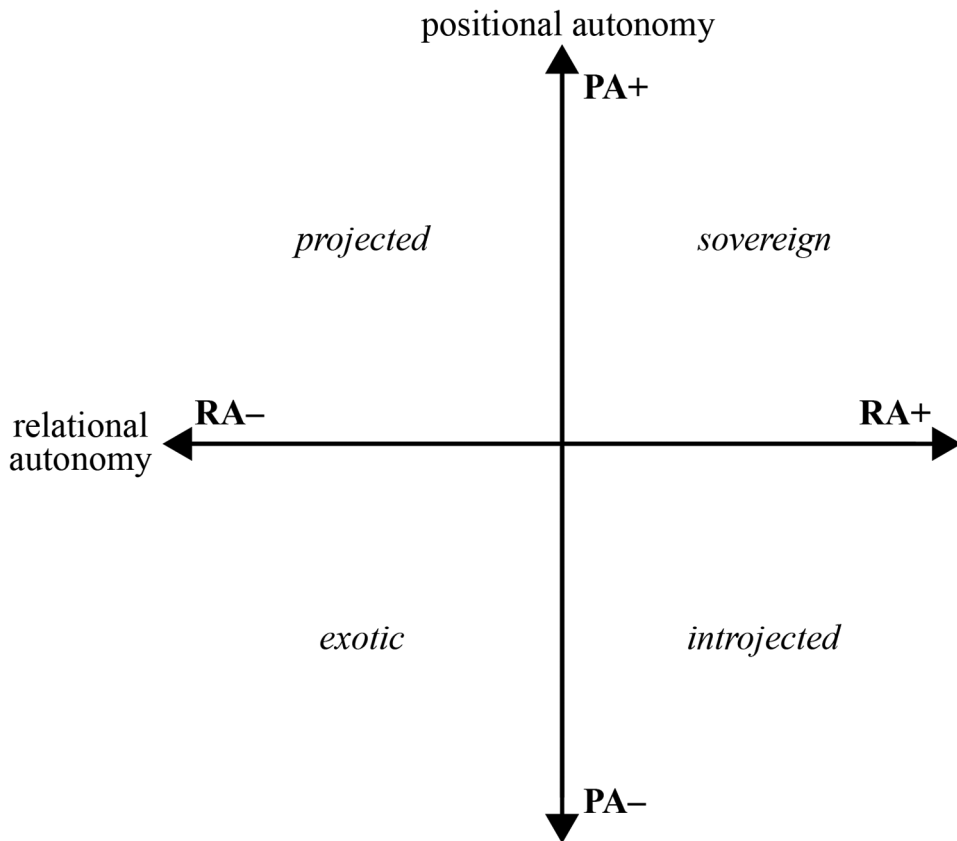


Figure 1. The autonomy plane (Maton & Howard, 2018, p. 6), reproduced with permission.

attempts to establish certain knowledge practices as valued and legitimate, as the four codes represent differing modes of *how* knowledge practices are performed and *what* knowledge practices are mostly valued.

For sovereign codes, the status of knowledge practices relies on strongly insulated positions of constituents and autonomous principles, while for exotic codes knowledge practices rely on 'borrowings' from elsewhere. For introjected codes, the status of knowledge practices comes from elsewhere but is transposed to serve internal purposes. For projected codes, the status of knowledge practices resides with constituents and principles that are internal but oriented towards other practices. However, the four autonomy codes are not a typology, so shifts, that is movements from one quadrant of the autonomy plane to another, may occur.

The unit of analysis is a cluster of (mostly verbal) actions performed by the teachers and students. The clusters were identified as parts of the text in the field notes describing certain constituents of the observed interactions. These are artefacts (e.g., checklists, forms and other learning materials) and operations. The operations include various negotiations (e.g., of divisions of workloads among the participants), literacy-oriented tasks (e.g., compiling information, evaluating, and establishment of shared understanding, e.g., by defining tasks or other important aspects of the project work).

Thus, the initial step was to distill a number (20) of interactional sequences by cutting out the parts not related to a *target* (explained below). The next steps involved crystallizing a target, then mapping autonomy pathways, that is patterns of shifts between autonomy codes during the observed classroom interactions.

Due to the type of observed activity (student-led and independent group work), this process was not straightforward, but based on continuous reflection. Some irrelevant, presumably as off-the-target interactions led to sudden shifts in the focus of collective interest. In other cases, categorization of target-related and non-target related contents involved judgement of the degree of relevance (e.g., a recurrent feature of the observed group work was frequent fragmentation of groups into smaller student constellations and re-formation of the groups). In such a manner, some pairs of students pursued interactions in parallel, recurrently engaging and disengaging with the mainstream of conversation.

The following step was an analysis of the movement of knowledge practices in relation to the PA and RA axes, that is tracing how the constituents of the classroom discourse were insulated from other discourses, and the constituents became commingled in actions directed at or moving away from the target. This involved distinction of constituents and the principles linking them that on reflection were deemed to embody strong or core positional and relational autonomy, and those that displayed ancillary, i.e., weaker positional and relational autonomy, followed by mapping of the ‘pathways’ of the shifts involved.

The target

To ascertain autonomy pathways of collective knowledge practices during instruction, it is necessary to establish the explicit purpose of the instruction, because it is the determinant of target and non-target matter. Here the target emerged from the analysis of the two teachers’ intentional emphases on a particular (Didaktik) matter during the instruction: *Devising a safety and security plan as an independent work team* in order to *try out a form of mixed-grade group project work qua team work*. A translation device was subsequently constructed, providing ‘a starting point for determining autonomy codes’ (Maton & Howard, 2018). In LCT a translation device is a means to enact the concepts, i.e., targets, in empirical research (Martin & Maton, 2017). Application of such a translation device to the empirical material enables the establishment of the constituents and principles of relation as they play out in a specific context (here, classroom instruction to support the students’ vocational becoming as security officers).

Table 1. Translation device for autonomy codes in the data (adapted from Maton & Howard, 2018, p. 10)

Results

Mapping autonomy pathways on the basis of autonomy code shifts allowed me to address both of the research questions (concerning the repurposing of vocational knowledge in vocational instruction, and the teacher’s intentionality during the instruction). The main findings are that fragmentation of occupation-specific knowledge into disparate work processes and work products resulted in a split target, and apparent difficulties in pursuing the split target led to students’ assessment focusing on limited aspects of generic work processes. The results are presented in two sub-sections, concerning *Establishment & Maintenance of the Target* and *Assessing the Target*.

Table 1. Translation device for autonomy codes in the data (adapted from Maton & Howard, 2018, p. 10).

	1st level	2nd level
Positional autonomy/ Relational autonomy		
+	Target Devising a safety and security plan as an independent team work	Core Group work operations & artefacts Ancillary Surveillance law
-	Non-Target	Students’ casual chat and banter Information from teachers to students on any other business

Establishment & maintenance of the target

The teacher Britt established the target through negotiations of student responsibility and its evaluation. Exhortations about student responsibility soon became ritualized as a central feature of a sovereign code enacted in the instruction, which the teacher routinely addressed: 'What is the first thing you do? Record attendance and appoint a secretary for the day'. Emphasizing the students' role as a 'work team', she planted the discourse in a sovereign code in three distinct ways. First, she frequently referred to the digital documents that framed the task at hand, i.e., devising a safety and security plan for Star Challenge (*How should you tackle a safety and security plan? Perhaps you should have a look at the documents there*). Second, she ritualized certain negotiations (*Please give me a sign when you've written who the chair and secretary are*). Third, she asked the students to consider the consequences of failing to act as a 'work team'. Consequences that the students raised (*We won't get an education, and no wages*) suddenly switched the classroom interaction to everydayness, that is, an exotic code. However, a quick intervention by the teacher returned attention to the digital documents (*There is good stuff there*), and re-established a sovereign code.

At 12.15 the teacher Britt tells the students that they are now a "work team": "You have a mission and that is why you're employees. This is a job you've been assigned externally. All members of the group must be active". When asked about consequences of not showing up, the students reply: "We won't get an education, no wages". The teacher Britt reminds the students of a number of documents in the LMS [Learning management system]: "How should you tackle a safety and security plan? Perhaps you should have a look at the documents there. It can be smart to check a Diploma project [syllabus]. We've swapped it with Star Challenge. There is good stuff there".

The frequent stays in a sovereign code were sometimes punctuated by bursts into an introjected code, characterized by certain elements identified as originating from outside, more specifically from security officers' occupational praxis. The students' prior exposure to this praxis was (of course) limited, particularly for the second graders at the time of the study. Thus, the students occasionally mentioned occupation-specific terms, e.g., *body search* or *truncheon* without further elaboration. Consequently, by mentioning quite specific tools and concepts from the security officer toolbox the students themselves initiated some brief detours to an introjected code. However, the teacher also infused the instruction with surveillance law as an important part of security officers' occupational praxis. For example, surveillance law was brought from an introjected code and integrated with a sovereign code through the teacher asking *What legislation do I have to use for support?* before she introduced a short role-play.

The teacher Britt continues by saying "What legislation do I have to use for support?" before calling out one of the students, Emil, to join her in the middle of the classroom, stating his make-believe purpose: "Now you want to come in". A short role-play is enacted with the students watching with interest. The teacher role-plays a security officer who asks Emil [pretended visitor] for ID, which in normal circumstances does not belong to a security officer's work tasks. She states that before asking for an ID she "has not checked the list". "Do I have the right to ask for an id?", the teacher Britt asks. "No, only the ticket", Dejan says adding "Law enforcement officer training is required for that". "A truncheon" (someone). The teacher Britt points out that in certain circumstances security officers have the right to ask for an id: "It depends", "check what legal texts say".

Once injected, however, surveillance law became firmly disembedded from occupational praxis and re-embedded in a sovereign code, framed by certain artefacts e.g., checklists and operations (e.g., *Check what legal texts say*). A typical pattern involved the teachers steering back to and keeping the interaction in a sovereign code by frequently invoking a personal sense of duty, thereby explicitly 'empowering' students with responsibility.

The teacher Britt then asks the class "What does a Diploma project show?" and Amir promptly answers, "You earn 100 credit points". But the teacher Britt is seeking more, further clarifying that she is interested in what the teachers expect from a Diploma project as a final "seal of approval": "That you are job-ready". Someone calls out: "I don't have a driving licence", prompting the teacher Britt to explain that a driving licence is not a formal requirement for security officers. She then reminds the students that "a Diploma project is independent work" with the students having to "find out on their own what to do". The teacher Britt emphasises: "From now on we shall not nag you. You should be acting as a work team, not doing group work".

Left to their own devices, some students also directed communication from an exotic code back to a sovereign code, often using props such as negotiations about formal responsibilities or definition, as illustrated by the following excerpt:

The group clearly has not got a clue what 'activities' may mean, with Evelina saying "On the individual level, I don't understand". Then she encourages the others: "Let's do some serious work. Activities that are provided to the consumer". Her offer is to search for a definition of the consumer: "I'll take the definition. I'm a secretary". Turning to the students who are busy editing the document, Evelina says: "What have you done? I'm the secretary. It is a secretary who does the writing, the chair does not write [to Dejan]".

Evelina made an effort to steer the interaction back to a sovereign code using negotiations about formal responsibility (*the chair does not write*), workload (*Let's do some serious work*) and definition (*I'll take the definition*). The operation of definition, for instance, defining what *the consumer is*, weakened the positional and relational autonomy of certain constituents closely connected to security officers' occupational practice. So, through definition, the students collectively reset their knowledge in an attempt to establish new common ground away from security officer-specific knowledge and praxis. Seeking a legitimation base elsewhere, that is in commonsense knowledge, they oscillated between sovereign and exotic code.

The knowledge practices are illustrated by the autonomy pathway in Figure 2. The shifts in autonomy codes resulted in a trip that started in a sovereign code, visited an exotic code and returned to the sovereign code before diving briefly into an introjected code (*Do I have the right to ask for an ID?*), then finished in a sovereign code. Despite some students' somewhat disparate detours into an exotic code (*you earn 100 credit points, I don't have a driving licence*), the teacher Britt firmly moved to a sovereign code, re-emphasizing the need for students to 'find out on their own what to do', without the teachers 'nagging'.

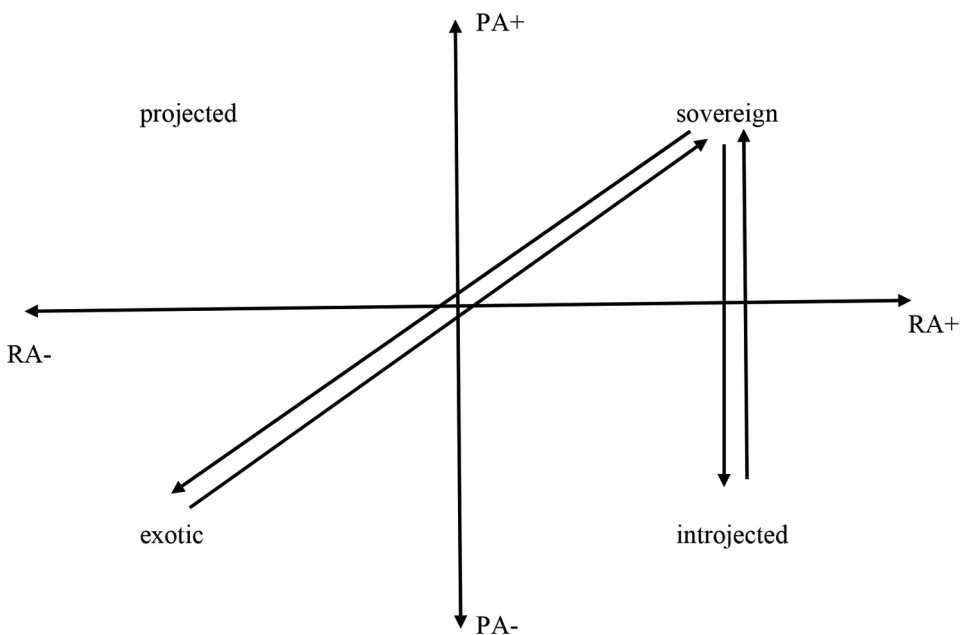


Figure 2. A three-direction autonomy trip with surveillance law (adapted from Maton & Howard, 2018, p. 13).

Assessing the target

In the light of the autonomy tour described above, vocational knowledge that is security officer-specific, such as surveillance law, only acted as a structuring constituent for literacy-oriented knowledge practices (PA+, RA+) of a sovereign code. Paradoxically, attention to these literacy-oriented knowledge practices, most importantly geared towards the final and tangible product of devising a safety and security plan for a public event, was diverted during the Diploma project to elusive and intangible team work. The target (*Devising a safety and security plan as an independent work team achievement*) was overshadowed by the students being tested on minor elements of work processes, some introduced by the teachers and others by the students (as exemplified by Evelina's efforts to keep such work on track). The next excerpt illustrates this intentional double agenda of the teacher, as manifested in an oral evaluation of the final group presentations with the third graders, in which the students were seated around a table. The evaluation was firmly grounded in a sovereign code, with the teacher Britt re-asserting the importance of students acting as team work mates rather than classmates.

The teacher Britt says that the students have now had an opportunity to experience what happens when they suddenly don't work with those they planned to work with: "Hey, how do you handle it? Since the idea of mine and Monica's was—and this is not in response to Amir [who had complained earlier about being left alone by his group members and having to do most of the work on his own]—it is not the end product [that counts]. Instead, the assessment of your diploma project is about working in a team and how you manage unexpected events. Are you prepared to meet new members in a group? Without faking and concocting?[The importance of these things] has become clearly visible to me. Ten new work mates [have arrived] on the doorstep. It's very hard when new colleagues move in, I tell you next autumn there'll be retirements, the most important thing is to remember that they're new, they haven't been around, you keep forgetting and you don't spell things out to them. These new people come in, this is exactly what happens here too. The teacher Monica chips in: "Here [in a Diploma project] you come to think of key qualifications, which are cooperation, taking initiatives, communication, all these parts have to be there both out there and in the classroom".

The focus of assessment of a Diploma project was re-affirmed in terms of a sovereign code as the process of responsibly handling social dynamics (*Without faking and concocting*) as opposed to the product (the safety and security plan). The teacher Britt reinforced the virtue and capacity to manage unexpected events by a sudden switch to an exotic code to emphasize the importance of flexibility. In this switch, she illustrated the significance of capacities to handle changing group constellations, by departing for a moment from the sovereign code by recalling her experience as a teacher (*It's very hard when new colleagues move in, I tell you next autumn there'll be retirements, the most important thing is to remember that they're new, they haven't been around, you keep forgetting and you don't spell things out to them.*). After this short detour to an exotic code, the dominating sovereign code was brought back, reinforced by the teacher Monica's efforts to tie a Diploma project to the discourse of job readiness, involving the so-called key qualifications (*Here you come to think of key qualifications, which are cooperation, taking initiatives, communication, all these parts have to be there both out there and in the classroom*). Thus, rather than addressing the problems that, for instance, Amir raised as substantial and salient, Monica framed them discursively as generic capacities (*qualifications*) called for in workplaces and classroom instruction.

So, tracing the autonomy pathways over the course of the Diploma project allowed me to pinpoint the teachers' and students' difficulties to make the two aspects of the target, that is the product (plan) and process (team work) work in tandem. Graphically, positions of the sovereign code clustered in the lower part of the PA+, RA+ quadrant of the autonomy plane.

Discussion

In a Diploma project, part of the teachers' responsibilities are to harmonize general goals, disembedded from specific contexts of (for example) a security company or kindergarten and specific bodies of occupational (e.g., security officer or nursery nurse) knowledge to fit their purpose. The challenge for the teachers is to reconcile such broad or generic goals with the overtly performative criterion of capacity to carry out recurrent work tasks. The teachers' intentionality is catalysed by

curricular content and manifested by content of instruction (which should coincide). However, in Diploma projects designed to meet requirements of a qualifications-based VET curriculum, the content remains suspended between two types of capacities: general (to meet requirements of most occupations) and performative (recurrent work tasks of specific occupations). This suspension of content may result (as found in this study) in a loss of direction among the teachers and students, stultifying and dulling their classroom interaction (Janik et al., 2019).

Tracing autonomy pathways of educational practices enabled exploration of teacher intentionality, as expressed through the observed vocational instruction. Mixed-grade group work, with its inherent difficulties as a form of articulation, shaped the observed knowledge practices (Eklöf, 2013; Gerrevall & Håkansson, 2005; Österlind, 2008). The observations included: collective shifts of autonomy codes (return trips, as previously described) in student-led group work; pre-dominance of stays in a sovereign code; and detours to an introjected code connected to surveillance law. Collectively, these observations indicate that in a Diploma project for a qualifications-based curriculum, the target may be inherently split with competing interests. The Didaktik 'What content?' aspect may not necessarily work in tandem with the 'How?' aspect to support educational practices such as assessment. Accordingly, the final assessment did not focus on the ostensible target during the Diploma project (devising a tangible product: a *safety and security plan for a public event*). Instead, it focused on intangible peer social group dynamics (*handling unexpected events*).

The educational practices contributed to vocational knowledge being diluted and repurposed as school group work *mechanics* or didactic formalisms (Janik et al., 2019). The studied aspect of the target that the teachers intentionally selected (tangible plan) appeared to be almost overshadowed by a motive to practice social skills in peer groups with few opportunities to practice project management in a people-centred service occupational area. Thus, during the instruction, the target's two constitutive ('what' and 'how') aspects shifted positions in relation to each other or possibly remained in a dynamic relationship to one another. The target, initially described as performative (ability to perform recurrent work tasks), was recast in a broader (social skills) but also much more stultified manner.

In the context of this study, the intention to combine specialization (recurrent work tasks) and breadth (orientation towards a people-centred service occupational area) in outcome-based curriculum produced classroom knowledge practices that focused on social collaboration in school group work. Briefly, the split target tended to produce short-term proceduralised knowledge practices, i.e., negotiations of time and workload between the participants. Thus, the teachers' 'restrained' (Hopmann, 2007) choice of targeting collaboration, albeit only in peer-groups and in the context of classroom instruction, appeared quite circumscribed in terms of providing students with integrative knowledge-building opportunities. Despite its limited scope, the study confirms an inherent weakness of curriculum based on occupation-specific tasks in USVET (Allais & Shalem, 2018a; Allais & Shalem, 2018b), and particularly indicates that qualifications-based elements, e.g., a Diploma project, offer too little structure for the teachers to plan their instruction. Accommodating specialization and breadth in a course that is geared towards people-centred service work and explicitly builds on students pooling their existing knowledge to prove their readiness for jobs seemed difficult.

The split target in the study corresponds to previously identified tensions associated with student-led work in earlier curriculum geared towards preparation for work rather than explicitly emphasizing job readiness (Gerrevall & Håkansson, 2005; Österlind, 2008). From a Didaktik perspective, maintaining a focus on both work processes and work results in preparation for either work or employability is apparently difficult. Thus, for example, the tangible work task of producing a plan in the Diploma project shifted to the intangible task (Guile & Unwin, 2019b) of setting up peer group work and keeping such elusive work on track through a joint effort.

Surprisingly, writing safety and security plans is not a task that security officers usually do, although they are of course supposed to follow such plans. The teachers told me that this target was introduced in an attempt to test the potential value of a novel design involving collaboration between the second and third graders. In this manner, the competences or exam goals (e.g., the previously mentioned knowledge

of the social context the task involves, for instance, laws and provisions as well as skills for work in a professional manner) were repurposed in the course of instruction to adapt to the needs of a peer group. The general infusion of elements of work life (the security industry and affiliated actors, e.g., organizers of the Star Challenge event) in the Diploma project, was regarded by both the teachers and students as having educational value. However, in accordance with previous findings, the involvement of industry stakeholders appeared to provide weak enrichment of learning, possibly because it restricted opportunities for vocational classroom interaction to venture into introjected and projected codes (Gerrevall & Håkansson, 2005). Therefore, I argue that embedding a Diploma project in a curriculum of preparation for work raises risks of focusing attention on *ad hoc* tasks, with limited opportunities for students to develop expansive understanding of occupations (Allais & Shalem, 2018b).

Moreover, the observations indicate that vocational classroom knowledge practices may provide poor support for students' integrative knowledge building, as they may get 'stuck' in an exotic code, and/or the instruction may 'stay' in a sovereign code (Maton & Howard, 2018). No clear instances of a projected code were detected in the data. However, it is possible that the second graders (who actually participated in the event) may have applied the internal constituents and principles encountered during the observed project work in the external practices of providing 'real' security services for the Star Challenge visitors. Staying put in a sovereign code in the observed interaction also limited the scope for repurposing surveillance law for students' learning with no support from the industry.

Here, incorporating surveillance law from an introjected code (occupational praxis) into a sovereign code contributed to a transformation of surveillance law into an abstract, freely floating and content-free legal document of questionable value to the students' learning and further development of capacities (Bagnall & Hodge, 2018). Thus, a curriculum driven by work tasks, e.g., a Diploma project, may have questionable educational value, merely offering students' rehearsals of 'the "doings" of everyday world of work' (Allais & Shalem, 2018b, p. 26) with few opportunities for students to access the knowledge that underpins recurrent work tasks.

Conclusion

In the sovereign code that dominated the observed instruction in a Diploma project, few novel or enriching meanings were developed and integrated with the derived safety and security plan, and very limited aspects of 'applied theoretical knowledge' (Allais & Shalem, 2018b, p. 27), such as surveillance law, were introduced. Thus, the students' opportunities to develop and show their capacities to perform recurrent work tasks appear to have been strongly restricted by the design of the task considered here. The performative target was reframed as practicing social, but strictly context-bound, skills and became a formalistic exercise for assessing limited aspects of students' vocational becoming.

Notes

1. Here, outcome-based curriculum subsumes competence-, and qualification-based curriculum. For simplicity, the terms qualifications and competences are used synonymously with capacities.
2. Other requirements include passing Swedish or Swedish as a second language 1, English 5, Mathematics 1a and vocational courses worth 400 credits. In total, 2 250 credits are required for a vocational diploma, including a 100-credit Diploma project.
3. A Diploma project is not equivalent to courses or tests in industrial or other professional sites leading to various kinds of certificates (*yrkesprov, gesällprov*), which are common in other European countries (Government Bill 2008/09:199). Assessment through practical demonstration of qualifications, particularly in workplace-based settings, has long traditions in VET. However, such assessment substantially varies worldwide as it is embedded in national education systems (*inter alia* Anttila et al., 2010).
4. The third graders completed their Diploma project by presenting oral reports, but the second graders were supposed to continue participation in the Star Challenge project in the following autumn, after my fieldwork had finished.
5. All names are pseudonyms.

Acknowledgments

The author wishes to thank the two anonymous peer reviewers for their comments.

Disclosure statement

No potential conflict of interest was reported by the author.

Notes on contributor

Dr Martina Wyszynska Johansson is a senior lecturer in the Department of Education and Special Education at the University of Gothenburg, Sweden. She is a teacher educator. Her scholarly interest is in vocational knowing and vocational learning.

ORCID

Martina Wyszynska Johansson  <http://orcid.org/0000-0001-9563-2614>

References

- Allais, S. (2014). *Selling out education: National qualifications frameworks and the neglect of knowledge*. Sense.
- Allais, S., & Shalem, Y. (2018a). Introduction. In S. Allais & Y. Shalem (Eds.), *Knowledge, curriculum, and preparation for work* (pp. 1–12). Brill/Sense.
- Allais, S., & Shalem, Y. (2018b). When is vocational education educationally valuable? In S. Allais & Y. Shalem (Eds.), *Knowledge, curriculum, and preparation for work* (pp. 13–29). Brill/Sense.
- Anttila, P., Kukkonen, P., Lempiinen, P., Nordman-Byskata, C., Pesonen, K., Tuomainen, S., & Räisänen, A. (2010). *We have evidence. How vocational skills demonstrations have been implemented in practice. Summary*. The Finnish Education Evaluation Council. https://jyx.jyu.fi/bitstream/handle/123456789/37809/1/978-951-39-3904-5_nro_48.pdf
- Bagnall, R. G., & Hodge, S. (2018). Contemporary adult and lifelong education and learning: An epistemological analysis. In M. Milana, S. Webb, J. Holford, R. Waller, & P. Jarvis (Eds.), *The Palgrave international handbook on adult and lifelong education and learning* (pp. 13–34). Palgrave Macmillan.
- Bathmaker, A. M. (2013). Defining ‘knowledge’ in vocational education qualifications in England: An analysis of key stakeholders and their constructions of knowledge, purposes and content. *Journal of Vocational Education & Training*, 65(1), 87–107. <https://doi.org/10.1080/13636820.2012.755210>
- Berg, G. (2018). Skolans statliga uppdrag [School’s national mission]. *Pedagogisk Forskning I Sverige*, 23(5), 43–60. <https://doi.org/10.15626/pfs23.5.03>
- Bernstein, B. (2000[1996]). *Pedagogy, symbolic control and identity: Theory, research, critique*. Rev Rowman & Littlefield Publishers.
- Bohlinger, S. (2012). Qualifications frameworks and learning outcomes: Challenges for Europe’s lifelong learning area. *Journal of Education and Work*, 25(3), 279–297. <https://doi.org/10.1080/13639080.2012.687571>
- Broady, D. (1983). *Samband mellan arbetsliv och utbildning. Några aktuella vägar för forskningen*. [Connection between worklife and education. Some current avenues for research]. In: *Kan utbildning förändra arbetslivet?* Stockholm: TCO, 113–178.
- Eklöf, A. (2013). A long and winding path: Requirements for critical thinking in project work. *Learning, Culture and Social Interaction*, 2(2), 61–74. <https://doi.org/10.1016/j.lcsi.2012.11.001>
- Eklöf, A., Kullenberg, T., & Nilsson, L.-E. (2017). “It is great she is really checking she wants us to pass”: Facilitating student project work. In: *Education in the crossroads of economy and politics: Role of research in the advancement of public good: Book of abstracts. Paper presented at 17th Biennial EARLI Conference for Research on Learning and Instruction, EARLI, Finland, Tampere*. Tampere: University of Tampere
- Gerrevall, P., & Håkansson, J. (2005). *Projektarbetet 100 poäng – Det första året* [Project work 100 credits – The first year]. Pedagogisk kommunikation 5, Institutionen för pedagogik, Växjöuniversitet.
- Government Bill 2008/09:199. *Högre krav och kvalitet i den nya gymnasieskolan*. [Higher demands and quality in the new upper secondary school]. Stockholm: Utbildningsdepartementet.
- Guile, D., & Unwin, L. (2019a). Introduction to the handbook. In D. Guile & L. Unwin (Eds.), *The Wiley handbook of vocational education and training* (pp. 1–16). John Wiley & Sons. <https://doi.org/10.1002/9781119098713.ch1>
- Guile, D., & Unwin, L. (2019b). VET, expertise, and work. In D. Guile & L. Unwin (Eds.), *The Wiley handbook of vocational education and training* (pp. 17–40). John Wiley & Sons. <https://doi.org/10.1002/9781119098713.ch2>

- Gy 2000:20. *Projektarbete – Kursplan, betygskriterier och kommentarer [Project work – Syllabus, assessment criteria and commentary]*. Skolverket 2001. Stockholm: Fritzes.
- Hopmann, S. (2007). Restrained teaching: The common core of Didaktik. *European Educational Research Journal*, 6(2), 109–124. <https://doi.org/10.2304/eeerj.2007.6.2.109>
- Hudson, B., & Meyer, M. A. (2011). Introduction: Finding common ground beyond fragmentation. In B. Hudson & M. A. Meyer (Eds.), *Beyond fragmentation: Didactics, learning and teaching in Europe* (pp. 9–28). Barbara.
- Janík, T., Slavík, J., Najvar, P., & Janíková, M. (2019). Shedding the content: Semantics of teaching burdened by didactic formalisms. *Journal of Curriculum Studies*, 51(2), 185–201. <https://doi.org/10.1080/00220272.2018.1552719>
- Jørgensen, C. H., Olsen, O. J., & Persson Thunqvist, D. (Eds.). (2018). *Vocational education in the Nordic countries: Learning from diversity*. Routledge.
- Klafki, W. (2000). Didaktik analysis as the core of preparation of instruction. In I. Westbury, S. Hopmann, & K. Riquarts (Eds.), *Teaching as a reflective practice: The German Didaktik tradition* (pp. 139–159). L. Erlbaum Associates.
- Lilliedahl, J. (2015). The recontextualisation of knowledge: Towards a social realist approach to curriculum and didactics. *Nordic Journal of Studies in Educational Policy*, (2015(1)), 27008. <https://doi.org/10.3402/nstep.v1.27008>
- Martin, J. R., & Maton, K. (2017). Systemic functional linguistics and legitimation code theory on education: Rethinking field and knowledge structure. *Onomázein: Revista De Lingüística, Filología Y Traducción De La Pontificia Universidad Católica De Chile*, 1, 12–45. <https://doi.org/10.7764/onomazein.sfl.02>
- Maton, K. (2014). *Knowledge and knowers: Towards a realist sociology of education*. Routledge.
- Maton, K., & Howard, S. K. (2018). Taking autonomy tours: A key to integrative knowledge-building, *LCT Centre Occasional Paper 1* (June): 1–35.
- Maton, K., & Moore, R. (2010). Coalitions of the mind. In K. Maton & R. Moore (Eds.), *Social realism, knowledge and the sociology of education* (pp. 1–13). Continuum.
- Mulder, M. (2019). Foundations of competence-based vocational education and training. In S. McGrath, M. Mulder, J. Papier, R. Stuart (Eds.), *Handbook of vocational education and training: Developments in the changing world of work* (pp. 1–16). Springer. https://doi.org/10.1007/978-3-319-49789-1_65-2
- OECD. (2007). *Qualifications systems. Bridges to lifelong learning*.
- Österlind, E. (2008). *Gymnasieskolans projektarbete ur elevperspektiv [Upper secondary project work from a student perspective]*. Stockholms universitets förlag.
- Riquarts, K., & Hopmann, S. (1995). Starting a dialogue: Issues in a beginning conversation between Didaktik and the curriculum traditions. *Journal of Curriculum Studies*, 27(1), 3–12. <https://doi.org/10.1080/0022027950270102>
- Shay, S., & Steyn, D. (2016). Enabling knowledge progression in vocational curricula: Design as a case study. In K. Maton, S. Hood, & S. Shay (Eds.), *Knowledge-building: Educational studies in legitimation code theory* (pp. 138–157). Routledge.
- Skolinspektionen. (2017). *Helhet i utbildningen på gymnasiets yrkesprogram [Holistic perspective on upper secondary vocational programmes]*.
- Skolverket. (2011). *Curriculum for the upper secondary school*. Statens skolverk. <https://www.skolverket.se/publikationer?id=2975>
- Skolverket. (2012). *Upper secondary school 2011-An overall commentary, diploma goals and programme structures*. Statens skolverk. <https://www.skolverket.se/publikationer?id=2801>
- Skolverket. (11 January 2019). *Introduktion till gymnasiearbetet för yrkesprogram [Introduction to the diploma project in upper secondary vocational programmes]*. Statens skolverk. Accessed 2019, February 26, from <https://www.skolverket.se/undervisning/gymnasieskolan/laroplan-program-och-amnen-i-gymnasieskolan/gymnasiearbetet>
- Svärdemo Åberg, E., Calissendorff, M., & Ståhle, Y. (2018). Förberedd för högskolestudier?: En studie av hur ”vetenskapligt grundat arbets sätt” tar skriftspråklig form i svenska gymnasiearbeten inom samhällsvetenskapsprogrammet [Ready for higher education?: A study of how “scientifically based work methods” are expressed in writing in Swedish diploma projects in the social science programme]. *Utbildning Och Lärande/Education and Learning*, 12(2), 7–23.
- Westbury, I. (2000). Teaching as a reflective practice: What might Didaktik teach curriculum? In I. Westbury, S. Hopmann, & K. Riquarts (Eds.), *Teaching as a reflective practice: The German Didaktik tradition* (pp. 15–39). L. Erlbaum Associates.
- Wheeler, L. (2019). Knowledge, competence, and vocational education. In D. Guile & L. Unwin (Eds.), *The Wiley handbook of vocational education and training* (pp. 97–112). Wiley & Sons. <https://doi.org/10.1002/9781119098713.ch6>
- Willbergh, I. (2015). The problems of ‘competence’ and alternatives from the Scandinavian perspective of Bildung. *Journal of Curriculum Studies*, 47(3), 334–354. <https://doi.org/10.1080/00220272.2014.1002112>
- Wyszynska Johansson, M. (2018). *Student experience of vocational becoming in upper secondary vocational education and training: Navigating by feedback*. [Doctoral thesis]. Göteborgs universitet. <http://hdl.handle.net/2077/56755>