

Duch, Henriette; Andreasen, Karen E.

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Reforming Vocational Didactics by Implementing a New VET Teacher Education in Denmark: Tensions and Challenges Reflected in Interviews with Vocational College Teachers

Henriette Duch

Aalborg University
Department of Learning and Philosophy
Kroghstraede 3, 9200 Aalborg, Denmark
E-Mail: hedu@learning.aau.dk

Karen E. Andreassen*

Aalborg University
Department of Learning and Philosophy
Kroghstraede 3, 9200 Aalborg, Denmark
E-Mail: karena@learning.aau.dk

*Corresponding Author

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Abstract: A new education program, Diploma of Vocational Pedagogy, has recently been implemented in Denmark to upskill vocational college teachers and improve didactics at VET colleges in general. Among many challenges, vocational college teachers have to adapt their pedagogy to a large number of students from backgrounds with no tradition for education. Despite historical changes, the education as vocational college teacher also struggles with the interplay between theory and practice in the program and great diversity among vocational college teachers. Based on empirical data from focus group interviews with students from the Diploma of Vocational Pedagogy program and concepts developed by Bernstein and Bourdieu, the article analyzes how these aspects might affect the development of new vocational didactics. We know that it is not easy to change the culture of educational institutions, and the analysis uncovers several factors that are expected to hamper the development processes.

Keywords: Vocational Didactics, Teacher Education, Bernstein, Bourdieu, Social Reproduction, Re-Contextualization, Focus Group Interview

Bibliographical Notes:

Karen Egedal Andreasen holds a PhD in education and she is associate professor in education and pedagogical assessment at the Department of Learning and Philosophy, Aalborg University, Denmark. Her main interests are questions of socialization, social mobility and processes of inclusion and exclusion and marginalization in different educational contexts.

Henriette Duch is doctoral student at the Department of Learning and Philosophy, Aalborg University, Denmark. She is also associate professor at VIA University College, Aarhus, Denmark. Her PhD project is about vocational teacher education. Her main interests are questions of professional development, teacher education social mobility in educational settings.

1 Introduction

Europe has focus on vocational education, and politicians expect changes within this educational area to solve a number of social problems and problems related to the labour market (Cedefop 2009; Cedefop 2015; Fejes and Köpsén 2014; Burchert et al. 2014). Denmark is struggling to produce sufficiently skilled labor for the future labor market and to attract young people to choose and complete a vocational education (Regeringen et al. 2014; Louw and Katnelson 2015). Among other things, the VET colleges struggle with high dropout rates, and research indicates that reforming the didactics is necessary to reduce such problems (e.g. Louw 2012).

To meet the political expectations, the Social Democratic-led government in 2014 passed a vocational college reform (Regeringen et al. 2014). The Minister of Education explains the reform concerning the young pupils in this way (The Danish Ministry of Education 2014):

“It is important that even more young people choose this path and that the Quality of the programmes is improved. (...) With the reform we strengthen the connection between schooling and work experiences in companies or internship centres.”

In Denmark the VET system in general is dual including practice and school so there is “a high degree of formalisation” characterized by a “strong involvement of social partners”, and the government is paying the school based part of apprenticeship (Eichhorst et al. 2015, p. 320-321).

A new education program for vocational college teachers, Diploma of Vocational Pedagogy, was introduced already in 2010 and is an important step in the realization of the reform intentions. The objective of the diploma program is to improve and upgrade vocational didactics, and it places increased demands on vocational teachers in terms of their ability to reflect on pedagogy and didactics (Undervisningsministeriet 2010). Improving the pedagogy and didactics at the colleges basically implies changing the culture. However, changing the culture in educational systems in general and at educational institutions more specifically is difficult (Bernstein 1990; Bourdieu 1996). Thus considerations on and analysis of the tensions and challenges related to such processes are relevant.

Vocational teachers are facing very large challenges, particularly because vocational college students in Denmark are an extremely differentiated group with very different preconditions and social backgrounds and many have academic and/or social problems (Jørgensen 2011; Louw and Katnelson 2015). A large share of the students are from families without a tradition for education, and the problems listed above are considered to be widely associated with the students' encounter with the school culture, its didactics and pedagogy and negative implications of social heritage. Researchers indicate that the teachers in youth programs tend to hold the students responsible for the problems related to these challenges (Nielsen et al. 2013). Rather than understanding pupils' problems from a social perspective and as related to the culture of the schools, the didactics and pedagogy, that they might understand them from a cognitive perspective as related to, for instance, low academic potentials or academic skills. Thus, improving the teachers' didactic and pedagogic competences is a central element in the reform to develop a style of teaching that does not reinforce reproduction of social

inequalities and social heritage and that may help reduce high dropout rates from vocational colleges (Jørgensen 2011). All current vocational teachers are required to complete parts of the diploma program, and all future vocational teachers will complete the entire program.

The objective of the diploma program is “to qualify the [vocational teacher] to independently perform pedagogic functions such as planning, organizing, developing and realizing tasks in teaching, counselling, dissemination, learning, didactics and social inclusion, and to develop a personal practice in relation to industry and labor market” (VIA 2015, p. 3; translated by the authors).

Another objective, which goes beyond teaching, is collaboration internally at the vocational college and externally with outside partners. It is described as follows: “to qualify the student to participate independently in interdisciplinary and cross-sectoral collaboration in public as well as private businesses, institutions, administration etc.” (ibid.). The increased importance of interdisciplinary collaboration makes it important to develop a shared pedagogic language across diverging preconditions. Self-images and understanding of colleagues’ professional competences, didactic approaches and educational preconditions become central factors, also in terms of not reinforcing the significance of negative effects of social heritage among the students.

The culture of educational institutions is reflected in, among other things, the pedagogic practice and in how teachers perceive, understand and match teaching to pupil experiences, background, development and potentials. In this sense, the culture represents a challenge at Danish VET colleges as mentioned above (Jørgensen et al. 2012) and perhaps also in the implementation of the ideas of the reform. It is therefore interesting to examine how legislation and the demands of a new pedagogy at the VET colleges are implemented and put into practice. Bernstein uses the concept “recontextualization” about such processes and by this also indicate the important role of the character of the context (e.g. Bernstein 1999).

Drawing on empirical data, we will examine how the new diploma program for vocational college teachers may help solve the above-mentioned problems at Danish VET colleges and discuss some of the tensions and challenges related to the process of changing the culture. However, we also want to emphasize that these problems are very complex, and we only explore and analyse a few factors here.

As students in the diploma program, the vocational college teachers face a double task: completing a diploma program and implementing what they learn to innovate, develop and improve their own didactics and ultimately meet the societal challenges. However, the vocational college teacher education has been and is affected both by the highly differentiated group of students in terms of professional and educational background and by that they will implement their knowledge from the education in very different contexts. In this article we explore (1) how the teachers in the diploma program experience the encounter with other participants’ preconditions and the academic content of the program, and (2) how these factors affect their self-image and their understanding of learning and development, (3) how the teachers articulate the possibilities for converting theoretical knowledge to didactics in their teaching at vocational colleges, and thus some of the tensions and challenges as experienced by the teachers and reflected in the interviews. These elements are discussed in relation to the intentions to innovate, qualify and develop didactics and pedagogy via the introduction of the Diploma of Vocational Pedagogy program, to the above-mentioned challenges, and to general problems and issues at vocational colleges.

2 Challenges in the program for vocational college teachers

Vocational college teachers are a highly differentiated group who teach very different subjects – e.g. mechanics, business economy, health – and their educational backgrounds and levels differ as defined in the Danish Qualifications Framework (Danmarks Evalueringsinstitut 2015; Uddannelses- og Forskningsministeriet 2014). For example, some teachers are trained in a skilled occupation, while others have medium-cycle educations. As a consequence, the different lines in vocational educations – including social and health, commercial, and technical educations discussed in this article – have developed different traditions for pedagogic education and continuing education of teachers.

Historically the vocational college teacher education has had different forms and content since 1891 (Rasmussen 1969; Tilsynet med den tekniske undervisning 1964). Since 1969, Statens Erhvervspædagogiske Læreruddannelse (SEL) has offered pedagogical courses for teachers at technical colleges. The courses vary from fourteen weeks to two years (Marckmann 1971). In 1971, the principal at SEL found that vocational teachers at that time differed from students studying to become teachers at primary or lower secondary schools. Teachers at vocational colleges are older, they already have an education, and the educational level varies. Vocational teachers know their subject; they are “highly motivated”, “mature” and “purposeful” (Marckmann 1971, p. 437). The teachers are differentiated and so are their challenges and needs in terms of a pedagogical course. Common for the different types of courses is that practical teaching comes before theory. According to Marckmann one challenge is that some want course content to be very practical. He states that a professional teacher needs to learn to reflect and make decisions in new situations.

Marckmann found that vocational teachers differ from other groups of teachers and that the necessary conversion of theory into practical didactics and pedagogy is based on a reflective and context-dependent decision.

Before 1989, teachers at technical colleges had 12-week courses and 80 hours of practical training and supervision at the college (Grünbaum 1991). They had to do some self-study and attend a compulsory three-week course. From 1990, technical and commercial college teachers attended the same course, which consisted of a theoretical and a practical part (Undervisningsministeriet 1996; Daugaard and Magnussen 1994). The course was alternating and the teachers were supervised by an experienced teacher at the college.

The social and health educations became vocational educations in 2007, and they have another teacher training course tradition. For example, in the former Aarhus County teachers from social and health colleges participated in the adult education teacher program at what is now called university colleges.

In 2010, new legislation standardized the pedagogic education of vocational college teachers regardless of subject area (Undervisningsministeriet 2013) and required everyone to complete a Diploma of Education. A preferred choice is the Diploma of Vocational Pedagogy, which is the focus of this article.

Unlike the former teacher training course for commercial and technical teachers, diploma programs are not defined as alternating training, and practical training is not a part of it as it was in the adult education teacher program. Diploma programs are based on the students' experiences, and it is up to the individual student and the individual vocational college how to implement it in practical teaching. As a result, the work methods differ considerably at the individual

colleges (Danmarks Evalueringsinstitut 2015), and the individual teacher faces different tasks in converting pedagogic theory into a personal teaching practice.

In a historical perspective, the Diploma of Vocational Pedagogy program poses two new challenges to vocational college teachers in terms of implementing their knowledge from the pedagogic education in their own didactics. First, all vocational college teachers are now required to have the same pedagogic education regardless of educational background, and we should therefore expect a unified professional environment for vocational pedagogy. Volume in a professional environment may be an advantage (Olsen 2013). Historically, vocational pedagogy has expanded, first with the merger of mercantile and technical teachers and later with social and health teachers, and student diversity in the diploma program may be considered a challenge as well as a potential. Second, the schools attempt in different ways to make up for the fact that the education no longer has a practical element by supporting the teachers' participation in the education to a new vocational didactics. This challenges principals and teachers in terms of assessing the type of support.

3 The empirical study

The data in the analysis is from two focus group interviews conducted during spring 2015; one with students from a social and health care college and one with students from a combined technical and commercial college. They represent the main types of vocational colleges. The empirical data is selected to reflect the diversity in subject area and educational background in order to illustrate the diversity in the combined education program (Flyvbjerg 2006). The participating teachers from the combination college are 36-43 years old and have 1-7 years' teaching experience. The teachers from the social and health care college are 34-53 years old and have from 18 months' to 3.5 years' teaching experience. They have reached at least the second of six modules in the diploma program. The empirical material also includes observations, management interviews and document analyses procured during a four-year PhD project.

The focus group interviews with the students are semi-structured and based on four questions.¹ The approach is social-constructivist and emphasizes that the respondents acknowledge the focus group as a community and learn within it (Barbour 2007; Halkier 2008). The respondents construct understandings and discourses in the situation. Our point of departure is that some structures are controlling but that actors have options in structures and will affect these structures (Bourdieu 1996; Ingemann 2013). After transcription (Bloor 2001), the interviews were read several times and research questions were concretized. Thus the data is the starting point for the analysis.

4 Analytical framework

Both Bourdieu and Bernstein discuss issues associated with pedagogy and culture in educational systems. They examine how societal structures are reproduced via the educational system and the role of specific cultures in educational contexts as they are reflected in pedagogy and didactics: "...pedagogic practice can be understood as a relay, a cultural relay: a uniquely human device for both the reproduction and the production of culture" (Bernstein 2003, p. 196).

¹ All data are collected by Henriette Duch.

Bernstein is preoccupied with the micro-level in terms of understanding dominant and oppressed groups. He describes how education via these processes contributes to shaping subjects' identity, consciousness and relation to others, and how pedagogy contributes to the formation of self-images:

Education is also integral to the formation of the identity, consciousness, dispositions and relational practice of agents of symbolic control, how these agents relate to each other and how they relate to those with different functions (Bernstein 2001, 27).

These processes and themes are particularly relevant in relation to this study as they thematise issues associated with intentions to change pedagogy in educations and with recontextualization (Bernstein 1999). The processes are partly associated with the content of the education programs, the subjects taught (e.g. pedagogical and psychological theories), partly with the way teaching is conducted, for example how psychological theories are applied by teachers or students, by "the 'what' and the 'how' of any transmission" (Bernstein 2001, p. 27).

Pedagogy – the "pedagogic device" – reflects and represents the discourses in the national and international field where it originates, for example the state's and scientific production of theories (Bernstein 1990). Pedagogic theories are thus created in a specific production field. Scientists produce theories and practices, which are disseminated. They are incorporated in the official recontextualization field, which is thus created by and becomes co-creator of the official pedagogy discourse. This discourse is transformed in the pedagogic practice to the new discourse, the pedagogic reproduction discourse.

In his analyses of educational systems, Bourdieu points out how they tend to reproduce themselves and are characterized by inertia in terms of change (Bourdieu 1997, p. 46; Bourdieu and Passeron 1996). Bourdieu elucidates how this can be understood with reference to the culture in educational contexts and concepts like habitus and capital (Bourdieu 1996). Habitus is permanent dispositions and is slow moving. Education as a cultural capital does not guarantee a change in habitus.

The theoretical perspectives and concepts described above will be applied in the analysis of the selected empirical data. Again we want to mention that the problem at focus is very complex and the analysis below is just meant to indicate some of the potential problems related to processes of changing the culture for the purpose of improving the didactic at VET colleges.

5 Analysis

5.1 From theory in the Diploma of Vocational Pedagogy program to vocational didactics

The mandatory modules in the diploma program has content such as "learning theories", "general didactics", "teacher competence" and "teacher professionalism" (VIA University College, University College Syddanmark et al. 2015). The content is not specified in the study program, and the students may therefore encounter different theories about it depending on the class they attend. The theories are chosen by the teachers at the University College, but texts typically used for teaching by the VET teachers reflect different pedagogic and didactic traditions and in general include theories like the ones represented in the selected data.

In the empirical data included in this analysis, the content from the teaching is expressed via references to theories that have been introduced during the program, specifically cognitive learning theory and theories on teacher professionalism

(cf. Piaget and Lars Erling Dale's). The interview did not include specific questions about theories; they were not mentioned by the interviewer. In the lessons they were used in the discussions and understanding of general pedagogic issues and of individual participants' learning processes. However, the students interpret their personal practice, development processes and characteristics with reference to these theories as reflected in the interviews. Therefore, the way theories 'interpret' themes like cognition, development, teacher professionalism etc. affects the formation of self-images among the students and their understanding of own practice and practice development. The theories as such represent – as Bernstein describes it – certain dominant discourses about pedagogy, didactics and learning processes, and a recontextualization occurs via practice during the Diploma of Vocational Pedagogy program. The selected examples illustrate these processes and how these discourses are expected to find their way into pedagogy and didactics at vocational colleges. They show the processes by which culture is produced and reproduced as analysed by Bourdieu (e.g. Bourdieu and Passeron 1996).

During the interviews, the students use theories to reflect on how they may apply their competences in vocational teaching. They do not talk about specific actions in the selected dialogues, but in the interviews and the dialogue with colleagues they articulate some themes and issues that appear to be central to them. The examples express the students' application of theories with relation to their own context and can thus be seen as expressions of what Bernstein refers to as recontextualization.

5.2 Diversity, production and reproduction of self-images

The vocational college teachers in this study are employed at a combined technical and commercial college, and as mentioned their educational backgrounds vary considerably (see below). The diversity might represent a pedagogic and didactic challenge but also a potential since it might inspire students to reflect on their development and identity as teachers. The diversity turns out to play an important role as context for identity formation as the students understand and evaluate themselves in relation to each other, especially their educational backgrounds. The school management is interested in how the diploma program can help establish a common pedagogic language to glue the school together. Pedagogy is shared across the many different educations and professional competences at the school, the managers say. Accordingly, pedagogic management is a central theme in interviews with the management, but as we will see below, management in the technical and the mercantile departments at the college have different ways of supporting the teachers in the pedagogic and didactic challenges.

Charlotte², with a medium-cycle education, and Kit, with a skilled occupation and a short-cycle higher education, are from the mercantile education programs. Tue and Chris, both trained in a skilled occupation, are from the technical programs. In the interview, they talk about sharing notes and helping each other understand the literature in the diploma program. They also talk about how they disseminate knowledge to others at the college and inspire each other to apply the new knowledge in their teaching. The principal encourages knowledge sharing, and Chris has presented his assignment at a department meeting in the technical department. In the mercantile department, the teachers are very autonomous in

² All names are pseudonyms.

terms of talking about new pedagogic knowledge and they introduce ideas from the diploma program at department meetings. They say that there is a lot of formal and informal knowledge sharing. During the interview, the students talk about differences and similarities between the different departments at the college, and the conversation turns to their very diverse educational backgrounds.

Charlotte (mercantile) articulates the significance of educational background in terms of keeping up with the professional level in the diploma program. The three others agree that the differences matter. Earlier in the interview, Kit has positioned herself as someone who received good grades in school and could have studied at university, but chose something else. When Charlotte says, “I just have to think that the challenge is bigger for you”, she refers to the students from the technical educations, who typically do not have a long education. The dialogue continues:

Chris: We do have a craftsman’s brain.

Interviewer: I don’t know about that, what is that?

Chris: [...] I took the first two modules with a colleague, and she has a bigger education than I do. And it is much, much easier for her. There were driving instructors and all kinds of things, you know.

Interviewer: Why does that matter?

Chris: I think they think in a different way.

Interviewer: OK.

Chris: Like, you know, in a more academic way, right?

Interviewer: Yes.

Kit: Mmmmm

Tue: But it’s a whole different world.

Interviewer: What is?

Tue: It’s also about where you were schooled after you left 9th grade, right?

Interviewer: Sure, how?

Tue: Well, again, it’s about how we build the charts in our head, right?

Tue and Chris recognize the differences articulated by Charlotte and attempt to explain and understand the different preconditions and their significance based on the theories from the program. Chris links his explanation to the brain. He uses the expression “craftsman’s brain”. According to Tue, this brain has different “charts”, which we assume refers to and captures their understandings of craftsmen’s preconditions for absorbing the academic content of the education program. As cognitive learning theories typically figure in the diploma program, the statement probably refers to precisely these theories’ interpretations of learning and learning processes and represent an example of reproduction of culture (Bourdieu and Passeron 1996). The context in the dialogue, including the other teachers’ reactions, supports this. There are two types of thinking, says Tue, academic and abstract thinking and then the craftsman’s way of thinking. The education is easier for academics, he says. When Tue applies a learning theory to explain the difference, the classification in the diploma program becomes the comprehension horizon. In other words, a cognitive learning theory is pulled out to explain why some people may be more challenged by the diploma program than others. This is an example of how the content from the education can be applied in the students’ dialogue to mark a difference, which on the one side reflects their self-images and on the other side contributes to the creation of these self-images. Charlotte attempts to modify

the difference in educational background by using the concept “qualified”, even though she introduced the theme about different preconditions:

Charlotte: Ok, I don’t agree with you. I did a module with mechanics and auto, and I did a module with chefs. I definitely think that they were just as qualified as me, and I have an education ... definitely, I think so.

Tue: But I haven’t, some of the people I studied with got As, they were super sharp.

Kit: Yeah, I haven’t noticed that anybody [...]

Tue: No.

Kit: Well actually, I think that there has been a lot of, of course some people talk more than others, but that’s the same thing in a class.

Tue: Mmmm.

Charlotte: So I don’t think I’ve really noticed.

In their attempt to tone down the importance of preconditions, they increase the focus on differences, for example in the statement that it is “no problem” to be a skilled worker and get a straight A. The dialogue thus highlights a difference, then tries to tone it down and in that process highlights it even more. The dialogue reflects an indication of positions where education represents a cultural capital based on which you classify yourself and others, despite the closing consensus that “it hasn’t played any role” and “So I don’t think I’ve really noticed”. In other words, education gives the teachers an identity and positions the individual teacher in relation to the colleagues.

We have to consider which types of reflection are framed by the concept (cognitive) “charts”. Is it educational background as cultural capital where the skilled vocational college teacher is inferior to teachers with longer educations? Or does it explain that the skilled teacher has not yet constructed the appropriate charts for the education program, but it will be resolved, the charts can be constructed? In that sense it may be a case of habitus undergoing change.

In the context of the organizational structure at the vocational college mentioned above, the interviews reflect that one group of students work autonomously to convert the theoretical content in their education, and one group does not think it is possible within the framework at their vocational college. The point is that the students have a dialogue about educational background that reflects a certain discourse, and this discourse is supported by different structural frameworks at their workplace. Those with the longest education have or assume autonomy in terms of integrating new knowledge in their didactics, autonomously and collegiately. At the same time, the students understand their possibilities of being able to do this with reference to the theories about learning and learning process they encounter during the diploma program. These theories encourage a specific discourse about and understanding of these processes and place the problems associated with applying the theories in practice with the individual student. If the discourse were related to other types of theory, e.g., a social or a psychological learning theory, it might initiate other considerations and perhaps be less likely to place problems with the individual vocational college teacher and thus individualize them. As mentioned, this is an example of the production and reproduction of culture cf. Bourdieu’s theories and his analysis of these processes (Bourdieu 1997).

Later in the interview, the participants discuss whether the teachers in the diploma program are responsible for good teaching or whether the students have a responsibility. Kit thinks the teachers are responsible and relates this to the question about whether she would show up for class:

Kit: [...] and I have to admit that sometimes I've not shown up because there was a teacher and I knew that if I go, I won't learn anything ... and you could say that I haven't had that approach [...] that I could try to influence the teaching if I feel that I'm not learning anything [...]

Charlotte argues that each person is responsible for getting something out of the teaching. She wanted to benefit and relates how she makes demands and contributes in class:

Charlotte: And so I said to my colleagues, you know what? I felt the same way in the beginning. It was extremely boring, but then it's up to me to make it interesting [...] and make demands to my teachers and make them perform more on what I want out of it. Because the way I see it, I'm the one they deliver the goods to, not to anyone else [...]. I'm definitely not interested in sitting around wasting my time [...].

So there are two strategies in relation to class: Students can participate actively and influence it, or they can maintain a division of responsibilities between teacher and student where the former is responsible. In Bernstein's terminology, this refers to the framework of the teaching. The two positions are not softened as in the above dialogue, but you might say that the underlying conceptions of learning are positivist and social constructivist rather than cognitive as above. The students in the interview thus establish (at least) three learning discourses, and you have to consider their role in the processes of recontextualization and whether they stay on in the vocational pedagogy.

Kit has taught for about four years before starting the pedagogic education. Initially, she says, "I really resisted going. I almost started crying when [a manager] forced it on me." She continues:

Yeah ... but [...] I've never been criticized for my teaching, and I'm a fine teacher, I thought. Why do I have to study? If I wanted to continue studying, I would have gone to the university [...]. My grades are fine; that was actually my idea [laughs]. I don't want to spend time sitting around. I'm here to teach and I like being in the classroom, so that's actually my biggest focus. So I just found it annoying, but it's also because I started [...] started on a fulltime study program.

Kit's statements and the fact that she explicates her choice show that education has a value for her. We thus have to assume that education plays a role in her identity and if nothing else, the interview shows that it is important for her to be able to say to her colleagues that she deliberately turned down an opportunity.

The dialogue continues, and Kit explains how she has gradually learned to sort and prioritize the reading material in the diploma program. She has learned how to select the things that are important for her own teaching. Things are different for Tue:

Tue: [...] I still find it hard to see its usefulness in everyday teaching. Every now and then something pops up, but hey, that's how it is, that's right, I've heard about that before or read about it, but I don't use it.

Interviewer: No.

Tue: Well not directly, I probably do it indirectly, I probably can't deny that. I still think that [...], it's annoying that I'm not going [...], but it's my own choice to skip teaching altogether, that's the most practical thing in our department.

Unlike Kit, he prefers to drop teaching at the vocational college and complete all modules in the diploma program consecutively. However, it is not clear from the quote whether it is his decision or whether practical issues in his department determine whether he studies full time or part time. The two teachers thus highlight different needs and experiences concerning the planning of the pedagogic education. They draw attention to different discourses during an education program like being away from the teaching and making things work at the department. They also have different experiences with converting the diploma program into didactics. One is able to, and the other one finds it difficult and only sees occasional links.

In sum, the dialogues at the combination college reveal different types of challenges in terms of converting theoretical knowledge into didactics. The students articulate problems seeing the link between different contexts, division of responsibilities between teacher and student, approach to learning, education as cultural capital, and different structural conditions in the departments at the vocational college. The students articulate their own identity in different ways in terms of educational level, and education is assigned importance in their mutual positioning.

Such discourses must be assumed to play a role in and influence their own teaching practice considering its significance in terms of identity.

5.3 Converting theories into practical pedagogy

The interviews in this section are from a social and health care college. Erling Lars Dale's theories about teacher professionalism and competence levels are used in a discussion of professional teachers' ability to make the desired changes in their own teaching practice. This vocational college has a completely different approach to integration of the diploma program than the combination commercial/technical college in the previous section. According to the management, the structural school model for combining diploma education and vocational college practice consists of two elements: (1) an introduction to being a teacher during the first period of employment; (2) the students are paired and followed throughout the diploma program. They observe each other's teaching and make practical didactic experiments, which may also form the basis of theoretical assignments during the diploma program. The model is somewhat similar to alternating training in earlier pedagogic educations at commercial and technical colleges but its implementation is much stricter. It is implicit in the model that the participant's teaching practice needs to change. In contrast to the model at the combination college, it is very close to the teaching. Discussions about implementation of theory and change are accompanied by action. However, the participants' ideas about the framework and the possibility to convert theory into practice differ considerably from the real school model, as we will see below.

Dorthe uses Dale's theories about competence levels to explain her problem at the vocational college. She says that she cannot become what Dale calls professional without a different allocation of her time between teaching, planning and development (Dale calls it equal thirds). Like Tue from the technical education she applies her knowledge from the education to classify and thereby explain her own experience:

Dorthe: I guess I should refer to some of our theory as far as [...] in our module, Katrine, [...] Didn't Lars Erling Dale [write] about those competence levels, where I think it's absurd ... so much time ... [...]. Not to sound pathetic, but how much time we spend in class and so little time we spend where we could actually develop something and where we might actually turn into professionals.

Katrine: Mmmm.

Dorthe: [...] I sometimes think it's a little crazy that they throw so much money at us [...] in relation to how much of it we can actually integrate in our daily work.

Dorthe applies a pedagogic theory that has emerged in pedagogic research to describe her own work conditions. She uses the theory as an analytical framework, but also as explanation. The theory represents certain discourses about teaching and didactics, which are both produced and reproduced by these processes (Bourdieu and Passeron 1996). If your time is not allocated according to Dale's recommendations, you cannot become professional. The framework for her teaching becomes a barrier to the extent that it may not be profitable for society or the college to pay for a diploma education. Specifically, neither time nor resources are sufficient to ensure that the students can implement their knowledge in their teaching. In Bernstein's terms, this reflects a recontextualization where pedagogic theory is applied not as a framework in the diploma program but as an explanation of how inadequate work conditions block the creation of fruitful frameworks in vocational pedagogy.

Later in the interview, the respondents demonstrate more optimism and a desire and need to jointly practice and discuss knowledge from the program with a view to changing teaching practices. Bodil thinks that it is a flaw that they have not as colleagues had some general discussions about "learning approaches", "view of human nature" and "forms of evaluation". Her point of departure is discussions of the theoretical content, which is part of the education due to its position in the qualifications framework, but not all students consider it a precondition for teaching at a social and health care college. Bodil finds it necessary; she wants to "raise the level", and she is thus very much in line with Dorthe. Planning and conducting classes is not enough; you have to work at a theoretical level as a teacher:

Bodil: [...] it is [...] for me, as Dorthe says, practicing in private. It is that I still change, and consciously, unconsciously the further you progress, those changes become more and more conscious [...] I know that I reject this because it didn't work, and actually I know now why it doesn't work [...]. It affects your professional identity to follow these modules, I completely agree with you, but [...] I still need that [...], that we can take it up to a level where we can actually discuss, I mean in the team, discuss didactics, discuss learning

approaches, discuss view of human nature and so on. Discuss how we evaluate [...], that we could just discuss in theory why precisely those evaluations we use now are a good idea [...]. The outcome is that I write an assignment about it and that I maybe with the closest colleagues [...], but in reality we won't ... make any changes.

Fie continues the dialogue. She does not have time to prepare for teaching that is based on, for instance, considerations about objectives because if she does, "I would have to change everything", she says. She is facing a dilemma. She wants something different now based on her diploma program, but it does not appear to be feasible in practice:

Fie: [...] I agree a lot with what you say, but I agree a lot because what is happening to me is also purely practicing in private. I mean, I'm really private about it [...]. I really need to make some progress together, [...] how do we lift the pedagogy [...], because right now, if you get a class, you just have to pick up what someone else made. So of course you have your own ideas about it, because there's no time to change it [...], but you just have to do what's already been made [...]. You can't prepare new teaching [...], I mean then I can't use all the things I've learned.

Fie finds that when she plans her teaching, she is subjected to a classification and a framework that she cannot change offhand. Likewise, Dorte and Bodil have some ideals. The dialogue at the social and health care college reveals considerations about the link between the newly acquired knowledge at the diploma program and the conditions at the college. The respondents face some dilemmas, but they also show an interest in and path to linking the diploma education, structures at the college and their own didactics. The path they indicate is other ways to plan teaching and divide labor to give the teachers an opportunity to apply their new education in cooperation with their colleagues. They want to leave behind the privately practicing teacher who shuts the door to the classroom and instead cooperate with colleagues.

Earlier in the interview, Bodil and Dorte talk about changes in their teaching. They talk about reflections during and after teaching, but they also highlight the boundary between reflections and specific changes in didactics:

Bodil: [...] I don't know if my teaching has actually changed and whether I've become a better teacher, and whether the students learn more. I sense [...] greater awareness about some things and that I'm quicker to spot certain things and am able to theoretically explain what is happening in the classroom right now [...] where I then lack something [...] the next step [...]. With this increased awareness compared to before when you just randomly observed, oh, ok something happened there, and something happened there, and it didn't really add up, now I think it's much better [...] more structured, and actually more targeted [...], that I would like to know what I could do here, but then I'm missing a little bit of that to be able to take the next step and say [...], if this teaching approach didn't work, what could I do to make it work [...].

Dorte: I think a lot of it [...] I recognize [...]. I mean thoughts are stored in my head when I see things or when I try to understand things. That's what happens in the car on the way home from work.

On the one hand, the dialogue shows that didactics have been changed, and on the other hand it reflects the inertia and the difficulties that are experienced. Plans and ideas about changes are not implemented.

Overall, the data from the social and health care college exhibits the complexity involved in transforming theories into didactics and practical pedagogy and maintaining a balance between personal challenges, collegiate collaboration and structural factors which you do not necessarily feel you have much influence on. The students articulate changed ways of thinking, ideas and wishes in terms of implementing the Diploma of Vocational Pedagogy.

6 Tensions and challenges in vocational didactics under change

The political intention behind the vocational college reform in Denmark is to ensure that the vocational colleges produce a future labor force with more skilled young people. Innovation and qualification of didactics and pedagogy is a core element of the reform and makes the vocational college teachers' pedagogic education central. However, the difficulties associated with changing educational cultures and translating theory into practical didactics and pedagogy are well known (Munthe and Ohnstad 2008). The recontextualization of legislation into didactic practice at schools is important, as pointed to by Bernstein. This is reflected in the historical development of the vocational teachers' pedagogic training as well as in many other professions (Damsgaard and Heggen 2010).

The analyses in this article represent examples of these processes related to specific contexts and teacher students. Thus we cannot, nor is it our intention, draw a more general conclusion, but the analysis clearly points to several tensions and challenges in these processes. One discussion concerns framing (see also Bernstein) and how structures aid or obstruct the development of new didactics at vocational colleges. The respondents talk about different conditions at their colleges, and they experience different barriers such as possibilities for knowledge sharing among colleagues, overall didactic considerations or development of teaching in general. Time is another key issue. At a structural level, you might say that the schools practice different models and offer the students different frameworks for implementing theories from the diploma program in their own teaching and thus being able to establish an interplay between theory and practice. The two vocational colleges in the analysis apply different models. At the combination college, the organizational framing differs among the departments, and their employees have different educational background, which might play a role in relation to their habitus. Both education and organization thus seem to play a decisive role in conversion to didactics.

Another question is how participation in the diploma program and exposure to the many different educational backgrounds represented in the classes and theories about learning, pedagogy, didactics and profession affect the vocational college teachers' identity and self-image. The students' statements indicated differences, which might be understood with reference to the concept of habitus as defined by Bourdieu.

The teachers discuss, among other things, Dale's theories and cognitive theories about learning which are very common theories used in Danish teacher education. They use these theories to reflect on learning processes in general, their own learning processes in particular, and on how to apply the education in vocational didactics. Some students perceive themselves as better equipped for a diploma education than others as expressed in discourses about educational

preconditions, which are related to an educational hierarchy. The analysis does not clarify the exact role of educational background, but the perception of importance exists among the students and can be related to social background, social class, identity and cultural capital (cf. e.g. Bourdieu and Bernstein). Moreover, the fact that the theories confirm these perceptions is problematic considering that vocational colleges are experiencing problems related to pupils' social heritage and social backgrounds. Such discourses and the self-images they express can be expected to manifest themselves in the pedagogic practice at the colleges and to contribute to a reproduction of the current culture.

Using cognitive theories might also individualize pupils' challenges and make teachers place problems regarding academic potentials and progress on the pupils rather than understanding them from a social perspective as related to the culture of the schools and the didactics and pedagogy. As we have described, research indicate that this can be considered an important problem in youth education.

Vocational college teachers respond and react in different ways to external demands for change, such as reforms. Vähäsantanen and Etaläpelto identify a resistant, an inconsistent and an approving orientation (Vähäsantanen and Etaläpelto 2009, p. 28) and find significant relations between professional identity, the individual's own interests and intentions. Based on the results of our analysis, such relations might play an important role in terms of implementation of didactic changes at vocational colleges.

A final discussion concerns collegiate collaboration, creating change together, making progress together. When the students articulate this both as a wish and as a possibility, we have to see it as an opportunity for movement away from the privately practicing teacher, as they say. Perhaps the social and health care teachers are articulating an unrealistic vision, but their opportunity for development apparently exists in the interplay or tension field between a structural level where framing in the diploma program and at the vocational colleges creates space for developing didactics and an individual level concerning identity, self-images and habitus.

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