

# Vocational Education & Training Emerging Issues?

## VOICES FROM RESEARCH

III International Conference & Research  
Workshop  
Stockholm, May 12-13, 2014

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*Research Group VETYL (Vocational Education & Training/Yrkeskunnande och Lärande), Department of Education, Stockholm University*

*We welcome old and new participants*

## Program Monday, May 12.

<b>13.00-13.15</b>	<b>Arriving at Sjöfartshotellet, Katarinavägen 26, Stockholm Registration</b>
<b>13.15 -13.30</b>	Opening of the conference – professor Lázaro Moreno Herrera
<b>13.30-13.45</b>	Practical information
<b>13.45-14.45</b> Sjöfartshotellet, Salongen	<b>Keynote 1:</b> Professor Petri Nokelainen, Tampere University, Finland: <i>What Contributes to the Development of Vocational Excellence?</i>
<b>14.45-15.00</b>	<b>Coffee break</b>
<b>15.00-16.30</b>  Sjöfartshotellet, Salongen  <b>PARALLEL SESSIONS</b>	<b>Paper session 1: Challenges for VET in three countries</b> Chair/discussant: Michael Gessler Jesús Alemán Falcón: <i>Formative Cycles of Basic Vocational Training: a tool against the risk of early school leaving</i> Evi Schmid: <i>VET in Switzerland: challenges for the near future</i> Andreas Oikonomou: <i>Vocational education in Greece: current situation and challenges</i>
Sjöfartshotellet, Biljarden	<b>Paper sessions 2: Identities for VET students?</b> Chair/discussant: Ulf Olsson Franz Kaiser: <i>Free your spirit and guide yourself. Decentralisation of control, frameworks, selforganisation and virtuous vocational education</i> Eva Klope: <i>To Be Trained To Be Something Or Someone - A Study Of Vocational Habitus Among Hairdresser Students In Upper Secondary School</i> Ruhi Tyson: <i>Teaching Vocational Ethics: The Biographical Case of a Master Craftsman</i>
<b>16.30-17.15</b>	10-15 min walk to the Birka terminal. <a href="https://en.birka.se/">https://en.birka.se/</a> Check-in, boarding-cards and cabin keys
<b>18.10-19.10</b> Room: Stockholm A & Stockholm B	<b>Keynote 2:</b> Professor Andreas Fejes, Linköping University, Sweden <i>Monsters and confessing animals – A Foucaudian approach to vocational education</i>
<b>19.15-20.30</b>  Room: Skåne  <b>PARALLEL SESSIONS</b>  Room: Carlshamn	<b>Paper sessions 3: Cross national studies</b> Chair/discussant: Inger Eriksson Jens Simeon: <i>Conditions for innovation of VET in international comparison</i> Petros Gougoulakis, Etsuo Yokoyama & Hiroshi Numaguchi: <i>Post- secondary Vocational Education and Training in Japan and Sweden: an identity under construction</i> John Benedicto Krejsler, Ulf Olsson & Kenneth Petersson: <i>The Opaque Smoothness of Transnational Governance in Scandinavia: The cases of Danish and Swedish teacher education reforms</i>
	<b>Paper session 4: VET policy – comparative aspects</b> Chair/discussant: Lázaro Moreno Herrera Christian Helms Jørgensen: <i>Does work based learning have a place in future VET?</i> Gun-Britt Wärvik: <i>Adult education policy in flux. Vocational teachers' responses to pressures for professional development</i> Natasha Kersh & Ida Juul: <i>Young people's perceptions of Vocational Education and Training (VET) as a career path: lessons from two European countries.</i>
<b>20.30</b>	Dinner & social evening

### Program, Tuesday May 13.

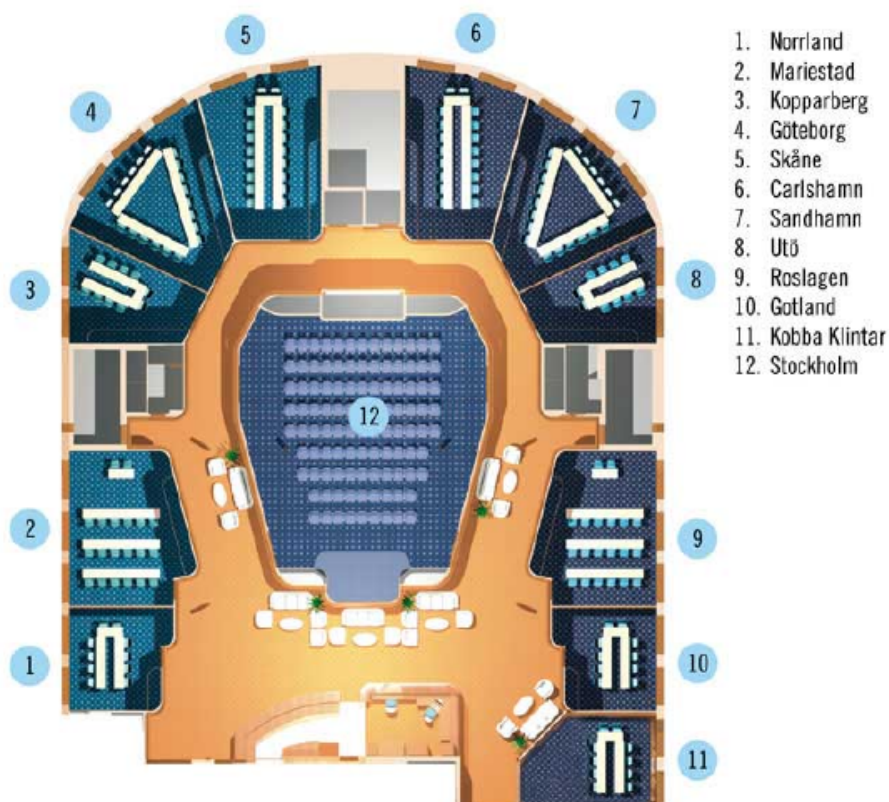
<b>7.00-9.00</b>	<b>Breakfast</b>
<b>9.00-10.00</b> Room: Skåne	<b>Keynote 3</b> Dr. Phil. Mattias Nylund: <i>What counts as important knowledge in upper-secondary vocational programs, and why? – On the social and political dimensions of content organization in vocational routes in Sweden and how they resonate in contemporary policy</i>
<b>10.05-11.30</b>  Room: Skåne  <b>PARALLEL SESSIONS</b>	<b>Paper sessions 5: Vocational knowing</b> Chair/Discussant: Gun-Britt Wärvik Eva Eliasson & Helena Rehn: <i>Feminine caring disposition and subordination: Swedish health care teachers' conceptions of important vocational knowing</i> Gunilla Berg-Christoffersson: <i>Communicating vocational knowing – A study during students' work-based learning</i> Laura Pylväs: <i>Natural Abilities, Self-regulative Abilities, and Environmental Conditions in Air Traffic Controllers' Vocational Development</i>
Room: Carlshamn	<b>Paper session 6: Challenges for Work-based learning</b> Chair/Discussant: Andreas Fejes Michael Gessler: <i>Vocational Training in German Companies: As good as the German Dual IVET-System?</i> Etsuo Yokoyama & Hiroshi Numaguchi: <i>On the Transforming of Vocational Education and Training in Japanese Automobile Companies at Turning Point! – Focus on Changing the Way of Vocational Education and Training at A company</i>
<b>11.30-13.00</b>	Lunch
<b>13.00-14.00</b>  Room: Skåne  <b>PARALLEL SESSIONS</b>	<b>Paper sessions 7: Assessing Vocational knowing</b> Chair/Discussant: Petri Nokelainen Viveca Lindberg: <i>Assessment of Vocational Knowing - A Nordic Perspective</i> Camilla Gäfväls: <i>Assessment and Institutionalisation of Floristry Knowing Through Vocational Testing</i>
Room: Carlshamn	<b>Paper sessions 8: Methodological issues in VET</b> Chair/discussant: Jens Siemon Inger Eriksson: <i>Analysing vocational knowing with help of learning studies</i> Lázaro Moreno Herrera: <i>The cycle of expansive developmental research as methodological tool for VET research – Potentialities and shortcomings</i>
<b>14.00-14.30</b>	Coffee break
<b>14.30-15.40</b>  Room: Skåne	<b>Panel discussion &amp; Conclusion</b> <i>Panel:</i> Andreas Fejes, Christian Helms Jørgensen, Petri Nokelainen and Evi Schmidt <i>Chair:</i> Gun-Britt Wärvik
<b>15.45</b>	<b>Arrival in Stockholm</b>

## General information

- **Author/s** will have 20 min to present their paper; papers with several authors presenting please observe time limits! Papers will be presented in blocks of three or two followed by 20 minutes, allocated at the end, for questions and comments.
- **Chair/discussant** introduces shortly the paper session (presents the contributors) and keep attention to time frames of the presentations. Open the discussion with comments/questions about the presented papers. Moderates the questions/comments from participants.
- **Copies of presentation and papers;** please circulate your presentation (pdf or ppt formats) and, if possible paper (pdf or word format) before Monday 12/05 using the participants email list.
- **Others:** Bring your luggage to the conference room no later than at lunch time on Tuesday; there will be no time to return to the cabins at the end of the last session of the conference!

## Conference rooms on the ferry

For keynote 2 (Andreas Fejes), we have been appointed conference room 12./Stockholm  
For keynote 3 (Mattias Nylund) and for the last session (Panel discussion and conclusion), we have conference room 5/Skåne. The parallel sessions are either in conference room 5/Skåne or 6/Carlshamn.



## Abstracts

### Keynote 1

#### What Contributes to the Development of Vocational Excellence?

*Professor Petri Nokelainen, University of Tampere*

European Commission has stated in several occasions (EC, 2006, 2008, 2009), most lately in the 2011-2020 VET development plan that right skills are needed as labor market requirements are changing rapidly (EC, 2010). According to EC (2010, p.9), one viable strategy is to “organize activities aimed at promoting VET attractiveness and excellence, which may include campaigns and skills competitions.” Lack of skilled labor force is not a problem only in Europe, but also in other parts of the world. For this reason, international skills competitions are gaining increasing interest around the world.

The Modeling of Vocational Excellence (MoVE, 2007-2008) was the first research project in the context of vocational skills competitions to address the individual attributes alongside and external conditions, which characterise vocational expertise and support the pursuit of excellence. Research shows that there is a relationship between natural abilities (intellectual, creative, socio- affective, sensori-motorical), intrinsic characteristics (physical characteristics, self-regulation, and personality), auspicious extrinsic conditions (physical, cultural and sociological milieu, important individuals, programs, activities, awards, accidents) and performance (Nokelainen et al., 2012, 2013).

Data from the MoVE research, and its successors (AVE, 2009-2011; PaVE, 2012-2014; NeMo, 2014-2017), has provided Finnish education institutions with strategies to improve vocational teacher education and authorities to further develop skills competitions. The research has supported the development of vocational teacher training seminars, instructional material and expert networks, such as “Skills Trainers Academy”. The research also points to ways in which the quality and relevance of vocational outcomes can be enhanced by offering vocational education students opportunities to develop the attributes and characteristics associated with excellence.

In 2010, RMIT University (Australia) and in 2011, the University of Oxford (UK) researchers applied the Finnish research instruments, resulting in international comparative data repository. Since 2011, the “Modelling Vocational Excellence (MoVE) International” has been the inaugural research partnership between these three universities, with support from WorldSkills International, WorldSkills Foundation and Deakin University, Australia. Societal goals of the research project are to support 1) skills improvement and competition best practice, 2) international skills benchmarking, and 3) promotion of vocational excellence to young people, employers and policy makers. The outputs of the research include case studies of the Australian, Finnish and British skills competition teams and a 38 country global report on the competitors at WorldSkills London 2011.

This presentation discusses about the role of different factors to the vocational talent development in various skill areas in the context of vocational skills competitions. Such factors include workers' natural abilities, intrinsic characteristics, and extrinsic domain and non-domain specific conditions. A specific focus is on their contribution to the development of vocational excellence. This presentation will also provide practical examples of using discrete Bayesian data analysis in mixed-method research.

## **Paper session 1: Challenges for VET in three countries**

### **Formative Cycles of Basic Vocational Training: a tool against the risk of early school leaving**

**Jesús Alemán Falcón**

Universidad de Las Palmas de Gran Canaria

Spain suffers a severe economic crisis which is reflected in the high rates of unemployment. Many of the jobless people have low levels of qualification, because of mainly early school leaving. The Spanish dropout school rate in 2012 was 24.9%, the highest in Europe. Recent research shows that dropout school's reasons are due to the personal characteristics of the students, the family care and the educational environment. The new law that regulates the Spanish Educational System, called LOMCE (*Law for the Improvement of Educational Quality*), has as one of its main goals to cut down this rate. The LOMCE sets up the Formative Cycles of Basic Vocational Training. These cycles allow students to complete their skills for lifelong learning and acquire the necessary training to obtain a professional qualification level 1 of the National Catalogue of Vocational Qualifications. Firstly, we will show in this paper how the Vocational Training System is structured in Spain. In the second place, we will present how the Basic Vocational Training Cycles are regulated. Finally, we will analyze the real chances that these Formative Cycles offer to reduce the early school leaving.

### **VET in Switzerland: challenges for the near future**

*Evi Schmid, Dr. phil.*

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Vocational education and training (VET) is of big importance in Switzerland: At the upper secondary level, two thirds of the young people enrol in a VET programme. Most of them do an apprenticeship, only one out of six is in a full time vocational school. Upper secondary completion rate is relatively high, having reached a peak of roughly 90%. It seems to be beyond controversy that the strong correlation between VET and the employment market is an important reason for the low unemployment rate among young people in Switzerland. All in all, vocational education and training in Switzerland enjoys a good reputation both at home and abroad.

Nevertheless, several challenges rise for the present and the near future. In my presentation I will discuss two of the biggest challenges of VET in Switzerland. One of these challenges is the vocational integration of young people: Upper secondary completion rate has been increasing to roughly 90%, clearly falling short of the ambitious benchmark of 95% that Swiss education policy formulated in 2006. Most of the young people start an education at the upper secondary level, however dropout – especially dropout from VET – seems to be a big problem for quite a big number of them. A second challenge is the positioning and recognition of professional education and training (Tertiary-level B, ISCED 5B): Besides the academic part at universities and universities of applied sciences the Swiss tertiary level also comprises a non-academic part (professional education and training, PET). PET is strongly in discussion especially because of its degrees: While academic tertiary education is completed with a bachelor's or a master's degree, graduates from professional education and training receive a diploma. This is the case in spite of PET being closely correlated with the needs of the employment market and PET graduates running the risk of being disadvantaged on the employment market.

### Vocational education in Greece: current situation and challenges

*Andreas Oikonomou, Assistant Professor,  
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As far as the Greek Educational System is concerned, vocational education and training (VET) is provided in the upper secondary general education level by the Vocational Lyceum (15 years of age and older), and in a post-secondary level by the Vocational Training Institutes (public and private IEK). Vocational training is also offered to adults by the Centers of Vocational Training at a non formal education level. VET in Greece is supervised by the Organization for Vocational Education and Training (OEEK), co-operating with many social partners. In this paper, the current situation of VET in Greece is presented. It is characterized by recurrent changes, both in structure and content. The economic crisis is also a cause for these changes, affecting VET, with recent example the new law concerning technical education. Data collected regarding vocational schools, their student population and staff, are compared to the data of academically-oriented High Schools (General Lyceum). According to the data, only one in four students follows the Upper Secondary Vocational Education and Training and only one in twenty students follows IEK after High School. Still there are serious issues to be solved, such as how to decrease drop out students, how to increase secondary education completion rates, and how to make more people participate in lifelong learning education. Moreover, the provision of high quality education and training, as dictated by the labor market, should be the main priority. Finally, Greek VET conditions are compared to those of other European countries and future possibilities are discussed in order to find strategies for developing VET in a way that will contribute to the economic development of the country.

## **Paper session 2: Identities for VET students?**

### **Free your spirit and guide yourself. Decentralisation of control, frameworks, selforganisation and virtuous vocational education**

*Dr. Franz Kaiser (BIBB-Germany)*

The proposal is not based on some empirical data or special findings of a research project. It deals with the change of the roles of learners, teachers and the political stakeholders in the field of VET. It can be stated, that we have a change in organization of work and policy from centralization to decentralization. A delegation of responsibility from the center to distributed working groups, teams and institutional working units. We use frameworks as a steering instrument of policy. We create competence based curricula and try to describe the learning outcomes. How processes are organized in detail is no longer predetermined. These strategies so the experts hope, sets more power on the lower level free and allow more possibilities for creativity in small working units. They can change faster; collaborate worldwide without a big amount of money and administration effort.

The consequence for the individual competences and models where outlined 2008 in a paper from Philip Gonon. He described the historical change from the craftsmanship to an entrepreneurial self. The change in the society causes changes in the pedagogical concepts and models – we have to learn to create and guide ourselves.

That seems like exemption of restrictions but it is at the same time a kind of voluntary subjection under the regime of decentralized control (Michel Foucault). Norbert Elias, a German sociologist has shown phenomena in his work “the civilization process” in 1939. As we guide ourselves we steer ourselves and follow guidelines and aims that are undiscussed and that reduce the democratic potential of the new situation.

The answer of actual pedagogical concepts in VET on the new requirements in the labour market of decentralized control is self-organized learning and it starts in the first years at school. That means to delegate the responsibility on competence development of adult learners to themselves and sometimes we lose some basic and wider perspectives of education and “bildung” in Germany when we focus more and more only on the requirements of workplaces, especially in the field of VET.

The proposal ends with some questions on how to deal with that situation from a pedagogical and ethical point of view.



## To Be Trained To Be Something Or Someone

- A Study Of Vocational Habitus Among Hairdresser Students In Upper Secondary School

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*Key words: Vocational habitus; identity; emotional labour; learning*

Departing from Bourdieu's conceptualization of habitus Colley and other contributors (2003) present the concept vocational habitus arguing that learning cultures in the VET-field are steeped to transform those who enter them. Furthermore Colley claim that learning is a process of becoming, which means that there is no such thing as being 'the right person' for the job. This in turn raises questions about who the VET student is supposed to become through its education.

Studying this in the specific area of hairdresser training is particularly interesting. To be trained to be a hairdresser means that more has to be learnt than to do nice haircuts or other treatments. The handicraft is one part of the vocational knowing of hairdressing, but to *be a hairdresser* demands more than handicraft. Students in the education of hairdressing also have to orient themselves to the vocational habitus of the area and the dispositions, realised as well as idealised which constitutes it (Colley et al 2003). The vocation of hairdressing also involves emotional labour (Hochschild, 1983) which means that students has to learn how to handle their emotions and to make their clients feel satisfied and taken care of. The field of hairdresser training is regulated by different interests such as employers, curriculum, customers, teachers and the students themselves.

With focus on learners' perspective this paper presents and discusses initial outcomes of a study about what kind of 'person' the education of hairdressing is training the students to be. The study intends to contribute to a better understanding of how vocational habitus is operating among students in the vocational education and training program for hairdresser students in upper secondary school. The study also aims to describe if and in what ways students' identities are influenced by their education. A key research question of the study is: How does vocational habitus emerge in the vocational education and training for hairdressers?

### Method

Methodologically this study is inspired by ethnography. Hammersley & Atkinson (2007) argues that the hallmark of an ethnographic study is that it's interested in the participants' everyday activities and how they regard them, where the researcher is approaching the field with an open mind. Method as well as the research questions are characterized by being present and not fixed at the outset, and that considerable time is spent on the field (Hammersley & Atkinson, 2007).

Data for the study reported in this paper has been gathered using participant observation, as well as the different types of talks, which some authors (Lofland, Snow,

Anderson, Lofland, 2006) describe as talk in action, informal interviewing and intensive interviewing. Various documents such as instructions, samples and information from the schools website has also been used. The study was carried out in a public municipal school where 9 students were observed and interviewed during the end of their second and beginning of their third year at upper secondary school. The class has been observed at twenty occasions and the length of the observations varies between 30 minutes and complete schooldays. The observations were mainly concentrated to the activities in the classroom when the students were trained in the VET courses. The courses which has been observed included different elements like attending to clients or models, exercising hairdressing at mannequin heads, lectures held by teachers or other represents from the branch of hairdressing, group work or writing tests by learners and so on.

The students initially train the vocation on mannequin heads, but after 1,5 year they receive clients in at school. This means that the students in the present study have been working with clients in school for about 6 months when this part of data was constructed. Over three years the hairdresser students have 53 days internship. Most of their internship takes place in the third year when they are at different saloons two days a week They have had about one week internship in the beginning of year one; accordingly students in the study have mostly been trained in school settings.

### **Expected outcomes**

The preliminary outcomes from this study indicates that they are relevant also for other professions and context others than where the study was made (Sweden). Preliminary conclusions so far are the following 1) Learners in the VET field of hairdressing in different ways are taught how to be, act and behave in the specific vocation. Through their education they are taught to be careful, hard working, glad and to 'sell them self' 2) Students make differences between whom they are drawing upon what kind of assignments they work with. They swing between an identity as a hairdresser when they work with clients or models and being 'an ordinary student' when there are no clients present. 3) Students identity in their own perspective is affected by the impression of mastering the vocational knowing of the handicraft, which makes the students feel confident since they master something exclusive. The sense of making clients satisfied and to handle different persons also make them more confident.

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## Teaching Vocational Ethics: The Biographical Case of a Master Craftsman

*By Ruhi Tyson*

Stockholm University

The focus of this article is on how vocational ethics are taught. This is an issue sometimes discussed with regard to teacher training for schools and universities, often from an Aristotelian perspective, but less often when it comes to teaching and teacher training in the various models of crafts apprenticeship education that exist. Even though there is no lack of arguments made for the virtues one is able to develop in learning a craft there are fewer takes on *how* this education comes about and descriptions of how it was experienced. This is problematic for two reasons: first because teaching vocational knowing thereby becomes a more tacit practice than it needs to be and second because the paradigmatic relation between teaching a craft technique and teaching vocational ethics is worth considering when one thinks about these elements in teacher training more generally.

I will be considering these problems through the educational biography of a master bookbinder, gilder and engraver, Mr. Wolfgang B., and some of the stories he tells both of being taught vocational ethics and of teaching them himself.

In doing this I am arguing for a systematic narrative approach to researching and teaching how to teach vocational ethics. This not only does justice to the particularity of practical wisdom but also calls attention to the imaginative character of being able to deliberate wisely.

### **Keynote 2:**

## Monsters and confessing animals – A Foucauldian approach to vocational education

*Professor Andreas Fejes, Linköping University*

We are encouraged today in contemporary liberal, democratic, capitalist societies to turn our gaze towards our inner self, scrutinizing who we are and disclosing this to teachers, counsellors, parents, friends and strangers. This disclosure of the self as a 'confession' has become quite familiar in educational settings. Pupils are asked to scrutinize themselves as learners, to evaluate their behaviour and disclose this so that they can be corrected and correct themselves. Confession is a technique embedded in the use of for example individual study plans, learning portfolios and learning guidance and counselling. Through confession in education and other walks of life we increasingly come to know, judge, and shape ourselves and others. I call these practices of self-disclosure a technology of the self of confession. Drawing on the work of Michel Foucault, I will problematize how confession operates within vocational education. Questions raised are: How does confession operate, and with what effects? Have we all become confessing animals? And is it possible to live the present otherwise, i.e. are we trapped within the confessional?

*Some references:*

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**Bio**

Andreas Fejes is Professor and chair of Adult Education Research at Linköping University, Sweden, as well as pro-dean for research and doctoral studies at the faculty of educational sciences. He has researched and published extensively in the area of adult education, and lifelong learning drawing on poststructural theorisations. Fejes has published books such as *Foucault and a politics of confession in education* edited with Katherine Nicoll (Routledge 2014), *The Confessing Society: Foucault, confession and practices of lifelong learning* co-authored with Magnus Dahlstedt (Routledge 2013), and *Foucault and lifelong learning: governing the subject* edited with Katherine Nicoll (Routledge 2008). Fejes is the founding editor of the European Journal for Research on the Education and Learning of Adults ([www.rela.ep.liu.se](http://www.rela.ep.liu.se)), and he is on several editorial boards.

Webpage: <http://www.ibl.liu.se/medarbetare/fejes-andreas?l=en>

**Paper session 3: Cross national studies**

**Conditions for innovation of VET in international comparison**

*Jens Siemon*  
*Hamburg University*

Social, economic and technological developments require innovations in VET systems. The import of successful VET-models from other countries might be a solution for those countries with a poorly developed VET-system. But besides the availability of resources also many subjective and cultural aspects can be critical success factors. A model that is successful in one country can fail totally in another. This presentation is focused on discussing,

- which conditions are subject to innovations in VET-systems,

- which subjective and cultural factors are relevant for successful innovations regarding VET-programs and
- how those factors differ among two countries with different starting points (Germany and Spain).

The analysis is based on several years of scientific accompaniment and evaluation of two very similar pilot projects in Spain and Germany. Both projects were aimed to establish a new version of dual vocational training considering changed conditions. The pilot projects and their corresponding conditions are described on the basis of a document analysis. To determine the subjective and cultural factors as well as the national differences 30 structured interviews with members of all VET-stakeholders of both countries were conducted and evaluated by content analysis methods.

As a result we found several subjective and cultural factors that are critical for innovations. Those are very different between the analyzed countries. As a consequence it can be assumed that the transfer of a successful VET-model from one country to another is not only a question of sufficient resources. Our results suggest to better develop own solution for each country, probably inspired by the ideas and experiences of the others.

### Post-secondary Vocational Education and Training in Japan and Sweden: an identity under construction

*Petros Gougoulakis*  
Stockholm University

*Etsuo Yokoyama*  
Nagoya University

*Hiroshi Numaguchi*  
Daito Bunka University

Relentless productivity development, within industry and commerce, is a result of global competition, periodic economic business cycles and high redundancy of the workforce. It updates the importance of education at post-secondary level for many individuals' opportunities to be employable. Whatsoever, it is not certain that the demand for manpower with the accurate skills is met through adequate training programs in colleges and universities. Traditional academic courses of study encounter only partially the competencies that the rapidly changing labor market requires. The hiatus between the logic of university education and the knowledge and skills demanded by a dynamic sector of services and goods production is often huge, which raises a discussion of how matching can be maintained efficiently. A post-secondary education based on applied knowledge that is closer related to the labor market and to the prevailing conditions in workplaces, provides a more relevant vocational training.

In this paper we make a comprehensive description of Post-secondary VET in Japan and Sweden, where we attempt to display the characteristics of this educational form in relation to each country's secondary education (gymnasium) and university vocational programs. The description take account of the

- Organization (how is post-secondary education regulated and designed in Sweden and Japan on an institutional level?)
- Content (what courses are offered and how are they designed – the allocation between theory and practice in the programs? )

- Student and Teaching staff (background and requirements on participants and the teaching staff at post-secondary VET)
- Status/position/reputation of post-secondary VET in each country (a tentative presentation of existing results from surveys, reviews and evaluations, as well as, what is currently discussed in media about post-secondary education).

The description is followed by a comparison between the two countries' post-secondary vocational education and training, with some concluding reflections and commentaries of the role of post-secondary VET for skills supply in today's work and society.

## **The Opaque Smoothness of Transnational Governance in Scandinavia**

*The cases of Danish and Swedish teacher education reforms*

*John Benedicto Krejsler, Aarhus University, DENMARK*

***Ulf Olsson, Stockholm University, SWEDEN – presenter***

*Kenneth Petersson, Linköping University, SWEDEN*

This paper traces how national teacher education in Denmark and Sweden is being transformed according to new dominant templates that emerge from opaque albeit often inclusive policy processes in transnational forums, the Bologna Process, the OECD and as the EU in particular. These transnational discourses usually operate by means of so-called 'soft law' around the imagined needs of how modern regions and nations are to succeed in 'an increasingly competitive global race among Knowledge Economies'. This language is subsequently copied in national documents, supplemented by national symbols, and is coined into governance technologies that gradually transform the field and its subject positions.

The paper demonstrates that the impact of Bologna Process, OECD and EU agendas on Danish and Swedish teacher education policy have contributed considerably to transforming national teacher education. In the case of the Bologna Process the effects can be rather direct. More often, however, such effects touch upon national educational agendas in opaque or indirect ways in terms of an emerging new overarching logic and a wealth of governance technologies in the forms of comparisons, stocktaking, standards, performance indicators, bench-marking and best practices. These new templates of transnational comparability are fuelled by the mechanism of mutual peer pressure among competing nations. Consequently, Danish teacher education discourse has emerged from a distinctly national seminary tradition into a modernized university college discourse that increasingly fits the transnational templates of comparability, albeit at a slower pace than her Swedish neighbour.

By following national debates, however, it is often difficult to notice the pervasive nature of this transnational policy impact, as reforms of culturally sensitive school and teacher education areas are often discursively re-inscribed into heated national debates. EU and OECD are not popular figures to pull out in public political debate, neither in Denmark nor in Sweden. The Bologna Process is largely unknown in the broader public. Therefore, school and teacher education reforms are often discursively linked to highly profiled and often controversial ministers of education (Bertel Haarder in Denmark and

Jan Björklund in Sweden). In the garment of the national workfare or competition state they come to personify the compelling requirements that follow from participating in a new transnational discursive community.

Theoretically the paper draws on post-Foucauldian *governmentality*-studies. Empirically it draws upon discourse analysis of European (EU), Nordic and Danish and Swedish national documents as well as literature on policy reform.

## **Paper session 4: VET policy issues – comparative aspects**

### **Does work based learning have a place in future VET?**

*Christian Helms Jørgensen, Roskilde University*

Dual systems of vocational education and training that build on the tradition of apprenticeship, have many attractive qualities, seen from a political perspective. VET systems that comprise a significant amount of work-based training, provide a valuable alternative for young people who chose not to pursue an academic career. Countries with strong apprenticeship systems tend to have less youth unemployment and a smoother transition to the labour market than others. Furthermore, from a learning perspective, the out-comes of work-based training and informal learning are enhanced when they are combined with formal education in a dual system. But historically in many countries, apprenticeship has given way to school-based forms of VET and dual systems are only dominant in a limited number of countries. Furthermore, the integration of work-based training in an educational programme involves many challenges that question the future role and organisation of work-based training in VET. In this paper, these challenges are examined based mainly on analyses of the Danish dual system of VET. In addition, innovative solutions to these challenges are discussed based on experiences from other European countries.

### **Adult education policy in flux. Vocational teachers' responses to pressures for professional development**

*Gun-Britt Wärvik, Department of Education and Special Education, University of Gothenburg*  
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The aim of this paper is to analyse consequences of the marketization of the Swedish adult education through VET teachers' responses to pressures for professional development, and against the background of the activation policy of the labour market. The main task of the Swedish adult education is to provide the labour market with an educated workforce. This was also the case when adult education was established in the 1960s. Individualisation of the education and demands for efficiency is now part of the picture, as it was 50 years ago. However, the adult education of today is embedded in another kind of governance. Competition between providers is expected to result in educational renewal and efficiency. This is an indirect form of governance that creates

new working conditions for VET teachers and that also has implications for their interactions with the students.

The paper is based on a case study of an educational provider and the introduction of a standardised educational concept as an attempt to solve the problems of tendering processes and short term contracts. Individualized computer based courses, based on the national educational goals and developed into a corporate "best practice" should guide the teachers' work with students and thereby change and develop aspects of their work.

A conclusion is that the practice architecture (Kemmis & Grootenboer 2008) of VET teachers' work is very sensitive to the institutional needs for external legitimacy to survive on the educational market. This creates situations that both enable and constrain the teachers' work with students.

Kemmis, S., & Grootenboer, P. (2008). Situating praxis in practice. Practice architectures and the cultural, social and material conditions for practice. In S. Kemmis & T. Smith (Eds.), *Enabling praxis: Challenges for education* (pp. 37-64). Rotterdam: Sense Publishers.

### **Young people's perceptions of Vocational Education and Training (VET) as a career path: lessons from two European countries.**

*Natasha Kersh, University of London and Ida Juul,*

The paper aims to contribute to better understanding of the issues of perceptions and motivations of young people towards VET, specifically focusing on factors that contribute to their either positive or negative attitudes. Vocational education and training (VET) as a career route for young people has been and continues to be open to wide interpretation and debate. The situation in most European countries is characterised by a so-called academic drift, which tends to position the VET system as the second-best choice. Enhancing the attractiveness and status of the VET system is therefore a concern that attracts political attention both on national and European levels. The proposed paper focuses on how the VET system is perceived by young people, and the way this influences their decisions in choosing their educational route. It draws on the findings from the 'Experiencing Inequalities' project funded by the Economic and Social Research Council (ESRC) carried out under the auspices of the ESRC Research Centre: Learning and Life Chances in Knowledge Economies and Societies (LLAKES).

The study compares the status and reputation of the VET systems in two countries which, in the discussions about varieties of capitalism, represent two poles (Thelen, 2004): specifically the paper focuses on England that belongs to the so-called liberal market economies and Denmark, which belongs to the coordinated market economies, indicating that coordination in the English labour market is secured mainly by market forces whereas coordination in Denmark is based on cooperative structures involving the state and the social partners. Comparing two different contexts, England and Denmark, enabled the researchers to reflect on the issues of perceptions and motivations of young people towards VET, specifically focusing on factors that



contribute to their either positive or negative attitudes. The analysis of the data has demonstrated that individual attitudes and perceptions need to be considered in the context of the policy debate and government policies in the area of VET. The research discusses the way young people frame and connect issues of participation, life chances and career choices and concludes that the problem of the parity of esteem of the VET system exists in both countries in spite of the different national contexts the two VET systems are embedded in.

## Tuesday, May 13

### Keynote 3

#### What counts as important knowledge in upper-secondary vocational programs, and why?

*- On the social and political dimensions of content organization in vocational routes in Sweden and how they resonate in contemporary policy.*

*Dr. phil. Mattias Nylund, Göteborg University*

The overall purpose of this paper is to critically contextualise the organization of content in Swedish upper-secondary vocational education by highlighting its social and political implications in relation to social class. Policy documents concerning the content of vocational education in Sweden from 1971 to 2011 serve as the main empirical source, with particular attention given to the reform of 2011 (Gy11). The paper builds upon Nylund (2013), which, in turn, comprises of four studies that each represents a different context that reveals social and political implications of the selection and organisation of content in Gy11. The content structure of Gy11 is thus analysed in relation to (a) the school's role of fostering democratic citizens and the overarching societal function of education (Nylund 2010), (b) knowledge distribution among social classes (Nylund & Rosvall 2011), (c) a class context, including key historical and contemporary reforms (Nylund 2012), and (d) a modern historical context, focusing on how two previous structural reforms (1971 and 1994) organised power and control over educational content (Nylund work-in-progress).

The results show that, in terms of its content structure and underlying principles, Gy11 represents a historical break with previous reforms in many respects. Fundamental organising principles of past reforms, such as students' preparation for active citizenship, critical thinking and entry to higher education, have been given less importance while the content is more context-bound than in previous reforms. The Gy11 reform can thus be seen as a part of a broader policy trend that is detracting from earlier efforts to give all social classes equal access to an equivalent education and reduce social imbalances in education. This new way of shaping vocational education is, it is argued, likely to exacerbate class inequalities by both reducing social mobility and rendering knowledge distribution in society more asymmetric.

*Keywords:* curriculum theory, vocational education, class, education policy, knowledge, pedagogic codes, upper-secondary school.

## **Paper sessions 5: Vocational knowing**

### **Feminine caring disposition and subordination**

#### *Swedish health care teachers' conceptions of important vocational knowing*

*Eva Eliasson & Helena Rehn*

*Stockholm University, Department of Education*

Data from an interview study with 17 teachers working in the upper secondary school health and social care programme show how power aspects, such as gender, class, and ethnicity affect the teachers' conceptions of what constitutes important professional expertise for a nursing assistant. According to the teachers, the most important expertise is related to a feminine caring disposition in which empathy and communication are identified as core abilities. However, these abilities need to be balanced in order for the nursing assistant to not become too emotional. There was a strong link to class in the teachers' statements, as they clearly indicated the nursing assistant's subordinate position in the field of health and social care. The professional expertise of a nursing assistant was defined as "knowing when your own abilities are not enough". The hierarchical structure was also revealed when the teachers spoke of a nursing assistant having to know when to call a nurse, rather than a doctor or an ambulance. The results raise questions of what it means when it is mostly nurses who, as a superordinate group, train a subordinate group, and what this means for the professional habitus of nursing assistants and the reproduction of hierarchies in health care.

### **Communicating vocational knowing – A study during students' work-based learning**

*Gunilla Berg Christoffersson*

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*Key-words: vocational knowing, digital environment, communication, reflection*

In recent years it has become increasingly common that students have access to computers in their education. Students and teachers daily use digital forums to discuss and answer questions, send information and comment on different issues. A key assumption in this study is that digital environments can have a significant impact in the development of vocational knowing. Collaboration between the teaching and learning in school and the skills that students acquire in the workplace part of the training is meaningfully developed with the use of a digital platform.

The aim of this study is to investigate vocational knowing that emerge through a communication in a digital environment. A key question in the study presented in the paper is: can vocational knowing be generated during a digital communication between schools and professionals where students are actively involved? The dialogue between students, teachers and supervisors provides a way of learning together both newcomers

as well as professional practitioners. The question is how this interaction can contribute to develop vocational knowing.

In this paper some of the basic key concepts in the study are described. The concept of vocational knowing is explained with relevance to the field of health and social care activities. In order to determine what constitutes vocational knowing in education, a review of the policy documents governing course curriculum, aim of the subject and content of the course in health and social care, is presented.

The theoretical frame of the study is based upon sociocultural tradition, especially of situated learning. Learning in this perspective takes place in the web-based community as well as during the practice of health and social care area.

The data collected consists of text, which is produced in communication between students, teachers and supervisors in a defined forum on the Internet, Google Drive. This interaction between the participants takes place through a dialogue between the student writing the initial post and the participants who will make comments to the post. A specific task is designed to be answered during the period students perform their workplace-based learning. The students are attending the second year of Health and care program in Upper Secondary school. Students are divided into groups of four to five with one teacher and one supervisor participating in each group in the web-discussion. In total there are six groups participating. The digital communication opens for a direct discussion and reflection of the situations that the students experience during the practical part of their education. The supervisors are thereby given the opportunity to convey their professional expertise directly in the digital forum.

Qualitative content analysis is used as a method of examining the content of the web-based communication. After classification of the text into meaning units, categories have been designed. The categories chosen, correspond to the content of the curriculum for the course.

Initial findings from the study show the way the students choose to describe a care situation and demonstrate empathy and understanding of the user's feelings. This indicates that the student can interpret the user's needs and also make a reflection on the feeling of being fed by someone else. As one of the students expresses: *"I think it's important to let users make as much as they can themselves, even if they spill, it means that they do not lose the skills they actually have, and it's clear that it's more pleasant to eat yourself than to be fed"*. This post is then responded and reflected on by the other participants in the web-group.

The outcome of the study shows that through the use of a digital platform vocational knowing becomes transparent to all students, teachers and supervisors. It opens up to comment on each other's ways of dealing with situations in the vocational area and to get a direct response from the professionals. Possibly increasing the vocational knowledge and learning of the group of participants as well as the individual.

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## Natural Abilities, Self-regulative Abilities, and Environmental Conditions in Air Traffic Controllers' Vocational Development

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Air traffic has been steadily increasing during the past decades as a result of globalization. The thousands of flights that are made every day around the world are stretching the capacity of airports and making air traffic an increasingly complex system to manage. Air traffic controllers' work covers air traffic control, air traffic advice, flight information, and emergency procedures with the aim of expediting air transport and maintaining aviation discipline. (Finavia, 2013). Even if the air traffic control system relies heavily on automation, human factors have an essential role in maintaining the efficiency and safety of air traffic control. (Ryymän et al., 2011; Teperi, 2012). Changes in air traffic controlling are setting new expectations for air traffic controllers' life-long learning and emphasizing a need for research into human factors.

This research aims to describe the characteristics and predictors that explain air traffic controllers' (ATCO) vocational expertise and vocational excellence. The study analyzes the role of natural abilities, self-regulative abilities, and environmental conditions in ATCOs' vocational development.

The study extends earlier research (see, e.g., Korpelainen et al., 2009; Nokelainen et al., 2009; Nokelainen, 2010; Nokelainen, unpublished) by giving an insight into the acquisition of vocational excellence in highly skilled and safety-critical vocations. The target population of the study consisted of ATCOs in Finland, (N=300) of which 28, representing four different airports, were interviewed. The research data also included the interviewees' aptitude test scores, training records, and employee assessments. To meet the needs of the study, three key personnel interviews were conducted. The research questions were examined using theoretical concept analysis. The qualitative data analysis was conducted with content analysis and Bayesian classification modeling.

The findings indicate that cognitive skills, self-reflection, volition, and goal-orientation are considered to be ATCOs' most important vocational characteristics in addition to

interpersonal, intrapersonal, and spatial skills. The main differences between the ATCOs representing vocational expertise and those representing vocational excellence were related to self-regulation; motivation and volition in particular proved to be somewhat stronger in the latter group. The success in entrance examination or during the study period did not predict vocational excellence in working life. However, ATCO training was considered to provide a sufficient basis for vocational development. Professional development was centred around the work environment and potential was directed to the leadership, work tasks, working environment and workplace training.

## **Paper sessions 6 – Challenges for Work-based learning**

### **Vocational Training in German Companies: As good as the German Dual IVET-System?**

*Professor Michael Gessler  
ITB, University of Bremen, Germany*

#### **Context**

The Dual IVET-System in Germany is highly regarded by the international community (OECD 2010). Less known is the maturity level of Continuing Vocational Education and Training (CVET) in Germany.

This research paper will initially compare CVET in Germany with other European countries. That will be followed by a recording and analysis of the state of development in CVET at German companies (N=133).

#### **European comparison**

Research Question 1: What similarities and differences exist between the various European approaches of CVET?

Research Approach: CVET is in most European countries weakly regulated and it is difficult to systematize CVET as it consists a wide range of formal, non-formal and informal learning activities. For the European comparison, use was made of data from the European comparative studies "Adult Education Survey (AES 2011/2012)" with respect to participation rates (Eurostat and single studies such as Bilger et al. 2013) and data from the "Continuing Vocational Training Survey (CVTS4)" (Eurostat and single data such as e.g. German Federal Statistical Office 2013) with respect to the modes of in-company managing CVET (e.g. education planning).

#### **State of development**

Research Question 2: What is the state of development with respect to CVET in German companies?

Research Approach: The second research question is directly connected to the data from the CVTS4. In the CVTS4, the state of development is recorded by means of separate items: e.g. "annual training budget", "review the skill and training needs", "written training plan or programme", "Evaluation/assessment of training outcomes". This approach was refined in the form of the so-called "quality model for company education

management" (EuPD Research Sustainable Management & TÜV Süd Akademie // Germany Technical Inspection Agency South Academy 2013).

### **Theoretical framework**

In the "quality model", a differentiation is made between three dimensions for recording and evaluating the state of development with respect to CVET in companies respectively company education management: strategic education management, structural education management and operative education management.

In the organisation theory, the dimensions of "strategy" and "structure" have been central design and analysis dimensions for the development of organisations since the 1950s/60s (among others, Chandler 1962). In the 1970s this approach became a target of criticism: On the one hand, the assumed connection "structure follows strategy" (see Mintzberg 1990 for a extensive critique) and on the other hand the focus on two dimensions were criticised. Waterman, Peters and Phillips published an extended model in 1980, which includes both the basic dimensions of "strategy" and "structure" as well as the dimensions of "systems", "style", "staff", "skills" and "subordinate goals". The dimension of "subordinate goals" was later amended to "shared values". "Shared values" together with the dimensions of "style", "staff" and "skills" form the "soft factors". "Strategy", "structure" and "systems" are described as the "hard factors". While the hard factors can be recorded and evaluated relatively well, the evaluation of the soft factors is difficult since these are largely immaterial (Bradach 1996).

In the initial "quality model" 2013, only the hard factors "strategy", "structure" and "systems" were incorporated, whereby the dimension "systems" was renamed "operative education management" for the purpose of better understandability.

On the one hand, the model takes up the existing ideas of organisation theory; high retest reliability and feasibility were therefore expected. With regard to the validity, on the other hand, the model is only capable of making statements to a limited extent: The "soft facts" such as "shared values" and "environmental factors" such as "competition" were not considered. Since further surveys are planned, the focus on "hard facts" is viewed as sustainable for the testing of the approach and for the comparison across sectors and company size.

### ***Methodology, Methods, Research Instruments or Sources Used***

#### **Model construction**

The basic dimensions for the model were initially broken down into sub-dimensions: The sub-dimensions of the dimension of "strategic education management" are e.g. "education needs", "education plan", "transfer to practice" and "education controlling"; sub-dimensions of the dimension of "structural education management" are e.g. "organisation", "infrastructure", "management" and "employees"; sub-dimensions of the dimension of "operative education management" are "education programmes", "consulting", "internal processing" and "external service providers". These sub-dimensions were then operationalised by means of 115 items.

### **Data Collection**

In the next step, companies from various sectors and company size were within the initiative “corporate education management award” invited to evaluate their company education management with the developed inventory; the current degree of implementation and the relevance for the success of the company were surveyed for each item.

### **Sample, descriptive and analytical evaluation**

133 companies took part in the 2013 survey, whereby the sample is broken down by size and sector as follows: Small and medium-sized service providers: 45 companies; large service providers: 27 companies; small and medium-sized manufacturers: 12 companies; large manufacturers: 16 companies.

The results were evaluated descriptively and analytically. The first results of the descriptive evaluation (see below) were published in 2013 (EuPD Research Sustainable Management & TÜV Süd Akademie 2013). The results of the analytical evaluation will be presented first time at the ECER 2014.

### **On the Transforming of Vocational Education and Training in Japanese Automobile Companies at Turning Point!**

*- Focus on Changing the Way of Vocational Education and Training at A company*

*Numaguchi Hiroshi (Daito Bunka University)*

*Yokoyama Etsuo (Nagoya University)*

Globalization and domestic market reductions attack not only Japanese Automobile companies, but also many of industrialized companies. So Vocational Education and Training in Japanese Companies are force them to be shortened and lightened. But they would not essentially to like to discard their Ways, those have built up their ways during high economical development in Japan. So we would like to make them clearly and present with this presentation.

A company changed its Vocational Training from simultaneous training to problem solving method training, and company training policy changed from attaching importance to Potentiality to evaluate Competency. Company training are composed by combination of Required Training and selected training. And self development is supported by company.

Then, Company makes an occasion to evaluate a person changing their Career Developing every 3 years and evaluate them. Vocational Training make much of self-responsibility for their training, it is very important point of transformation concerning training in the Company.

We have gotten some transformations throughout our analyzing. That is a self-responsibility and Competencies. This Model is still continuing now in A company.

## Paper session 7: Assessing Vocational knowing

### Assessment of Vocational Knowing - A Nordic Perspective

*Viveca Lindberg*  
*Stockholm University*

Based on two reviews, Swedish research on assessment in education (Forsberg & Lindberg 2010) and Assessment in Nordic VET-research – a mapping of the field (2012), it was found that although assessment has become a major issue in educational research, vocational education and training has so far been given very little attention in both Sweden and the Nordic countries. Still, questions related to both formative and summative assessment are in focus both in VET teachers' everyday work as well as in VET teacher education. In order to enhance discussions and start a common work on a Nordic basis, an anthology was initiated. Four of the Nordic countries – Denmark, Finland, Norway, and Sweden are represented in the anthology, with an editor for each country. It contributes with descriptions of assessment in VET in various settings: school; work; competitions, and for various purposes: assessment for and of learning as well as for qualification. Further, tools for assessment, participators in assessment, and students' perspectives are represented. Contributions are based on various perspectives and methodologies – interviews, video-recordings, digital photos and documents.

### Assessment and Institutionalisation of Floristry Knowing Through Vocational Testing

*Camilla Gåfvels*  
*Stockholm University*  
*Department of Education*

In Swedish floristry education, it is possible to obtain a floristry certificate by testing skills in a vocational test. Recommended time for preparing the test is, minimum, 200 hours. Often, it is an integrated part of the floristry educational structure and curriculum, taking place late in the education. Even if the test is voluntary, it has become influential since it is a prerequisite to become a journeyman. In a sense, the test is a gatekeeper for students who want to become part of the *community of practice* (Wenger, 1998). Nonetheless, it is not connected to school curriculum in any compulsory sense.

Students perform the test during a day. The following day, teachers assess their work. Significant in this assessment process, is group discussions formed by understanding and interpretation of the grading scales in the Swedish Certificate in Floral Design. When assessing, teachers make personal judgments, followed by group assessment where personal judgments are transformed into a joint assessment. Noteworthy, is how the *assessment actions* involve lots of parameters where new understanding develops through relational knowing (Adiea et al., 2012; Lindberg&Löfgren, 2010; Carlgren, 2011). In this process, knowing becomes both defined and institutionalised through the assessment actions. Moreover, the process exemplifies how vocational knowing is part of an institutionalised handicraft movement and tradition, since the tacit dimension is frequently shown in teachers' embodied actions (Polanyi, 1966).



By interpreting assessment actions performed between teachers and related to their students' work; the issue of this paper is to discuss the content of floristry teachers' assessment action of vocational knowing, and how it is exposed in embodied talk -in- interaction. The purpose of the paper is twofold. Primarily, to give an overview of floristry vocational knowing, seen from interpersonal performativity in assessment actions. Secondly, to line out critical incidents in the process that moderates floristry vocational knowing. The research question is: *What is significant for relational floristry knowing – seen in a test situation – and how is it embodied in action?*

## Methods

The empirical material consists of video recording from a day when teachers assessed the vocational test performed the previous day. The analysis is inspired by conversation analysis combined with aspects of multimodal method. The notions of *correction* and *reparation* are used as concepts in order to analyse particular ways of assessing vocational knowing in a test situation. The reparations describe a systematic way to solve misunderstanding and ambiguity (Melander, Sahlström, 2010). In this case, correction and reparations is seen to occur when teachers have a sum-up discussion about the students' floristry work, transforming the personal grading processes into relational conclusions about the students' work.

The analytical approach takes a starting point in Allan Janik's (1991) notion of tacit knowledge as descriptive rather than explicit, by interpreting assessment actions. Through video recording, empirical examples from the vocational test give a foundation to discuss what floristry knowing consists of, and what boundaries the language game sets up in action (Wittgenstein, 1993). Another aspect is the understanding of assessment actions as examples of *knowing known*, in order to discuss teachers' achievement in situ as *knowing how*. (e.g. Carlgren, 2011; Ryle, 1949; Lymer, 2009; Schön 1995). The situated aspect of floristry knowing is shown at two levels; a) in the floral object b) in the content of teachers' knowing and how it is expressed. An essential outcome is viewing the assessment actions as situated vocational knowing and lining out specific modes of moderation in floristry assessment actions (e.g. Jewitt 2013).

*Key words: Assessment actions, Floral design, Vocational knowing*

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## **Paper session 8: Methodological issues in VET**

### **Analysing vocational knowing with help of learning studies**

*Inger Eriksson, professor  
Stockholm University*

The issue of this presentation is to discuss how learning study can function as a tool for expanding a didactical understanding of theoretical and practical aspects of knowing. By tradition much vocational knowing is described and perceived in dichotomised terms as practical or theoretical. Taking an activity theoretical perspective (CHAT) this type of dichotomies is problematic since knowledge is seen as developed and used in a specific activity or practice. Thus, knowing must be regarded as complex, multi faceted (multi-voiced) and situational where, theoretical aspects are built into artefacts as professional language, models, and of course physical tools ect. Knowing how to use, value and assess (and develop) the practice-specific artefacts is demanding both a “theoretical” and “practical” knowing. In this presentation this issues will be discussed in relation to an example from a learning study in home economics where students knowing of how to prepare a cold emulsion (exemplified as mayonnaise) where focused.

Learning study is a teacher led model developed to improve teaching practices in a way that enhances students learning. The model is interventionist- aiming to develop teaching and it is iterative – consisting of repeated analysis, design, evaluation and revisions of a lesson. Further, the model has a special focus on how the content is treated by teachers and students in the on-going classroom interactions, how tools are used and what subject specific content is made available for the students. The core of a learning study is the so-called ‘object of learning’ (OL). The object of learning needs to be identified and analysed both in relation to the historically and culturally developed knowing (in this case cold emulsions) and students’ actual understanding of the targeted knowledge. This identification and analysis is led by questions as: what in the targeted knowing is difficult for the students to understand and master? What do students understand and perhaps misunderstand? What knowing is built into the tools and rules? What do a knowledgeable person master and how?

If the research and development is focusing the meaning of knowing and the relation between practical and theoretical aspects of knowing the identification and analysis of an OL can help teachers and researchers to develop subject specific didactical knowledge. In order to understand the knowing embedded in i.e. making a cold emulsion the students simultaneously need to master bot the manual tools as well as the theoretical principles of a cold emulsion.

## The cycle of expansive developmental research as methodological tool for VET research – Potentialities and shortcomings

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Yrjö Engeström originally developed the cycle of expansive developmental research on the basis of Vygotsky's cultural-historical methodology (cf. Engeström 1987, pp. 318-337; Engeström, 2005). The aims of this paper are two fold: it seeks to explore and like wise discuss potentialities of this methodological construct in the field of VET. Cultural historical activity theory, and in particular the so called cycle of expansive developmental research (cf, Engestrom, 1987, Engeström, 2005) serves as theoretical foundation and framework of analysis of the experiences and developmental work presented and discussed in this paper. The exploration of the use of the cycle of expansive developmental research is much inspired by an earlier use of this methodological approach by the author of the paper (cf, Moreno Herrera, 1998). In this paper the methodology developed by Engeström around learning processes has been operationalized and used as a methodological framework applied to the analysis of the field of VET. Likewise there are no intentions to make an interpretation in its original formulation but rather to explore potentialities for its operationalization. As already clarified in an earlier us of this paradigm (cf. Moreno Herrera, 1998), the cycle of expansive developmental research, as any other methodological framework, could be to a great extent critically discussed. In this case, as in the previous one, the paper argues for potentialities and shortcomings.

VET is here assumed to be a well-delineated *activity system* with clearly identified features and a stated need, i.e., the need for improvement in its practice as the main way to fulfil social expectations of various kinds. In order to contribute to meeting the already mentioned needs, a rigorous analysis of the *activity system* is required. Following the original paradigm the paper discussed the relevance that this analysis includes the following: (a) *object-historical analysis*, (b) *theory-historical analysis* and (c) *actual-empirical analysis*. The various sections of this paper deals, in an operationalised way, with these analyses. The analyses need to be followed by a stage of formation of new instruments, resulting in the arising of qualitatively new models<sup>1</sup> (Engeström 1987, pp. 328-329). According to the methodological operationalization developed for this study, the new models and constructs do not emerge independently, but as a result of

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<sup>1</sup> In this study as in the previous one where we used this model the expression *new models* (also *new contracts*, *new instruments*) directly related to Engeström's methodological concepts (1987). An important question at issue here is, how do we understand the term *new* in the context of education? From a semantic point of view, *new*, in relation to models, is supposed to fulfill the condition of being *other than the former or before* (Webster's, 1975, p. 773). The standpoint of the present study assumes the term from a dialectic perspective where the above condition is observed, but at the same time it is admitted that the models or constructs are closely related and built on earlier developments.

the empirical analysis and on the grounds of the historical analyses. There is, however, a need for a stage of in-depth reflection, a concise summary, where a final shape and a reflective accounting for the contributions and bases, which allow a transformation of the new models into new forms of practice.

Following one of the main tenets in expansive developmental research (c.f., Engeström 1987) the ‘new’ models should be evaluated with the help of results of the historical analyses. In line with the original paradigm the paper argues that the new models and constructs need to be assessed considering meaningful aspects arising in the three historical analyses. The new models are assumed to be an important contribution to and basis for an expected qualitative development of the activity system VET. Arguably their practical application depends, however, on normative elements beyond the area of influence of research.

From this stand point the paper proposes what the author considers some of the comprehensive ways forwards in research within VET.

## **Panel Discussion and Conclusions**

**Panel:** Andreas Fejes, Christian Helms Jørgensen, Petri Nokelainen and Evi Schmidt

**Chair:** Gun-Britt Wärvik

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