

# Vocational Education & Training Emerging Issues?

## VOICES FROM RESEARCH

IV International Conference & Research  
Workshop  
Stockholm, May 11-12, 2015

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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 11

<b>12.00-13.00</b>	<b>Arriving at Sjöfartshotellet, Katarinavägen 26, Stockholm Registration</b>
<b>13.00 -13.10</b>	Opening of the conference – professor Lázaro Moreno Herrera
<b>13.10-13.20</b>	Practical information
<b>13.20-14.20</b> Sjöfartshotellet, Salongen	<b>Keynote 1:</b> Professor Karen Evans, University of London, UK: <i>Putting different forms of knowledge to work in practice: conceptual issues, pedagogical strategies and enduring challenges</i> Chair: Gun-Britt Wärvik
<b>14.20-14.40</b>	<b>Coffee break</b>
<b>14.40-16.40</b>  Sjöfartshotellet, Biljarden  <b>PARALLEL SESSIONS</b>  Sjöfartshotellet, Salongen	<b>Paper session 1: Vulnerable VET-students</b> Chair/discussant: Petri Nokelainen Christian Helms Jørgensen: <i>Students' drop-out - what is the problem? - shifting problems and shifting policies</i> Evi Schmid: <i>Educational VET programmes for low-achieving school leavers in Switzerland</i> Jesús Alemán Falcón: <i>Basic level VET Programmes: school context and profile of students at risk of early school leaving</i> Kenneth Abrahamsson: <i>In search for future trends of apprenticeship learning in Sweden</i>  <b>Workshop: Vocational identities</b> Led by Franz Kaiser Franz Kaiser: <i>Different approaches to vocational identity – notes from a VET-pedagogical-perspective</i> Eva Klope: <i>In the shadow of a vocation- identity creation within the vocational education and training for hairdressers</i> Agnieszka Bron & Camilla Thunborg: <i>Becoming a professional – Non-traditional students' forming and transforming identities in transition between HE and working life</i> Ruhi Tyson: <i>Vocational Bildung, culture and identity: a biographical approach</i>
<b>16.40-17.15</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>18.00-19.00</b> Room: Stockholm	<b>Keynote 2:</b> Associate professor Vibe Aarkrog, Aarhus University, Denmark <i>School-based assessment of prior learning – a discussion of three issues</i> Chair: Viveca Lindberg
<b>19.00-20.00</b>  Room: Skåne  <b>PARALLEL SESSIONS</b>  Room: Carlshamn  Room: Stockholm	<b>Paper sessions 2: Cross national studies</b> Chair/discussant: Hæge Nore Michael Gessler: <i>Dual abroad: Application, Adaptation or Innovation? Apprenticeship training at the Mercedes-Benz Plant in Tuscaloosa, USA. A Case Study</i> Philippe Gonon: <i>Exporting the dual system (apprenticeship system)? Promises and pitfalls</i>  <b>Paper session 3: Interaction within VET</b> Chair/discussant: Anna-Lena Göransson Laurent Filliettaz: <i>Learning through interactional participatory configurations: Evidence from the vocational training of early childhood educators</i> Janne Kontio: <i>Making fun of language: Students of auto mechanics creating norms through jokes and verbal play</i>  <b>Paper session 4:</b> Chair/discussant Per Andersson Birgit Schaffar-Kronqvist: <i>Why (vocational) teacher training?</i> Eva Eliasson: <i>Teaching for a vocation: boundary work and didactic principles in</i>

	<i>vocational education</i>
<b>20.00</b>	Dinner & social evening

### Program, Tuesday May 12.

<b>7.00-9.00</b>	<b>Breakfast</b>
<b>9.00-10.00</b> Room: Carlshamn <b>PARALLEL KEYNOTES</b>	<b>Keynote 3</b> Dr. Åsa Broberg, Stockholm University <i>Negotiating the value of school and work in vocational education and training – a historical perspective on pedagogical development in Swedish VET</i> Chair: Daniel Alvunger <b>Keynote 4</b> Professor Bill Lucas, University of Winchester, UK <i>Remaking TVET: how more ambitious outcomes and a better understanding of signature pedagogies can contribute to a rethinking of vocational learning</i> Chair: Michael Gessler
<b>10.10-11.40</b> Room: Skåne <b>PARALLEL SESSIONS</b>	<b>Paper sessions 5: VET-teachers and VET-teacher education</b> Chair/Discussant: Birgit Schaffar-Kronqvist Per Andersson: <i>VET Teachers' Continuing Professional Development – barriers and opportunities</i> Anna-Lena Göransson: <i>Vocational teacher identity and language</i> Daniel Alvunger: <i>Changing Educational Leadership and School Improvement in Vocational Educations? VET teachers and the Career Services for Teachers Reform in Sweden</i>
Room: Carlshamn	<b>Paper session 6: Standards for VET</b> Chair/Discussant: Anna Hagen Tønder Peliwe Lolwana: <i>Standards in the South African vocational education: what are they and who wants them?</i> Jan Petterson: <i>Experience from a trial with standard setting on the upper secondary school vocational programs</i> Falk Howe: <i>Task oriented learning in vocational education and training</i>
Room: Stockholm	<b>Paper Session 7: Challenges for Work-based learning</b> Chair/Discussant: Agnieszka Bron Natasha Kersh: <i>Learning through boundary-crossing in VET settings: lessons from the UK</i> Fernando Marhuenda: <i>Personal development and competence building in work integration companies</i> Gun-Britt Wärvik: <i>Adult education in a workplace context – recognising production workers' responses and partnership challenges</i>
<b>11.30-13.00</b>	Lunch
<b>13.00-14.30</b> Room: Skåne <b>PARALLEL SESSIONS</b>	<b>Paper sessions 8: Assessment within VET</b> Chair/Discussant: Petri Nokelainen Haege Nore: <i>Purposes and practices of assessment in VET</i> Ulf Olsson: <i>Post-political dialogue as a technology for self- colonialization</i> Hamid Asghari & Viveca Lindberg: <i>Vocational teachers' experiences of assessing vocational knowledge</i>
Room: Carlshamn	<b>Paper sessions 9: Apprenticeship and qualifications</b> Chair/discussant: Gun-Britt Wärvik Anna Hagen Tønder & Torgeir Nyen: <i>The role of apprenticeship training in Norwegian VET</i> Stephanie Matseleng Allais: <i>Strengthening occupational and vocational qualifications</i> Petri Nokelainen: <i>Learning at work: Apprenticeships and changing skills requirements</i>

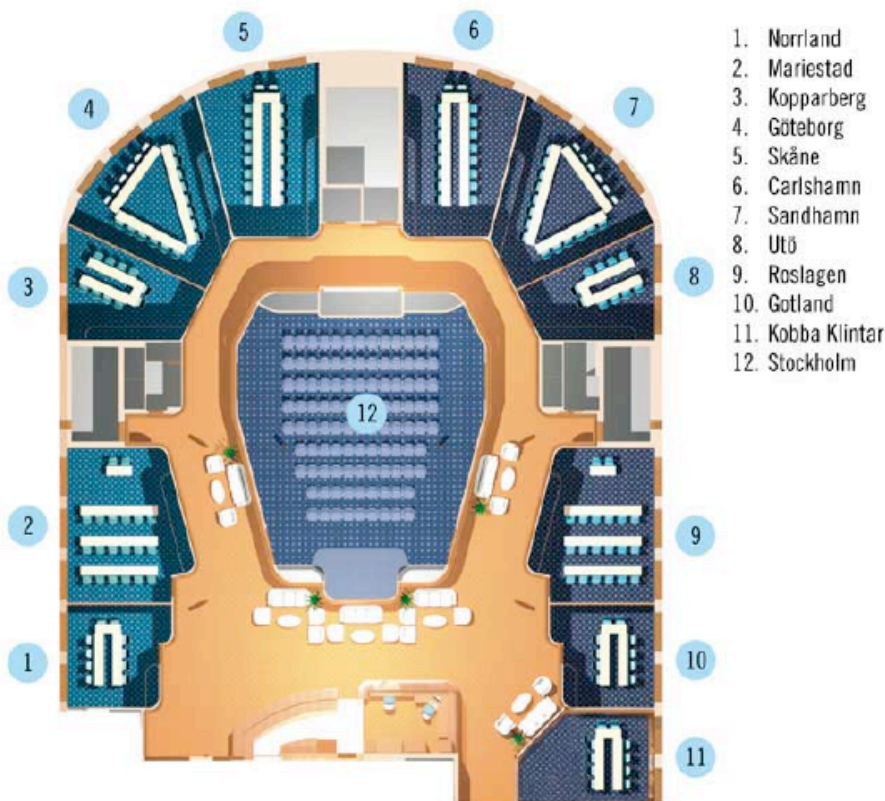
Room: Stockholm	<p><b>Paper sessions 10: Dimensions in VET (Talent education, Comparative studies, national system development)</b>                  Chair/discussant: Natasha Kersh                  Suna Christensen: <i>Talent Education in Vocational Education in Denmark – presentation of case study</i>                  Petros, Gougoulakis, Hiroshi Numaguchi &amp; Etsuo Yokoyama: <i>Between the Academy and Industry: Post-Secondary VET in SWEDEN and JAPAN with focus on Workplace-based Training</i>                  Lázaro Moreno Herrera: <i>Technology education as ground for vocational education &amp; training – The historical development of a compulsory subject as case study</i></p>
<b>14.30-14.45</b>	Coffee break
Room: Stockholm	<p><b>14.45-15.40</b>                  Panel discussion &amp; Conclusion  <i>Challenges for research and development in Vocational Education &amp; Training</i>                  Panel members: Stephanie Matseleng Allais, Fernando Marhuenda, Haege Nore, Philip Gonon                  Moderator: Lázaro Moreno Herrera</p>
<b>15.40-15.45</b>	<b>Conclusions</b>
<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. Each paper will be followed by a 10 min. discussion.
- **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 upload your presentation (pdf or ppt) and paper (pdf or Word) before May 1 to the dropbox. Should you have difficulties with this, email your presentation and paper to Lázaro and Viveca.
- **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

Main conference room on board is named Stockholm. For parallel sessions we will in addition use Skåne (no 5) and Carlshamn (no 7).



## Abstracts

### Keynote 1

#### Putting different forms of knowledge to work in practice: conceptual issues, pedagogical strategies and enduring challenges

*Professor Karen Evans, University of London, UK*

This contribution aims to inject fresh thinking into the issue previously conceptualized as the ‘transfer’ of learning between settings and contexts, with particular reference to the relationships between subject-based and work-based knowledge as well as between theory and practice. An alternative approach, originally proposed by Evans, Guile and Harris (2009) is based on the concept of *re-contextualisation*. Re-contextualisation is a multi-faceted concept that refers to the idea that knowledge and practice change as we use them in different settings. A conceptual framework is developed to describe and analyse the activities that facilitate re-contextualisation, through the enactment of different forms of knowledge in curricular, pedagogic, workplace and personal practices. The framework has been developed heuristically through research into programmes and practices in higher vocational education (including engineering, finance and media practice) and extended recently through new inquiries into work-based learning of ‘free-lancers’ and the professional development of newly qualified nurses. These cases will be used to illustrate how the framework can be used to analyse programmes and identify the practices which can facilitate higher vocational and professional learning in practice.

### Paper session 1: Vulnerable VET-students

#### Students’ drop-out - what is the problem? - shifting problems and shifting policies”

*Christian Helms Jørgensen, professor mso, Ph.D.*

Department of Psychology and Educational Studies, Roskilde University, DK-4000  
Roskilde, Denmark

#### Abstract

In education policy it is anticipated that young people without any post-secondary school education will have a high risk of becoming unemployed due to globalisation and the disappearance of low-skilled jobs. While enrolment in post-compulsory education has increased in most countries, so have the drop-out rates, especially from the vocational programmes. As a consequence, the raising of the completion rates and the reduction of drop-out rates have become highly prioritised goals for education policy. This chapter examines how the drop-out problem is understood in education policy and in research connected to improving education. It also examines what kind of measures and solutions are prescribed to solve the drop-out problem in connection with different

understandings of the drop-out problem. The first part of the chapter reviews research on drop-out and on the related policies to reduce students' drop-out. The review identifies two general framings of the drop-out problem in policy and research. The first framing locates the drop-out problem with the individual student's characteristics, their choices and career planning. The second framing locates the problem in the educational system, and relates drop-out to school practices, structures and cultures. The second part of the chapter examines the shifting education policies designed to reduce drop-out in the Danish system of vocational education. It analyses how the framing of the drop-out problem has shifted over time, and how, accordingly, the solutions and measures applied in policy reforms have shifted. The analysis finds that policies to reduce drop-out in Denmark seem to be going in circles. In the conclusion some of the reasons for the inconsistencies in policy are discussed.

### **Educational VET programmes for low-achieving school leavers in Switzerland**

*Evi Schmid*

In Switzerland, a two-year apprenticeship with Federal VET Certificate was established in 2002 aimed at increasing the employability of low-achieving school leavers. It is a low-threshold VET programme offering standardised vocational training to low-achieving youths. It leads to a VET Certificate, which is different from the Federal VET Diploma obtained after a three- or four-year apprenticeship.

About ten years after the introduction of these two-year apprenticeships approximately 50 different programmes are established, in almost every industry. The statistics show that the number of young people enrolling in two-year apprenticeships has been increasing from year to year: In 2013 almost 5000 young people graduated with a VET Certificate and, in the same year, almost 7000 apprentices started a two-year apprenticeship (BFS, 2015). These numbers confirm the need for such programmes both for the school leavers as for the employment market. Research findings also show that these new training courses offer favourable learning opportunities that foster employability and upward mobility after graduation (Kammermann, Stalder & Hättich, 2011). However, until now, there is a lack of information on the dropout rate in two-year apprenticeships: We don't know yet how many people drop out of these programmes, which are the reasons for dropping out and how special support measures, which the Cantons have been asked to install for apprentices in two-year programmes, can help to prevent from dropping out. Such information is necessary to further optimize these low- threshold programmes.

### **Literature:**

Kammermann, M., Stalder, B. E. & Hättich, A. (2011). Two-year apprenticeships – a successful model of training? *Journal of Vocational Education and Training*, 63(3), 377-396.

BFS (2015). *Statistik der beruflichen Grundbildung 2013*. [www.bfs.admin.ch](http://www.bfs.admin.ch) [12.2.2015].

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### **Basic level VET Programmes: school context and profile of students at risk of early school leaving.**

*Jesús Alemán Falcón*

University of Las Palmas de Gran Canaria

In this paper we present the results of a research conducted in the Canary Islands to determine factors associated with risk of early school leaving (ESL) in the students enrolled in Basic level VET Programmes as well as in secondary schools. A large number of them has a high probability of leaving school early without getting any professional qualification to enter the labor world. To conduct this research, we used a sample of 3574 students and 528 teachers from 57 public schools in the Canary Islands. The aim of this paper is to describe the profile of students at risk of early school leaving. We refer to the personal, familiar, school and social context. We also present the differences between being or not a student at risk in ESL and how it depends on the relationships that they form with peers or with faculty. We also show what is the perception of teachers on these relationships, on the necessary conditions for the proper operation of the school and on the basic professional competences to develop the profession of teaching, especially in Basic level VET Programmes.

**Keywords:** *early school leaving, profile of students, perception of teachers.*

### **In search for future trends of apprenticeship learning in Sweden**

*Kenneth Abrahamsson, senior consultant & adjunct professor, Luleå University of Technology<sup>1</sup>*

This paper raises some issues on the trends of vocational education and apprenticeship learning in Sweden. It is part of a CEDEFOP-supported comparative project coordinated by a research team in Bremen.<sup>2</sup> The main project comprised in addition to national

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<sup>1</sup> This abstract reflects work in progress and was set together on a just-in-time context as I just

<sup>2</sup> The purpose of the research project is to study VET governance structures and financing arrangements in five countries selected by Cedefop – Italy, Latvia, Portugal, Spain and Sweden – in the view of establishing or expanding apprenticeship and, more broadly speaking, dual vocational education and training.



situation reports, two workshop initiatives at partner levels. The first workshop aimed at identifying patterns of governance and financing of apprenticeship education in the set of countries participating. A workshop of the Swedish development concerning governance and financing was organized at Centre of Vocational Skills and Knowledge, University of Gothenburg in September last year. The first workshop was built on an assessment tool with regard the patterns of governance and financing put together by the Bremen team. It comprised a set of questions regarding; Consistent legal framework, Allocation of strategic and operational functions; Degree of involvement/integration of various bodies; Quality assurance and innovation strategies; Outcome orientation (evaluation, impact, diplomas, certification); Input orientation (national curriculum, partnership structures etc.) and Financing arrangements/costs, benefits and quality. The participants in the first workshop were teachers and school leaders in VET, social partners, researchers and the mission was to outline a consensus images of governances and financing of apprenticeship programmes in Sweden. A summary of the discussion was set together by Ingrid Berglund, senior lecturer, University of Gothenburg and it was integrated in the work at the Bremen team.<sup>3</sup> Sweden has a long tradition of school based vocational programmes with national curricula. Upper secondary vocational education as well as apprenticeship education are also covered in the Education Act. In spite of a growing interest from politic quarters to strengthen and implement apprenticeship programmes and vocational programmes at upper secondary level, the interest for VET-programmes is decreasing in Swedish upper secondary education (but apprenticeship programmes are increasing within the falling VET-sector), and especially for girls who chose general or study preparatory programmes.

According to the project objectives, the second phase of the project :

*“.....should shed light on the question ‘How potential governance structures and financing arrangements should look in order to develop and expand apprenticeship?’. Based on the first stakeholder workshop and the country reports each country shall develop ‘visions’ about potential governance structures and financing arrangements to support apprenticeship in the respective country. These visions should have a midterm perspective ranging from five to ten years and should be complemented by a strategy how to reach the vision.”*

The purpose with this paper is to discuss future trends of apprenticeship and dual VET-programmes in Swedish education considering this background. Similar activities have already been organized in the other partnership countries. The session is planned to be interactive and looking forward to future developments.

- Analysis of visions for the future development of apprenticeship/dual VET in Sweden
- Reflection about a selected (preferred) vision adjustment and refinement of this vision
- Definition of strategies to realise this vision

The application by the Bremen team to CEDEFOP for the Governance and financing project paid special attention to the degree of public commitment to vocational education and training (high/low) and the involvement of industry and firms in initial vocational training (high/low) and thereby recognizing writings from other scholars (Busemeyer and Trampusch, 2012). The intersection of these two dimensions leads to

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<sup>3</sup> Memorandum from CEDEFOP-workshop on Governance, Financing and Quality of Apprenticeship and /or Dual VET systems.

the classification of four skill formation regimes: state-centred, liberal, collective and segmentalist (see table 1).<sup>4</sup>

Table 1: Classification of four skill formation regimes: state-centred, liberal, collective and segmentalist

		Degree of industry involvement	
		High	Low
Degree of state intervention	High	State-centred regime	Liberal regime
	Low	Collective regime	Segmentalist regime

In short, the purpose of this session is to present and discussion possible trends of apprenticeship education/vocational programmes and workplace learning components at different education levels in Swedish education. Attention will be paid to:

- The Swedish VET-map; geographical distribution, demand and supply of VET
- Form of governance, financing and various forms of incentives
- Forms of collaboration between schools, regional actors and industry
- Dual mission of VET-programmes: skills and social inclusion (quality and equality)
- Social constraints and possible future developments
- Which are possible trends within a five to ten years period?
- Which role can/will VET/Apprenticeship programme play 2020 or 2025

<sup>4</sup> Quoted from Technical proposal to CEDEFOP by **University of Bremen** – TVET Research Group I:BB and Institut Technik und Bildung ITB –, Germany (Group Leader)

## Workshop: Vocational identities

Participants in this workshop are asked to reflect over the following questions and also to relate to these in the discussions following the inputs from the four introductory paper presentations:

- What is the knowledge and competences need in specific occupations or professional acting
- What is the mentality people in vocations describe by themselves
- What are concepts of “Beruf”, “Competence” and “professions”
- What are the consequences for learning

### Different approaches to vocational identity – notes from a VET-pedagogical-perspective

*Franz Kaiser, University of Rostock*

Looking at VET in research from a disciplinary VET-perspective means to integrate the individual subjective perspective on processes happening during apprenticeship training and the development of personality at the workplace after the episode of training. How can the influence of specific vocational training situations, tasks and acting in an organization in a specific branch and a group of employees with a similar qualification structure be described and how has research to be organized to cope with the challenge of such a multivariable corpus of research?

The presentation starts with the question why we should ask about vocational identity. Isn't it clear that most of the people have to change their vocational identity during their life because of the changes in economic structures and processes? Do we still believe the classical theories of Georg Kerschensteiner and Aloys Fischer, that the young people will find their vocation in the “Beruf”? What is the aim and perspective of vocational education and training if that is not fact?

In the second step different ways of research were described, based on research-experience of the author

In a more **sociological perspective** it's possible to differ branches in which the work in the occupations take place. This **sectorial analysis** of economic structures in a society shows that occupations were often situated in specific fields of the society, for example: nurses in the field of health, bricklayers in Building and construction, bank clerks in finance. Then we can have a closer look to the specific **historical traditions** of the qualification system in the specific branch and the way of organization the interests of the employees, the hierarchical structures in most of the organizations and how this influence the mentality of the people working in that field.

Looking at the specific **tasks at the workplaces** is a way to come closer to the processes of work the people are doing, following the idea of materialistic-Marxism: “consciousness is shaped by the way of being”. The culture-historical tradition and the activity theory of Leontjev and the materialistic work analysis (Hacker, Volpert,

Engström) in that tradition can show the hierarchical structure of aims and qualification in VET. From this point of view can be shown which specific qualification shapes the occupation in a kind of objective way.

This specific workplace supervision approach needs lot of time and can be combined in some cases with **curricular analysis**. In the dual system in Germany the structure of the training regulations for the apprenticeship training follows the tasks at the workplaces and the curricular at the VET-schools try to develop Learn situations based on the work situations at the work based training.

To come closer to the individual perspective we need a **biographical reconstruction** towards the meaning of vocational identity for the whole life of people. Is it possible to show the difference of how people act and think, when they work different in different occupations? In that case we have to look back to the childhood, to what they do in their leisure time and what are their tasks at work and what are their thoughts about what should happen in their own future.

If we can show similarities inside the groups of occupations, based on some of these approaches, than we get clearer figures of what it means to talk about vocational identity. The presentation gives some examples of the named approaches and is an input in a discussion and following case-studies of the workshop.

### In the shadow of a vocation- identity creation within the vocational education and training for hairdressers

*Eva Klope*  
Department of Education  
Stockholm University,  
Sweden

#### Abstract

This study attempts to understand the creation of identities, especially focusing on vocational identities within the vocational education and training (VET) for hairdressers. To be trained for a vocation like hairdressing means that more has to be learnt other than to do nice haircuts or other treatments. The handicraft is one part of the vocational knowing of hairdressing, but to *be a hairdresser* is about something more besides handicraft. Identity in this study is understood from a sociological perspective influenced by Richard Jenkins' (2004, 2008) theoretical model of social identities. This is used together with the Bourdieu-inspired concept of vocational habitus (Colley, James, Tedder, & Diment, 2003). The method is inspired by ethnographic research and the empirical material consists of interviews and observations. Based on this material personal portraits have been created of four students. The intention is to focus on the students' perspective about the everyday activities in school and their experiences of being trained for a vocation in school. The analyse shows that students are trained to develop a vocational habitus, to look, move, talk and feel like a hairdresser is expected to. The students encounter these expectations differently, depending on their identities as hairdressers, students or identities established in other contexts. A main finding of

the study is that student identities and vocational identities sometimes are in conflict with each other.

The contribution of the study is an increased understanding of identity creation in vocational education. It also contributes to a better knowledge of young people in vocational education and their relationship with their vocational education and upcoming vocation.

Keywords: *Identity, vocational identity, student identity, hairdresser, vocational education, ethnography*

### **From being a student to becoming a professional Students' forming identities at Swedish Higher Education**

*Agnieszka Bron, Professor*  
*Camilla Thunborg, Associate Professor*  
Department of Education  
Stockholm University

In this paper, we want to explore the question of how Swedish HE students form their identities when studying programmes leading to the professions. Based on the research results from the European project RANLHE ([www.dsw.edu.pl/fileadmin/www-ranlhe/index.html](http://www.dsw.edu.pl/fileadmin/www-ranlhe/index.html)) we will both present our theoretical findings about biographical learning and students' struggles with their identities as well as we will give examples from the analysis of students' stories. Examples will be provided from a programme that prepares to professions as physiotherapist at KI. We will demonstrate the process of identities formation as being a student and an employee. Moreover, how these identities can contribute to changes towards professional identities thereafter. Our hypothesis/conclusion is that higher professional education cannot contribute to the forming of professional's identities. The last can be only formed during the work. Thus, learning and acquiring work competencies at job will contribute to identity formation.

### **Vocational Bildung, culture and identity: a biographical approach**

*Ruhi Tyson,*  
Department of Education, Stockholm University  
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The paper presents a pilot study where a series of biographical conversations with craftmaster Wolfgang B. focus on Bildung-experiences in the context of his vocational education. The aim of such conversations is to develop a deeper understanding of Bildung in and through VET with a particular focus on didactical descriptions.

In the paper it will be argued that by looking at Bildung as part of VET we develop a concept that also surfaces processes of identity-formation and variations in VET cultures. Furthermore it expands on the character of competencies as well as didactical

questions surrounding their development. The latter aspects featured most prominently in the pilot study whereas the paper will be exploring more of the former issues connected to identity-formation and vocational cultures.

From a methodological perspective Bildung is, to large degree, a biographical process that is best articulated in conversations (rather than observations). Furthermore, by choosing cases of highly educated and proficient practitioners, such as Mr. B. who holds three master certificates, chances are that educational structures and processes that facilitate Bildung-experiences especially well are surfaced.

Key-words: *Vocational education, Bildung, biography, identity*

## **Keynote 2:**

### **School-based Assessment of Prior Learning – a discussion of three issues**

*Vibe, Aarkrog, Ph.D. and associate professor, Aarhus University, [viala@edu.au.dk](mailto:viala@edu.au.dk)*

Based on the results from a research project about school-based assessment of prior learning (APL) among unskilled adults who want to obtain a formal skilled qualification, the paper discusses the following three issues: how does a school-based APL influence the process and result of APL? How does a school-based APL influence the students' perception of their professional identity? How are the results of APL transformed into the contents and pedagogy of the courses that train the students for the formal qualification? In research-based literature a recurrent theme is where APL should take place: in workplaces? at school?, in a specific APL institution? One of the aims of the research project was to clarify the advantages and disadvantages of a school-based APL. The research project was accomplished in 2012-2014 and included observations and interviews of teachers and students in technical, commercial and social and health care VET-programs.

## **Paper session 2: Dual Systems go abroad**

### **Dual abroad: Application, Adaptation or Innovation? Apprenticeship training at the Mercedes-Benz Plant in Tuscaloosa, USA. A Case Study**

*Professor Michael Gessler*

#### **Description:**

It is widely known that big German companies implement apprenticeship trainings in their plants outside of Germany. Less known is what they exactly do: Do they just apply (copy and paste) the original dual vocational education and training system, do they adapt (copy and adjust) the system to the local conditions or do they innovate (copy and change) the classic model? Qualitative field studies are necessary to answer these

questions. In this presentation the case „Mercedes in the United States“ will be presented. Mercedes was selected because of its (1) popularity and possible impact as a role model, its (2) quality orientation and reputation for „made in Germany“, and (3) its internationalisation strategy which started - later than for example Volkswagen - in the 1990th with the plant in Tuscaloosa. Six focal interviews were conducted with training officers and human resource managers from Germany (3) and the USA (3). These data were enriched with on-side-visits in the two focal plants: Bremen and Tuscaloosa. Bremen was chosen because of the given support to implement an apprenticeship training in Tuscaloosa: Bremen was the „Lender“ and Tuscaloosa the „User“. This case study was not only made to get deeper inside views. The central purpose of this study is to leave the abstract macro-discussion „Is Transfer possible?“ behind and to reach the the next level of understanding: How and why do Transfer occur in the Practice?

### Exporting the dual system (apprenticeship system)? Promises and pitfalls

*Philipp Gonon, University of Zurich*

#### **Abstract**

Vocational education and training in Germany, but also in Switzerland and Austria, often internationally known as “apprenticeship model” or “dual system”, is considered *the* “success model”. It not only provides training possibilities for young people but also seems to be successful in avoiding youth unemployment and easing integration into the labour market. That is why policy borrowing is again at stake in Europe and elsewhere nowadays. From an international viewpoint the dual system is viewed predominantly in the perspective of its advantages. In light of previous experiences, however, the attempts to transfer such a concept have not been encouraging (see Stockmann 2013). Nevertheless, the call for the export of dual systems has also become louder again, also in Switzerland (Strahm 2013). This article examines what the important issues for an apprenticeship model are and why such an attempt to export such a “dual system” has to be scrutinized critically.

## **Paper session 3: Interaction within VET**

### Learning through interactional participatory configurations: Evidence from the vocational training of early childhood educators

*Laurent Filliettaz*

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#### **Short abstract**

Recent literature in the field of workplace learning has stressed the importance of guidance in the process of learning in and from practice (Billett, 2001). Workers do not only learn just by conducting specific tasks individually; they learn when adequate resources are afforded to them and when more experienced workers are able to share their knowledge and skills and assist them in their practice. Hence, there is considerable

importance to investigate the specific qualities of guidance at work and to understand how learning workers engage with these resources. In line with previous research conducted in various technical trades (Filliettaz, 2011), the talk will address the topic of guidance at work in a distinct and specific context: that of early childhood educators and their vocational training. In the Swiss VET system, early childhood educators move back and forth periods of teaching in vocational schools and periods of practical training in institutions caring for pre-school children. During their internships, students are supervised by mentors, who assist them in their early days at work. In a research program currently conducted at the University of Geneva, we aim at understanding how these mentors provide learning opportunities to students, and how students engage with these opportunities. The talk will consist in presenting the general objectives and methodological specificities of this research program, based on audio-video interaction analysis. It will also report on results emanating from this research program and stress diverse interactional strategies used by mentors to endorse tutoring functions towards students at work.

### **Extended abstract**

In this contribution, we wish to present a recently initiated research program sponsored by the Swiss National Science Foundation (SNF), which investigates the construction of professional competences in the field of Vocational and Educational Training of early childhood educators. We expose the objectives and methodological orientations of this research program and its preliminary findings.

In Switzerland, VET programs for early childhood educators are positioned at what is called the tertiary-B level, that of higher professional education. Training lasts three years, during which students combine periods of courses where they are taught by vocational teachers in higher vocational colleges, and periods of internships where they are supervised by “pedagogical supervisors” in the workplace.

In our research program, we are specifically interested in the role and place of « interactional competences » in the vocational training of early childhood educators. Interactional competences can be defined as a capacity participants have to engage in joint actions effectively and to make relevant contributions to social encounters. Defined as such, interactional competences can be seen as key elements of the professional practice of early childhood educators, who constantly engage interaction with children, colleagues, parents and other partners. By focusing on the program of the Advanced Studies (Etudes Supérieures) for early childhood educators in the canton of Geneva and observation data gathered on a number early childhood institutions in the same area, the research program pursues four main objectives. First, to document the central role of interactional competences in the practice of a type of profession that strongly hinges on the management of interpersonal relations, and where the professionals interact with people who express specific needs; second, to provide a better understanding of the role interactional competence plays in the process of learning this type of profession; third, to show how the institutions involved in vocational training value and legitimize specific interactional competences; and, finally, to uncover the logics of continuity or disruption between the different institutions and the sorts of interactional competences involved in the vocational training program that is being studied here. Our theoretical perspective is aligned to situated and activity oriented approaches to vocational learning. Anthropological approaches inspired by social theories of learning have provided a better knowledge of the conditions under which learning environments allow novice workers to learn their trade and to change their position within



communities of practice (Lave & Wenger, 1991; Billett, 2001; Stenström & Tynjälä, 2009). Approaches recently developed in France, such as *vocational didactics* (Pastré, Mayen & Vergnaud, 2006), or *the clinic of activity* (Clot, 1999), also converge on considering the detailed observation of work and training practices, augmented by interviews with the workers or the apprentices, as a central means for uncovering the praxeologically contingent nature of professional skills as well as the social and collective character of the conditions within which expertise is constructed. At a methodological level, we propose to specify the situated and sociocultural approaches to learning with an analytical perspective borrowed from the field of “discourse analysis”. Discourse analysis refers to a wide range of concepts and methods related to the field of sociolinguistics and aims to study language use in specific social contexts. According to this perspective, learning can be considered as an interactional accomplishment (Suchman, 1987; Heath & Luff, 2000 ; Brown et al. 1989; Durand & Filliettaz, 2009). Applied linguists have also proposed to see teaching and learning practices as a multimodal meaning-making process in which participants use and combine various semiotic resources such as talk, body orientation, gestures, gaze, objects, etc. (Kress et al., 2001).

Consistent with this theoretical and methodological background, specific sorts of empirical data have been collected to document situated training and learning practices. At this stage of our research program, we focused on training experiences in the workplace. Three students working in three different institutions were observed during an internship at the end of their first year training. Each student was video recorded during various activities and transitions between activities. We also audiorecorded “pedagogical interviews” between students and workplace supervisors. Organised on a weekly basis, in absence of the researcher, these interviews allow students and supervisors to reflect on the ongoing internship, on the students’ progress or difficulties, etc. Finally, we conducted reflexive research interviews with students and supervisors. These interviews were led by researchers and were based on a selection of video excerpts taken from the observations. The participants could then comment on their choices, difficulties, feelings or elaborate significant aspects of their professional practice.

Amongst the various directions in which collected data have been explored and analysed so far, the topic of guidance strategies provide by workplace supervisors constitutes a promising avenue. In our contribution, we will present preliminary results illustrating the wide range of “participation configurations” through which workplace supervisors exert a tutoring function towards students in the workplace. Participation configurations emerge and unfold in the course of activities involving both students and workplace supervisors. Amongst the resources afforded by the workplace, we observe how supervisors arrange opportunities for students to participate in education activities. As for individual engagement, we analyse how students make use of these opportunities to experience aspects of the interactional competences required in their training program.

Preliminary findings reveal three distinct configurations through which workplace supervisors exert forms of guidance towards students in the workplace. We refer to these configurations as i) *observation-and-feedback*, ii) *joint-action*, and iii) *display-and-imitation*. *Observation-and-feedback* is a format in which the supervisor stands back and

gives the floor to the student who then carries out the ongoing activity with children. In the format of *joint-action*, the supervisor and the student endorse complementary roles and cooperate in accomplishing the planned activity. Finally, *display-and-imitation* refers to situations in which the supervisor explicitly shapes and leads the on-going activity, affording the student with the opportunity to observe the main features of the action and reproduce them later on. From our observations, these three formats are not rigid and static. Our results show that participatory practices are flexible and that supervisors may shift from one format to another according to the evolution of the ongoing activity.

### **Making fun of language: Students of auto mechanics creating norms through jokes and verbal play**

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This study focuses on how gender and language choice are oriented to through jokes in everyday interactions where both female and male students are learning auto mechanics in an upper secondary school in Sweden. Data are drawn from video-ethnographic work during two years in a beginner's level workshop within a Vehicle engineering program taught in and through a foreign language. An ethnomethodological approach is taken in order to explore how different language and gender norms are oriented to in everyday student-student interactions within auto mechanic school practices. Former research in educational settings show a clear correlation between boys' verbal play and power relations and how the ability to joke is an important resource and strategy to gain status and avoid subjection (see Huuki et. al. 2010; Kehily & Nayak 1997). It is here demonstrated how boys' and girls' joking about conventionalized understandings of what it means to be an auto mechanic student in this environment is strongly linked to, as well as contesting, expectations on both language skills and gender. Joking is interactive and referential, that is, it demands responses from other group members and it displays the ways in which the participants make sense of the implicit meanings of this jocular interaction. I argue that verbal play can be seen as conditional for participation at the Vehicle programme and that it contributes to constructing identities related to gender and language choice.

*Keywords: Vocational Education, Auto Mechanics, Ethnomethodology, Verbal Play, Language learning*

## Paper session 4

### Why (vocational) teacher training?

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The question why an individual, or a society should invest in a professional teacher training program has been continuously posed. Different agents have various reasons for attending or not attending a (vocational) teacher training program or investing in it. My paper will start from Kant's and Herbart's arguments why teachers should attend a scientifically based teacher education and sketch the recent discussions in the Swedish-speaking minority in Finland about the need and relevance of (vocational) teacher training from different angles: Students who are about to start their carrier, students who already have a longer teacher-carrier and teaching-experience, employers, school principles and the civil and democratic society.

### Teaching for a vocation: boundary work and didactic principles in vocational education

*Eva Eliasson*

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#### **Abstract:**

Studies have revealed that persons involved in health care mean that the most important skills for caregivers are related to communication, ethics, attitude and empathy to caretakers (Eliasson & Rehn, 2013, Thörnquist 2004). On the basis of this background the aim in the text is to explore how health care teachers in Sweden talk about the acquisition of vocational knowing at upper secondary school, and how they describe their teaching to develop caring dispositions. Håkansson and Sundberg (2012) claim that most researchers today agree that the teaching methods are not the key to learning. What matters is instead the use of teaching methods related to central didactic principles that support students' learning. The intention in the text is to identify underlying didactic principles, expressed in the speech of the teachers. The results are also analysed from a socio-cultural perspective of learning using concepts as mediating tools, communities of practice and boundary-crossing.

Qualitative interviews with 17 health care teachers, working with teenagers or adults in upper secondary school, are used as a method (Rosenberg, 2012). The criterion for

selection of informants has been diversity in professional background, age, sex, years in profession and school forms. The intention was to get a broad view of conceptions. The results show that the dialogue is central in the acquisition of vocational knowing. Dialogues are often mentioned when it comes to developing abilities like empathy, ethics and a good attitude. “Dialogue” is a positively charged word that embodies social ideals, contrasting words as aggressiveness, hostility and prejudices (Wierzbicka, 2006). Dialogue can be seen as a learning method that matches the desirable outcomes. Another strong theme is the connection to working life. The teachers try to link the teaching to working life by using examples from their own practice, a teaching method often used by vocational teachers (Robson et al, 2004; Kemmis & Engström, 2011). Variation in teaching methods is necessary to keep the students’ attention. Lectures, films, practical sessions, narratives, role playing, discussions etc. are mentioned as various ways to make the learning interesting and motivating. Other themes are the creation of a good learning environment, development of language skills and the adaptive, flexible teacher. As a summary the main didactic principles are *dialogicity*, *working-life connection*, *variation*, *relationship-building*, *concretion* and *flexibility*. In a socio-cultural perspective you can understand the principle of working-life connection as a way to invite the students behind the scenes (Lave & Wenger, 1991; Wenger, 1998). Mediating tools as narratives, dialogues and modern techniques are used to start a process towards professional thinking. By using varied tools the teachers try to bridge the institutional school setting and approach a bit of authenticity.

**Tuesday, May 12**

**Parallel keynotes:  
Keynote 3**

**Negotiating the value of school and work in vocational education and training – a historical perspective on pedagogical development in Swedish VET**

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The first vocational education and training in Sweden funded and regulated by the government came into being in two reforms in the early 20<sup>th</sup> century. The pedagogical imperative of this system, made up by different types of schools and educations, was work. In the beginning of the 20<sup>th</sup> century work was still thought to harbor pedagogical qualities. During the period of time up until 1971 when the VET was integrated in the upper secondary school system this changed. The point of departure for pedagogical thinking shifted from the logics of work to the logics of school. In the thesis, *Education on the border between school and work. Educational change in Swedish vocational education and training 1918-1971*, I illustrate this shift by examine the pedagogical practices of production, diligence allowance and probation time. These practices had its roots firmly in the tradition of work and none of them survived the transition from work based to school based vocational education. In the thesis they are examined for their pedagogical value and in focus is the renegotiation of this value. The theoretical frame work as well as the analytical tools used is inspired by Johan Asplund's concept "figures of thought". This makes visible the pedagogical thinking and doing as an important force in the development of VET. It also provides a way to capture and describe the dynamic between two structures constitutional to modern vocational education and training – school and work.

Keywords: *vocational education and training, educational practices, figures of thought*

**Keynote 4:**

**Remaking TVET: how more ambitious outcomes and a better understanding of signature pedagogies can contribute to a rethinking of vocational learning**

*Bill Lucas*

Across the world TVET is being reformed, rethought and remade as governments in both developed and developing countries acknowledge its importance for economic

prosperity and social wellbeing. Such rethinking rarely takes account of research (Maclean, 2011) or of pedagogy (Lucas, Spencer and Claxton, 2012). Reforms tend to be driven by numbers ('we need more apprentices'), systems ('employers and providers need to play different roles') or economics ('we need more engineers so we'll pay more for their training'). Recent research into apprenticeships (Lucas and Spencer, 2015) offers an ambitious set of desirable outcomes for vocational education – routine expertise, resourcefulness, 'craftsmanship', functional literacies, business-like attitudes and wider skills for growth. Drawing on evidence from the learning sciences (Claxton, 2012; Dweck, 2006; Ericsson, 2008; Hattie and Temperley, 2007; Perkins, 2009; Rose, 2004; Lucas and Claxton, 2010; Lucas, Claxton and Spencer, 2013) it is possible to demonstrate how pedagogy can best be matched to context to achieve ambitious outcomes for apprentices and, indeed, all engaged in TVET. Of particular relevance are the concepts of 'signature pedagogy' (Shulman, 2005) and cognitive apprenticeship (Collins, Seely Brown and Newman, 1987), both of which can usefully be applied to the challenges facing those interested in improving the quality of vocational education. Too often vocational pedagogy is not given the attention it deserves; but if we want improve the quality of vocational education in general and apprenticeships in particular we have to put learning at the centre of our thinking.

**Bill Lucas**

Professor of Learning

Director: Centre for Real-World Learning University of Winchester

**Key words:**

vocational education, vocational learning, vocational pedagogy, signature pedagogy, apprenticeship, epistemic apprenticeship, cognitive apprenticeship, craftsmanship, dispositions

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## **Paper sessions 5: VET-teachers and VET-teacher education**

### **VET Teachers' Continuing Professional Development**

*– barriers and opportunities*

Per Andersson & Susanne Köpsén, Linköping University, Sweden

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**Key words:** participation, identity, community of practice, boundary crossing, dual professionalism

This study concerns the continuing professional development (CPD) of vocational teachers, with a particular focus on professional development within their vocational subject areas. The study takes place in Sweden, in VET on upper secondary level. Swedish vocational teachers normally work full-time and spend most of their days at

school, and how they meet the demands of contemporary vocational competence differ. They have varying opportunities and options for CPD, and this study explores to what extent and how the teachers cross boundaries between school and work-life to take part in different types of CPD – and what the perceived results, barriers, and opportunities are of and for these activities.

Research questions:

- To what extent do vocational subject teachers participate in different types of CPD activities?
- What does their participation mean in terms of boundary crossing between different communities of practice?
- What are the perceived results of CPD activities among vocational subject teachers?
- What are the perceived barriers towards and opportunities for CPD among vocational subject teachers?

The analysis is based on survey data on teachers' participation in CPD activities, as well as on the perceived results of these activities and perceived barriers and opportunities/motivation for participation in relation to this.

## Vocational teacher identity and language

*Anna-Lena Göransson, Karlstad university*

Being a vocational teacher means being a speaking, listening, reading and writing teacher with the twofold task of imparting vocational knowledge to students and of preparing them for future employment and citizenship with increasing demands for command of language and communicative skills. This situation makes vocational teachers' language experiences interesting in the perspective of vocational education and training. My paper reports on a study of future and practising vocational teachers' occupational biographies, which were investigated with the aim of learning more about the respondents' personal discursive history. A basic assumption is that language development, learning and identity development are connected and that linguistic experiences are integral to life. The study is based on 43 occupational biographies in which future and practising vocational teachers describe their childhood, early school years, career choice, vocational training and work experience. The biographies were read in terms of the theories of Kress (1989), Lave & Wenger (1991) and Wenger (1998), which allow me to understand identity formation as language development and situated learning in communities of practice. The biographies reveal that the respondents have participated in greatly differing speech communities on their way to vocational teacher training. They primarily describe the language of occupational speech communities but also mention factual texts and work-related documents as important to their identity development, teaching profession and participation in the vocational teacher education.

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## Changing Educational Leadership and School Improvement in Vocational Educations? VET teachers and the Career Services for Teachers Reform in Sweden

*Daniel Alvunger, Linnæus University, Kalmar Sweden*

In 2013 the Swedish government launched a reform on career services for teachers that introduced first-teachers as a new category. Since this reform still is in the process of being rolled out, we know fairly little of its impact, especially concerning VET teachers that are appointed first-teachers. My paper explores two cases of VET first-teachers with focus on the implications on educational leadership practices and the direction and content of school improvement. The theoretical framework for the analysis of conceptions identified in the interviews builds on the concept "distributed leadership" – that is an understanding of leadership as relational, contextual and co-performed. It becomes evident that the VET first-teachers consider themselves to represent an important educational leadership being process leaders for creating a culture built on mutual trust, turning the focus of school improvement from a "top-down" perspective to change "from below". They become "brokers" and a link between school management and their colleagues, even if there are some difficulties. Moreover they visualise different practices and foster a new awareness – concerning e.g. assessment and the relationship between school and work-place – that seem to influence collegial discourse. VET first-teachers are "facilitators", promoting capacity-building that has an impact on organisational change and development.

*Keywords: Vocational teachers, Educational leadership, School improvement, Career pathways for teachers*

Daniel Alvunger, Senior lecturer (PhD) in Education, is a member of the research group SITE (Studies in Curriculum, Teaching and Evaluation) at Linnæus University and responsible for the LNU-VET platform. He is also part of a research team conducting research and ongoing evaluation projects concerning school reform enactment and school improvement on local level.



## Paper sessions 6 – Standards & competence-descriptions

### Standards in the South African vocational education: what are they and who wants them?

*Peliwe Lolwana*

Researching Education and Labour Centre  
University of Witwatersrand  
Johannesburg, South Africa

#### **Abstract:**

The establishment of standards in vocational education preoccupies policy makers, employers, qualifications and curriculum developers as well as vocational education institutions. Why is it so? Perhaps it is because vocational education has to face ‘both ways’ – to higher education as well as work. In this way then, vocational education has two masters to serve, with different interests, agendas and traditions. Also, the different role players have different conceptions of these standards

Since the overthrow of apartheid education, South Africa has been attempting to strengthen its vocational education system and has managed to implement a number of reforms in the system. Over the years there has been experimentation on different models in transforming vocational education. There has also been a growth of institutions involved in the quality assurance in vocational education. Yet, the users of this system continue to be unhappy about the standards in this system. In this paper, I first look at how different countries approach the issue of standards in vocational education. Secondly I look at how standards development have evolved over time in South Africa. Lastly, I present the lessons that are emerging as well as identifying the areas which, as a country, seem to be our blind spot.

### Experience from a trial with standard setting on the upper secondary school vocational programs

*Jan Pettersson*

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Sweden

This paper draws on experience from a project financed by the Swedish National Agency for Education in 2011. The task consisted on an assessment about the possibilities to make sharper definitions between different assessment categories by focusing in task within vocational education and training at upper secondary level in Sweden.

Standard setting is a model that is used, among other things, for the construction of national tests. With the support of the reference groups of teachers greater consensus can be reached about the quality of data, and how information and student solutions can be evaluated in relation to the knowledge requirements. The pilot project with the

standard settings was conducted on programs such as Electricity and Energy (EE), Hotel and Tourism (HT), Natural Resource (NB) and Health and Social Care (VO).

In the Swedish school system there are laws and regulations concerning equal and fair assessment and grading. This applies equally for upper secondary school vocational subjects as for subjects like math, English and Swedish. The goals and the knowledge requirements for vocational subjects at upper secondary schools often have abilities as central part in the knowledge requirement. To judge this with equity is a challenge. In the experiment with standard setting images of the student under performance taken by a teacher were used and complemented by the teacher descriptions. This was used as a basis for the reference group to reason about the quality of different performances students demonstrate in relation to knowledge requirements. The method enabled certain consensus but is limited by the fact that the reference group usually follows the teacher's descriptions even though parts of the ability that is judged is not documented. Another issue that was found to influence the reference group's view of the assessment was different perceptions of job requirements.

### Task oriented learning in vocational education and training

*Falk Howe*

The rapid technological, economic and social change at the beginning of the 21st century poses the question which didactic concepts or which learning and training strategies can help to realise an adequate and effective vocational education and training. In nearly all economic sectors and occupational areas there are now new or fundamentally changed qualification requirements. Against this background task-oriented learning is a didactical concept that supports coping with the given challenges with a work- and work process-related learning.

The planned presentation introduces the vocational science-based approach "Kompetenzwerkstatt" that has been continuously developed for more than 12 years to give – among others – answers to the following research questions:

- How can an occupation be portrayed – as detailed as necessary and as short as possible – by spheres of activity?
- How can work processes of skilled workers and experienced craftsmen can be analyzed and described?
- How can the results of work process analyses be transferred into task-oriented educational measures in relation to a particular sphere of activity?

One of the main products of the "Kompetenzwerkstatt" is a series of handbooks that supports trainers and teachers to implement work-oriented vocational education and training. Every handbook puts a focus on an instrument or method that can be easily used i.e. to analyze work processes or to shape task-oriented learning.

The application of the Kompetenzwerkstatt will exemplarily be demonstrated in the field of the electrician trade. In a research and development project, which was funded by the European Social Funds and the local ministry for education and research, a group

of vocational researchers – in close cooperation with teachers and trainers – designed, implemented and tested so called learning and working tasks.

The basis for the project was built by spheres of activity that were identified and described in expert workshops with the help of experienced master craftsmen. After this work processes in all of those spheres of activity were analyzed thoroughly. These analyzes provided information about the typical sequencing, characteristic objects and requirements of work processes. In a final step the results of the work process analyzes were used to develop learning and working tasks. The tasks refer to problem-containing situations of operational reality and were performed in the manner of projects. The assignments are inspired by typical customer orders of crafts enterprises.

The effectiveness of this work process-related learning was evaluated by an online survey of 250 apprentices. The results were very encouraging to carry on with the approach: A large majority of the apprentices estimated that the development of their professional expertise was greatly improved through this kind of vocational learning. The project has shown that – on the basis of expert workshops and work process analyzes – it is possible to develop well-founded, authentic, and practically relevant learning arrangements.

## **Paper session 7**

### **Learning through boundary-crossing in VET settings: lessons from the UK**

*Dr Natasha Kersh*

UCL Institute of Education, University of London

*Key words: boundary crossing; learning space; workplace learning*

This paper aims to consider configurations, strategies and implications of learning through boundary crossing and knowledge transfer in the context of vocational education and training (VET) and work-related settings. Within the context of VET, transferring knowledge through bringing together its different types (e.g. subject-based and work-based knowledge) permeates the notion of vocational pedagogy. In the literature, the fundamental principles of vocational pedagogy have been considered within the concept of ‘learning through boundary crossing’ within and between the contexts of education and work; (Guile, 2011; Bakker et al; 2011; Edwards, 2011; Evans et al, 2006).

This paper draws on data gathered through several projects, such as ‘Enhancing STEM Teaching at Level 3’ and ‘Impact of Poor English and Maths Skills on English Employers’ carried out at the UCL Institute of Education. Case studies undertaken across different occupational sectors in a range of UK workplaces (including, for example, the Fire and Rescue Service, and the Engineering and Social Care sectors) have indicated ways in which learners and employees bring together subject-based and work-based knowledge through boundary spaces that emerge from different practices and experiences.

The interplay between learning and working spaces has been characterised by their somewhat blurred boundaries, where boundaries and spaces are multi-faceted and multi-dimensional. Learning through boundary crossing within and between the contexts of education, work and other related settings has been a subject of interest in a number of national and international studies (Guile, 2011; Harreveld and Singh 2011; Tuomi-Grohn and Engestrom, 2003). The concept of 'boundary crossing' contributes to an understanding of learning at work and the ways that learners acquire and use their knowledge and skills across different contexts and settings. Boundaries have often been perceived as 'spaces' with potential for learning (Harris and Ramos, 2012; Edwards, 2011).

Crossing the boundaries across a range of spaces at work, such as physical, virtual or informal, enables employees to navigate these spaces while learning and using their skills within their environments. The learning space is often perceived as a combination or overlap of a range of components, such as physical space, learning contexts and environments, formal/informal learning and virtual learning. Research suggests that engaging in learning and applying skills not only within but across a variety of contexts and spaces enables employees to develop a range of transferrable skills required by the contemporary economy and knowledge society. The nature of skills for employment is changing as employees are increasingly expected to deploy skills in more flexible and adaptable ways, and to be able to demonstrate not only job-specific skills, but also personal skills and capabilities (Evans et al, 2006).

Our case studies have indicated that, in the context of VET, transferring knowledge through bringing together subject-based and work-based knowledge, in ways that meet the requirements and expectations of the learner/employee, the employer, and the awarding and professional bodies, is considered to be one of the most significant underlying principles that permeates the notion of vocational pedagogy in VET settings. The strategies that provide a foundation for the implementation of this principle across the courses and learning spaces are based on the concepts of boundary crossing, transfer, tailoring and motivating. Our case studies have indicated that within the vocational education curriculum context, these concepts are translated into the following: (1) boundary crossing within and between the context of education and work; (2) knowledge and skills transfer between education and the world of work; (3) tailoring the curricula to the needs of local employers; and (4) motivating students towards the acquisition and integration of subject-based and work-based knowledge. Drawing on a number of case studies undertaken by the author, this paper discusses the ways that knowledge transfer and boundary crossing have contributed to vocational excellence and pedagogy in VET-related learning settings and considers their implications and associated outcomes for learners/employees.

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## Personal development and competence building in work integration companies

*Fernando Marhuenda*

Work integration (social) enterprises (WISE) promote purposeful educational processes, formal and informal, with people getting out of processes of social exclusion. In our past<sup>5</sup> and current<sup>6</sup> research we study educational practices that happen on the workplace as well as their effects upon the processes of personal and professional development of workers with supported contracts in their transition into the ordinary labour market. Supported contracts last up to three years.

Supported upon Michael Eraut’s notion of learning trajectories, we are trying to adapt his model as a descriptive and analytical tool to describe and explain educational practices within WISEs. In my paper, I will debate on the possibilities and cautions to take in such adaptation, as WISEs offer low qualified positions to supported workers and as most of them lack any proper acknowledged qualification.

This discussion will address issues that come out of the theory but also illustrations of how we are working with learning trajectories as an analytical tool, able to show variations within the pedagogical relation during the training process from the very entry into the work integration company until the process is finished and workers go out into the ordinary labour market. It will also deal with the connections between personal and social competences in Eraut’s learning trajectories and employability, and how these are assessed and handled within WISEs.

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## Adult education in a workplace context – recognising production workers' responses and partnership challenges

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Key words: *adult education, partnership, production workers*

Partnership is today a common model for the organising of working life development, however also very demanding since it involves the crossing of institutional boundaries. The partnership should benefit from the particularities from each partner, but at the same it is essential to develop sensitivity and openness for different traditions. The partners may often find themselves in situations to which they are not very familiar. In the example discussed in the paper, the adult education teachers were acting as local project leaders for the different development projects that took place on the production floor. The target group – the production workers – was not ordinary adult education students but people who should fulfill their normal work duties at the same time as they participated in the testing of forms for integrating work and education, and under the leadership of a production manager. The aim of the paper is to analyse the challenges that appeared when the partnership jointly was trying to accomplish change on the production floor. The three groups mentioned above are at the centre in the paper: the teachers, the production workers and the managers from in one of the participating engineering companies, and against the background of demands from the larger network organisation.

## Paper session 8 – Assessment within VET

### Purposes and practices of assessment in VET

*Hæge Nore*

Defining learning outcomes and VET-standards are topics discussed and partly implemented throughout Europe and beyond (ECVET, EQF, EQAVET). In Norway, assessment for learning has been a national priority area in primary and secondary education, including IVET, since 2010. (Hopfenbeck et al, 2013). Four principles for

formative assessment are outlined in The Education Act Regulations and there are strong links between assessment and learning outcomes as described in national curricula. In VET there is a great challenge because students and teachers work with different curricula the first and second year of school based training. For the apprenticeship period, there is a third and trade specific curriculum. Recent studies on teachers and trainers assessment practices (Nore & Lahn, 2013, 2014) show that teachers focus more on assessment according to learning outcomes and on students' self-evaluation whereas trainers focus on quality in daily work and include more people as customers, clients and colleagues in the feedback to apprentices (Kvale, 2007). As in Friche's study (2010), we found different assessment cultures and practices across educational programs and across trades. Loyalty to the curriculum is stronger in the service sector with short traditions in VET. Plumbers on the other hand, have long journeyman's traditions and assessment is immediate and direct feedback on performed work. Assessment in the technical industrial trades are feedback according to industry standards and procedures. Assessment in schools and by teachers seem more focused on learning outcomes, whilst assessment in companies focus on the quality of work. With different curricula and actors (a lot of teachers, trainers and even apprenticeship training offices) throughout the VET period, assessment hardly include vocational identity or the process of becoming (Colley et al, 2003).

Key words: *assessment, learning outcomes, quality of work, vocational identity*

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## Post-political dialogue as a technology for self- colonialization

*Ulf Olsson*

### **Research questions**

The major purpose of this paper is to contribute to the discussion of what is going on in contemporary Europe. The smaller purpose is to discuss the operation of political dialogue and confession as governmental rationalities in the construction of the contemporary European Higher Educational Area (EHEA) as a transnational political space. The main focus is the prime instrument for the creation of EHEA, namely the so called Bologna process. Its overarching goal is to make the national systems of higher education transparent, harmonized and comparable as way to promote citizens' mobility and the continent's overall development. Our purpose is to examine the governmental rationalities that permeate the process of stocktaking (recurrent evaluation processes) considered having a key role in the implementation of the Bologna Process. In our analyses, we are playing with Foucault's concepts of

governmentality and dispositive. We use “play” to signal that we are exploring governmentality as more or less a methodological approach to thinking about conditions that make the present possible. From a point of view of governmental rationality the Bologna process is not far from operation of dialogue and confession in face-to face relationships. Dialogues and confession as a face-to-face technology is, in different ways, about shaping individuals to make them ready for inclusion into society or into a religious commonality. In a homologous way the processes of dialogue and confession operating in the Bologna Process are about shaping nations for inclusion in a transnational space. The Bologna Stocktaking Process as a recurrent systematic political dialogue or rolling agenda can be seen as a post-political force fostering discursive changes and commits to an agreed way of thinking about education. Simultaneously, the Bologna Process becomes one of the worksites where contemporary Europe is being made. In that very process it contributes to make Europe governmental. I the end of the paper I start to play with or am experimenting with some concepts borrowed from post-colonial theory. In order to approach and raise questions about how Europe is being made and made possible to govern from new angles.

### Vocational teachers’ experiences of assessing vocational knowledge

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Assessment is described as a process that includes the collection, interpretation and presentation of data which leads to a defined decision (Nyström, 2004). In recent years, the models of formative and summative assessment have been frequently discussed and debated by school researchers such as Gipps (2001), Jönsson (2009), Korp (2011), Lundahl (2006, 2011), Moss, Girard and Haniford (2006), Pettersson (2011) and Wiliam (2006). Formative assessment is a smoothly flowing process of assessment and summative assessment is assessment of the student’s acquired knowledge at a certain time or an exam (see e.g. Black&Wiliam, 2003; Gipps, 2001; Moss et al., 2006; Wiliam, 2006). The discussion of assessment is often about how a teacher, based on curricular goals and knowledge requirements, can implement a similar and equivalent assessment of student knowledge (cf. *ibid.*). Equivalent assessment is a central concept in earlier research on grading and assessment (see e.g. Black&Wiliam, 2003; Gipps, 2001; Lundahl, 2006, 2011). Teachers’ assessment should not rest on their personal ideas of what knowledge they see as important for the education. Assessment must be based on established criteria (see e.g. Black&Wiliam, 1998) if students are to be assessed equally and fairly. Assessment takes place in an interaction between teachers, students, their environments, language, and the objects which are used in the process, such as or computers, and books (Moss et al., 2006). By assessing, teachers try to create opportunities for students to show what they can (Nyström, 2004).

Research on vocational education shows that the relationship between the vocational teacher and the students is very important in the formative assessment model (Asghari, 2014). Equally important is the vocational teacher’s feedback to the students (Öhman, 2015). In the summative assessment model, students’ vocational theoretical knowledge is often assessed (Lindberg, 2003). Studies of vocational teachers’ assessment practice



can contribute to previously unknown views of teachers' work (Lindberg, 2011). In the forthcoming article, which this presentation is a part of, two vocational teachers' assessment practice when they talk about their experiences of teaching will be shown and discussed. Assessment can be discussed from many different aspects. It can serve as a way to motivate students in their learning, it can make students' reasoning about the topic visible for teachers, it can create opportunities for feedback to students, and it can construct different identity formations in students (Moss et al., 2006). And identity formation is what the article, based on the studies of vocational teachers' assessment practice, will focus on. The assumption is that vocational teachers' assessment practice leads eventually to the students' grades and those students can through their grades construct different identities in different contexts (cf. *ibid.*). It means that a non-passing grade can bring consequences in students' lives, like losing their self-confidence, dropping out of school and education, and even in some cases, become gang members and get into crime. It appears from vocational teachers told experiences that students, through a pass grade, may identify themselves as students, who may have enough knowledge, are good enough as citizens and are proud to be skilled workers. It also appears that vocational teachers in such situations identify themselves as a caring teacher. Vocational teachers told experiences show different considerations that qualify for a pass-grade and may be categorized as "pass grade in advance", "pass grade as praise", "pass grade as a last chance" and "pass grade for being well behaved and socially competent". These categories of assessment do not proceed from curricular goals and knowledge requirements, but they may be related to vocational teachers' care for their students.

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## Paper session 9 – VET: school-based and/or work-based?

### The role of apprenticeship training in Norwegian VET

*Anna Hagen Tønder & Torgeir Nyen*

**Keywords:** *Apprenticeship, upper secondary education, educational reform*

This paper addresses the issue of institutional development and change in vocational education and training in Norway, with a particular focus on the status of the apprenticeship system from the 1970s until today. In the early 1970s around 2-3000 new apprenticeship contracts were signed every year. At the time, the apprenticeship system was considered by many to be an anachronism and an exploitation of young people as a source of cheap labour. It was widely believed that the apprenticeship system as a model of training was fading. However, in the 1980s the apprenticeship system experienced a new revival. In the 1990s the apprenticeship scheme was made an integral part of the formal education system as part of a reform of upper secondary education. In recent years, 16000-18000 new apprenticeship contracts have been signed every year. This resurgence and strengthening of the apprenticeship scheme is probably quite unique in an international perspective. The main purpose of our paper is to analyse the role of different actors as well as the main mechanisms and processes behind this change. We argue that the role of the social partners was decisive in the development of the hybrid model which is still the main model in Norwegian VET.

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## Strengthening occupational and vocational qualifications

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In this paper we attempt to build some criteria for evaluating and strengthening vocational, occupational, or professional curricula. To look for conceptual continuity between general, vocational and professional education we go back to distinctions that have been purposefully eroded in educational thinking, such as the distinction between education and training; between knowledge for its own sake and instrumental knowledge; and between skills and knowledge. We claim space for them and explore their implications. We then draw on recent research into professional and occupational curricula, and bring some of its theoretical insights back to debates about secondary level curricula. On the basis of a consideration of this literature, we propose three key concepts through which to think about curricula, and an additional concept (concept three below) through which to think specifically about vocational or professional subjects and qualifications:

1. knowledge for its own sake;
2. powerful knowledge;
3. occupational formation; and
4. epistemic ascent.

We have tested the criteria through a cursory application to a selection of vocational subjects in the South African secondary school curriculum, showing serious problems with some of the vocational subjects on offer. We now attempt to apply them to curricula in nursing, teaching, law, and economics.

## Learning at work: Apprenticeships and changing skills requirements

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Following the central European model, Finnish government has issued clear plans for the future to reduce the number (and grow the size) of the secondary level vocational education institutions. As the new financial model increasingly rewards education that is provided outside the school buildings, vocational education providers have a growing pressure to bring learning closer to the real-life learning environments, that is, workplaces. Apprenticeship education is an obvious answer to this problem, but its current volume in the Finnish context is modest at most. This paper analyses the factors that help or hinder the application of apprenticeship education in the context of Finnish vocational education. We start by describing the apprenticeship education system in the Finnish context, and analyze why it has not established a stronger position. We then proceed to reviewing Finnish research on workplace learning to extract factors that support or hinder learning at workplaces. Thirdly, by using these factors as a framework, we report the results of an interview data from Finnish apprenticeship education providers.

### **Paper session 10:**

#### **Talent Education in Vocational Education in Denmark – presentation of case study**

*Suna Christensen, National Center of Vocational Education (NCE), Denmark*

In Denmark a government directive from 2015 obliges vocational education schools to develop 'talent education'. This challenges the teachers, as well as it raises critical questions about the direction and purpose of vocational education in general. The concept of talent is in everyday practice a contested concept and simultaneously there is little research in this field which can support teachers in pedagogical considerations and processes. A few schools have experimented with education for talents. This paper presents findings from explorative research into student perception and teaching points among teachers engaged in developing talent education. The first part of this presentation aims at sorting out the understanding of talent as it emerges from teachers' identification of talent. Attention is paid to context embodied in teachers' identification

practices, and the relation between school and workplace context is discussed. Secondly the values and qualities embodied in the present empirical concept(s) of talent tied to a government discourse on economic growth is discussed and compared to cultural-historical notions of good craftsmanship (i.e. Sennet 2009) and notions of 'knowing-in-practice' as particular vocational expertise (Billett 2001).

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### **Between the Academy and Industry: Post-Secondary VET in SWEDEN and JAPAN with focus on Workplace-based Training**

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#### **ABSTRACT**

The current and the future status of VET is a priority issue in the discussion agenda of national and international educational policy bodies. Among other challenges that VET is facing, it seems that the connection between education providers (the school) and receivers in the working life is of urgency, and a crucial aspect of quality of the provided qualifications. The purpose of this paper is to present the main characteristics and structure of post-secondary VET in Sweden and Japan today. Particular attention will be paid to

1. the links between school-based and work place-based training (traineeship) as a concrete manifestation of the overarching issue with reference to the relation between theory and practice in the curriculum,
2. how the cooperation between educational suppliers and working life partners is shaped in the two countries (tradition and current praxis)
3. the "academic" status of post-secondary VET in Sweden and Japan in relation to regular university education

The presentation begins with a tentative theoretical positioning that sets the issue in question in an educational context, and ends up with some reflections about the future of VET in the two countries with proposals for future comparative research.

### **Technology education as ground for vocational education & training – The historical development of a compulsory subject as case study**

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#### **Abstract**

This paper attempts to illustrate how technology education is conceived to be a ground for vocational education and training. The historical development of technology education within the Cuban educational system is used as case study. An attempt at summarizing the complex process of establishment and further development of the subject in Cuba is indeed vulnerable due to the remarkable variety of intervening factors. This development is, from my perspective, a socio-economical and culturally conditioned phenomenon. In line with the theoretical approach developed by Goodson (1988) in relation to curriculum development, the establishment and further lines of the development followed by technology education in Cuba was, and still is, conditioned by socio-economic *climates of opinions* (ideas and interests) ruling the society in different historical stages.

The new socio-economic development of the country is one of the major challenges for the development of technology education as schools subjects. Criticism has been considerable in relation to how the grounds of polytechnic education have been enacted in the subject's latest development. Still there is a consensus that in order to secure employability and to face the challenges of increasing service and industrial sectors a serious reconsideration of the traditional approach of the relationship technology education and vocational education & training is highly needed.

Key words: *Technology education, sloyd, vocational education & training,*

## **Panel Discussion**

### **Challenges for research and development in Vocational Education & Training**

#### **Panel:**

Stephanie Matseleng Allais, University of the Witwatersrand, South Africa

Fernando Marhuenda, University of València, Spain

Haege Nore, Oslo and Akershus University College of Applied Sciences, Norway

Philip Gonon, University of Zürich, Switzerland

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