

PROGRAMME

4th Congress on Research in Vocational Education and Training
SFIVET Swiss Federal Institute for Vocational Education and Training

VET CONGRESS 2015



DEVELOPING SKILLS ACROSS INSTITUTIONAL BOUNDARIES



25–27 March 2015
Bern/Zollikofen
Switzerland



Research and Development

Co-operation partner:

Austrian Association of Research and Development in Education



Swiss National Science Foundation



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Printed by
s+z:gutzumdruck
Summermatter und Zimmermann
Nellenstadel 1
3902 Brig-Glis
Switzerland

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WELCOME ADDRESS

For the fourth time, the Swiss Federal Institute for Vocational Education and Training SFIVET invites researchers to exchange vocational education and training (VET) research findings and reflect on VET issues.

“Developing Skills across Institutional Boundaries” is a key topic for VET. It includes teaching and learning across different learning locations, the permeability of education institution boundaries over the course of one’s life and, from a comparative point of view, the development of skills in (inter)national institutional arrangements.

The integration of teaching and learning across different learning locations (school and the workplace) is at the core of VET and constitutes an important challenge for skills acquisition. This specificity raises the following questions: How is learning at school and at the workplace connected? How are concrete learning-teaching processes structured so as to integrate the different learning experiences? How can the institutional aspects of collaboration between the different learning contexts be analyzed? Furthermore, how is boundary-crossing between the different spaces possible?

In recent decades, the institutional divide between VET and professional education and training (PET) and higher education (HE) has been increasingly challenged with calls for greater institutional permeability. In a lifelong learning perspective, permeability between VET/PET and HE is central to enhancing educational and social mobility and life chances. It allows people to change their first educational choice and provides a range of feasible alternative educational pathways at a later stage. Because lifelong learning plays an increasingly important role in the modern working world, institutional permeability allows for further development of skills and a professional reorientation later in one’s life. Therefore, institutional (im)permeability and transitions between initial VET and PET and HE are at the heart of analysis. This applies for continuing education and training (CET) and the validation of non-formal and informal learning.

Heightened global competition challenges national systems to improve their models of skill formation. There is widespread awareness of the importance of education in ensuring employability and social and political participation. In the field of VET, this raises the following questions: Which education reforms relating to VET/PET, HE and the education/ economy divide may be undertaken to address these dynamics? What are the results of cross-national comparisons of skill formation models and how can they be explained? Furthermore, regarding international policy borrowing and lending, how can vocational education and training models be transferred and translated worldwide into different cultural contexts?

Devoted to the theme “Developing Skills across Institutional Boundaries”, the congress seeks to make a contribution to these topics and provide an overview of VET research activities in Switzerland and other countries. It is also intended to facilitate academic exchanges between leading institutions and to present the latest international research findings. The seven symposia and 12 papers sessions are framed by four keynote addresses given by internationally distinguished speakers.

I hope that you will all gain fresh insights into VET research, take part in inspiring discussions and enjoy your stay in Bern!

Prof. Dr. Carmen Baumeler
Chair of the Congress
Head of Research & Development, SFIVET

CONGRESS COMMITTEES

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SFIVET Zollikofen

KEYNOTE ADDRESSES

Prof. Dr. Päivi Tynjälä (University of Jyväskylä, Finland)

Integrative Pedagogy as a Tool for Connecting School Learning and Workplace Learning

The purpose of this presentation is to describe the Integrative Pedagogy model which has been constructed for enhancing the development of professional expertise across institutional boundaries. The model emphasizes the integration and interaction between school-based and workplace learning. It is based on accounts of expertise as an integrated whole of four basic components: conceptual knowledge, practical knowledge, self-regulative knowledge and socio-cultural knowledge. The model is also supported by recent studies on adult thinking which present integrative thinking as the highest form of thinking (e.g. Kallio 2011). The most recent version on the model includes emotional level of learning. Practical examples and research results on the application of the model will be presented.

Prof. Bernd Fitzenberger, P.h.D (University of Freiburg, Germany)

Transitions from School to Vocational Training and Work in Germany: The Economic Perspective

Despite the strong improvement of labor market conditions in Germany and the low level of youth unemployment in comparison to most OECD countries, the number of youth without a vocational training degree and without a tertiary degree remains high and a low socio-economic status or a migration background are associated with particular difficulties in the school-to-work transition. This talk will review basic trends for school-to-work transitions in Germany from an economic perspective. Then, the talk will report a case study of career planning and the first transition after graduation among lower track secondary schools (LTSS) students. While only a small share of LTSS students start an apprenticeship immediately after graduation, most LTSS students either continue schooling to achieve a higher school degree or continue with pre-vocational training. The findings reviewed suggest that a focus of career guidance on the immediate start of an apprenticeship after graduation may be misplaced. The final part of the talk considers the wage effects of occupational mobility within and across firms after apprenticeship. On the one hand, occupational mobility may involve a loss of occupation specific human capital which may result in a wage loss. On the other hand, occupational mobility may be associated with a career progression which may result in a wage gain. Instrumental variable estimates imply that occupation and job changes imply wage losses, whereas occupational mobility within the training firm results in wage gains.

Prof. Dr. Sanne F. Akkerman (Utrecht University, the Netherlands)

Crossing boundaries to develop skills and being skilled in boundary crossing

Most people participate in and move between different sites, including school contexts, teams, workplaces, but also more informally, leisure and peer groups on a daily basis. Increasingly however, we see how people are now required and expected to make successful transitions within and between their life domains, connecting and integrating what they learn. In relation to work there is a growing need to learn to collaborate with people from other disciplines, institutions, and cultures. Based on a literature review (Akkerman & Bakker, 2011), I want to present how we can conceptualize the current challenges and opportunities in terms of boundary crossing, and discuss how it can impact learning and professional development. By means of two empirical studies, I want to discuss the sort of skills that seem to be involved in boundary crossing, concluding with a research agenda and proposing suitable methodologies.

Prof. Dr. Justin J.W. Powell (University of Luxembourg, Luxembourg)

Boundary-spanning Education and Vocational Training Programs: From Institutional Permeability to International Cooperation and Model Transfer

Institutional permeability as well as international cooperation and transfer across cultural boundaries are on-going challenges for education and vocational training systems. As competition and cooperation worldwide have increased, education and training models that successfully integrate academic and workplace-based learning and thus lead to enhanced skills and employment have attracted ever more attention. Among the boundary-spanning models that combine postsecondary academic education with workplace-based training are Germany's dual study programs. As these have grown rapidly over the past decade, interest elsewhere has risen apace. Although translating and transferring such models across different cultural contexts has always been challenging, policy borrowing and lending persist. Discussing the results of a recent comparative study, the presentation charts international interest in this model and identifies both barriers to and enabling factors in transfer processes across institutional and international boundaries. Our findings emphasize the level of interest among decision-makers, understanding the model, existing international educational exchanges, general economic conditions, and governance structures as crucial factors in model transfer.

PROGRAMME OVERVIEW

Wednesday 25 th March	Thursday 26 th March	Friday 27 th March
09.30-11.00 Registration and Coffee Piazza	09.15-10.00 Keynote Bernd Fitzenberger Aula	09.15-10.30 Paper Sessions 4A Aula, 4B Room 214, 4C Room 117
11.00-11.15 Welcome & Opening Aula	10.00-10.30 Coffee-Break Piazza	10.30-11.00 Coffee-Break Piazza
11.15-12.00 Keynote Päivi Tynjälä Aula	10.30-11.45 Paper Sessions 2A Aula, 2B Room 117, 2C Room 214	11.00-12.45 Symposium V, VI und VII V Aula; VI Room 214; VII Room 117
12.00-13.30 Lunch Piazza	11.45-13.15 Lunch Piazza	12.45-14.00 Lunch Piazza
13.30-15.00 Symposium I und II I Aula; II Room 214	13.15-14.45 Symposium III und IV III Aula; IV Room 214	14.00-14.30 Best Paper Award Aula
15.00-15.30 Coffee-Break Piazza	14.45-15.15 Coffee-Break Piazza	14.30-15.15 Keynote Justin Powell Aula
15.30-16.45 Paper Sessions 1A Aula, 1B Room 117, 1C Room 214	15.15-16.00 Keynote Sanne Akkerman Aula	
	16.00-17.15 Paper Sessions 3A Aula, 3B Room 214, 3C Room 117	
18.00-19.00 Social Programme: Guided Tour City of Bern		
	19.00-22.30 Congress Dinner Restaurant Casino Bern	

PROGRAMME OF WEDNESDAY,
25TH MARCH 2015

9:30am - 11:00am	Registration and Coffee Location: Piazza	
11:00am - 11:15am	Welcome & Opening Location: Aula Carmen Baumeler, Chair of the Congress Cornelia Oertle, General Director of SFIVET	
11:15am - 12:00pm	Keynote 1: Päivi Tynjälä (University of Jyväskylä, Finland) Location: Aula Integrative Pedagogy as a Tool for Connecting School Learning and Workplace Learning	
12:00pm - 1:30pm	Lunch Location: Piazza	
1:30pm - 3:00pm	Symposium 1: Teaching and learning to teach in vocational education and training schools Location: Aula Discussant: Fritz Staub (University of Zurich) Chair: Jean-Louis Berger & Carmela Aprea (SFIVET) The Impact of the First Year of Teacher Education on Vocational Teachers' Classroom Management GIRARDET, Céline; BERGER, Jean-Louis; VAUDROZ, Cynthia; APREA, Carmela Educational and Professional Pathways of Commercial Vocational School Teachers of "Economics and Society" in the German-speaking Part of Switzerland EBERLE, Franz; HOLTSCHE, Doreen Conception, Implementation and Evaluation of a Training Program on Professional Error Competence for German Pre-service Teachers WUTTKE, Eveline; KRILLE, Claudia; BOULEY, Franziska Theresia	Symposium 2: Boundary-crossing' in vocational education and training Location: Room 214 Discussant: Sanne F. Akkerman (Utrecht University) Chair: Viviana Sappa (SFIVET) Boundary crossing skills: a review study SAPPA, Viviana; APREA, Carmela Mentoring interaction at internship as a site for learning - - insights on talk as social action. LAITINEN-VÄÄNÄNEN, Sirpa; Talvitie, Ulla; Luukka, Minna-Riitta; Vänskä, Kirsti Can a Technology-enhanced learning journal system be an effective boundary object in initial VET? CATTANEO, Alberto; BOLDRINI, Elena; MOTTA, Elisa; GURTNER, Jean-Luc; APREA, Carmela
3:00pm - 3:30pm	Coffee-Break Location: Piazza	

3:30pm - 4:45pm	<p>Paper Session 1A: Different learning contexts in VET Location: Aula</p> <p>Teaching and learning in workplace settings: characteristics and interaction with the classroom instruction SALINI, Deli</p> <p>Boundary objects and learning documentation: an analysis of current practices across VET contexts CARUSO, Valentina; CATTANEO, Alberto; APREA, Carmela</p> <p>Linking Experiences from different learning contexts within initial Vocational Education and Training FURLAN, Nicole; GURTNER, Jean-Luc</p>	<p>Paper Session 1B: Training and labor market reforms in VET Location: Room 117</p> <p>Can EU-funded management and professional training programmes increase firm performance? Regression-discontinuity evidence MARTINS, Pedro</p> <p>The Effect of Job Information on Gender Segregation. Evidence from a Labor Market Reform in Germany SANITER, Nils; SCHWERI, Jürg</p> <p>Do training vouchers increase adult learning? Evidence from a randomized information treatment GÖRLITZ, Katja; TAMM, Marcus</p>	<p>Paper Session 1C: General vs. Vocational education and social reproduction Location: Room 214</p> <p>Vocational education or general education? The impact of social origin, gender and immigrant background on the transition to upper secondary education GLAUSER, David</p> <p>Institutional structures shaping social reproduction by 'heating up' and 'cooling out': the role of VET in Austria LASSNIGG, Lorenz</p> <p>(Un)intended Outcomes of Permeability in the Swiss VET KOST, Jakob</p>
6:00pm - 7:00pm	<p>Social Programme: Guided Tour</p>		

PROGRAMME OF THURSDAY, 26TH MARCH 2015

9:15am - 10:00am	<p>Keynote 2: Bernd Fitzenberger (University of Freiburg, Germany) Location: Aula Transitions from School to Vocational Training and Work in Germany: The Economic Perspective</p>		
10:00am - 10:30am	<p>Coffee-Break Location: Piazza</p>		
10:30am - 11:45am	<p>Paper Session 2A: Learning in VET: writing and financial literacy Location: Aula</p> <p>Developing a comprehensive financial literacy framework: Voices from stakeholders in European Vocational Education and Training APREA, Carmela; LEUMANN SOW, Seraina</p> <p>Learning from collaborative writing in healthcare education: Qualitative analysis of peer-feedbacks ORTOLEVA, Giulia; BE-TRANCOURT, Mireille</p> <p>What makes students in vocational schools better writers? Promoting general writing competence in vocational schools: Results from an intervention study KONSTANTINIDOU, Liana; HOEFELE, Joachim; KRUSE, Otto; DIETERICH, Sebastian</p>	<p>Paper Session 2B: Educational choices, costs and returns of VET Location: Room 117</p> <p>Firms training costs in times of decreasing demand for apprenticeships - An analysis based on the BIBB-Cost-Benefit-Surveys 2007 and 2012/13 WENZELMANN, Felix; JANSEN, Anika; SCHÖNFELD, Gudrun; PFEIFER, Harald</p> <p>Non-cognitive skills and human capital investments: Competitiveness or locus of control? WOLTER, Stefan C.; Jaik, Katharina</p> <p>Do wage expectations influence the decision to enroll in nursing college? SCHWERI, Juerg; HARTOG, Joop</p>	<p>Paper Session 2C: Labor market, career and wages Location: Room 214</p> <p>How do former homemakers respond to training or workfare? Impacts of activation policies for women with means-tested benefits in Germany KOPF, Eva; ZABEL, Cordula</p> <p>Wage inequality and returns to workplace training for men and women employees. A Quantile Regression analysis. ICARDI, Rossella</p> <p>Career decisions after an apprenticeship in healthcare. The role of the training institution. TREDE, Ines; KRIESI, Irene</p>
11:45am - 1:15pm	<p>Lunch Location: Piazza</p>		

1:15pm - 2:45pm	<p>Symposium 3: Crossing boundaries and connecting learning experiences in vocational training programs: empirical evidence and methodological consideration Location: Aula Discussants: Sanne F. Akkerman (Utrecht University) & Päivi Tynjälä (University of Jyväskylä) Chair: Laurent Fillietaz (University of Geneva)</p> <p>Negotiating social legitimacy in and across contexts: examples from apprentices in a « dual » training system LOSA, Stefano</p> <p>“I am your assistant”: Analyzing interactional positioning to identify trajectories of professional socialization among VET students DURAND, Isabelle; FILLIETTAZ, Laurent</p> <p>Work as an object of analysis in an across training spaces: The case of the vocational training of early-childhood educators in the Swiss VET context FILLIETTAZ, Laurent; TRÉBERT, Dominique</p>	<p>Symposium 4: Helping youth at-risk entering into the working world in different cultural contexts of Switzerland and South Africa Location: Room 214 Discussant: Ellen Laupper (SFIVET) Chairs: Jace Pillay (University of Johannesburg) Lars Balzer (SFIVET, University of Johannesburg)</p> <p>How to help young people at risk entering the world of work in Switzerland: The example of the project LIFT BALZER, Lars</p> <p>Benefits of Vocational Educational and Training (VET) for South Africa and its youth at risk PILLAY, Jace</p> <p>Advocating for the need to introduce Technical Vocational Education and Training (TVET) at South African Primary Schools DIALE, Boitumelo</p>	
2:45pm - 3:15pm	<p>Coffee-Break Location: Piazza</p>		
3:15pm - 4:00pm	<p>Keynote 3: Sanne F. Akkerman (Utrecht University, the Netherlands) Location: Aula Crossing boundaries to develop skills and being skilled in boundary crossing</p>		

4:00pm - 5:15pm	<p>Paper Session 3A: New media and video analysis in VET Location: Aula</p> <p>Crossing the boundaries of schools and workplaces by leveraging the convergence of mobile and social media. Tentative considerations from an apprenticeship study from the Global South. PIMMER, Christoph; GRÖHBIEL, Urs; GWANDIWA, Daniel; FRIEDLI, Michael</p> <p>Social regulation in small groups learning activities: an experience with apprentice chefs. MOTTA, Elisa; CATTANEO, Alberto; GURTNER, Jean-Luc</p> <p>Promoting Reflection at the Workplace: Combining a Smartphone App with Coaching Groups KÖNINGS, Karen D.; VAN BERLO, Jean; KOOPMANS, Richard; HOOGLAND, Henk; SPANJERS, Ingrid; TEN HAAF, Jeroen; VAN DER VLEUTEN, Cees; VAN MERRIËNBOER, Jeroen</p>	<p>Paper Session 3B: Career outcomes of VET Location: Room 214</p> <p>The effect of increasing school-based education of apprentices SIEGENTHALER, Michael; BEERLI, Andreas; BOLLI, Thomas</p> <p>Does VET in schools help or hinder access to higher education? TABASSO, Domenico; POLIDANO, Cain</p> <p>Horizontal Mismatch and Vocational Education EYMANN, Annina; SCHWERI, Juerg</p>	<p>Paper Session 3C: History and Politics of VET Location: Room 117</p> <p>From Apprenticeship to the Dual System of Vocational Education: The Discursivation of the “Freedom to Choose Problem” in the Context of Reforms of the System of Vocational Education in Switzerland (1960-2010) BERNER, Esther; BÜCHEL, Karin; ZEHNDER, Lea</p> <p>Back to the roots? Institutional Legacies and the Creation of Collective Skill Formation in Liberal Market Economies BUSEMEYER, Marius; VOSSIEK, Janis</p> <p>Political feasibility in Switzerland of a three-way cofinancing continuous vocational training demand-oriented model VOIROL-RUBIDO, Isabel</p>
7:00pm - 10:30pm	<p>Congress Dinner: Restaurant Casino, Bern</p>		

PROGRAMME OF FRIDAY, 27TH MARCH 2015

9:15am - 10:30am	<p>Paper Session 4A: Learning, teaching and careers in VET Location: Aula</p> <p>Combining teaching with other jobs: a possible resource to face professional challenges in VET? Preliminary data from a Swiss study. SAPPA, Viviana; BOLDRINI, Elena; APREA, Carmela</p> <p>The contribution of youth voluntary work to create a stimulating learning environment WEBER GUISSAN, Saskia; Dr. CORTESSIS, Sandrine</p> <p>Occupational career patterns over 30 years: Influences of family of origin, personality and life situation SCHELLENBERG, Claudia Patricia; HÄFELI, Kurt; HÄTTICH, Achim; GROB, Alexander</p>	<p>Paper Session 4B: Skill formation in changing labor markets Location: Room 214</p> <p>Training networks as an innovative form of VET to foster a flexible and individualized profile of qualifications and competencies BIRR, Lorraine</p> <p>The relevance of training institutions for knowledge skills TIEMANN, Michael</p> <p>The relationships between Vocational Education and Training (VET), industry and innovation in Spain: An exploratory analysis OLAZARAN, Mikel; OTERO, Beatriz; LAVIA, Cristina; ALBIZU, Eneka</p>	<p>Paper Session 4C: Premature apprenticeship contract terminations and occupational stigmas Location: Room 117</p> <p>Retail apprentices occupational identification: identity work in light of a stigmatized occupation DUEMMLER, Kerstin; CAPRANI, Isabelle; FLAMIGNI, Elettra</p> <p>Premature apprenticeship contract terminations – the role and impact of organizational climate within the training company FORSBLOM, Lara</p> <p>The effect of trainers' beliefs on training quality and on prematurely apprenticeship contract terminations NEGRINI, Lucio</p>
10:30am - 11:00am	<p>Coffee-Break Location: Piazza</p>		

11:00am - 12:45pm	<p>Symposium 5: The importance of apprenticeship models for disadvantaged youths in an international comparison of Germany, Austria and Switzerland Location: Aula Discussant: Frank Musekamp (University of Bremen) Chairs: Lars Balzer (SFIVET), Marlise Kammermann (SFIVET)</p> <p>Factors influencing the success and the effects of training occupations of two years duration - example: car service mechanic BECKER, Matthias; SPÖTTEL, Georg</p> <p>Two-year apprenticeship in Germany: What is its relevance and which role does it play within dual VET system? GRANATO, Mona; KROLL, Stephan</p> <p>Inclusive Vocational Training (IBA) in Austria - An Analysis of Career Pathways DORNMAYR, Helmut</p> <p>Occupational careers in Switzerland: what influences them? - Occupational pathways of young professionals with Swiss Federal VET Certificate KAMMERMANN, Marlise; BALZER, Lars; HÄTTICH, Achim</p>	<p>Symposium 6: Gender-segregation in VET: Causes and development Location: Room 214 Discussant: Regula Julia Leemann (Fachhochschule Nordwestschweiz) Chairs: Irene Kriesi (SFIVET), Christian Imdorf (University of Basel)</p> <p>Gender segregation in the German VET sector - do gender differences in vocational choice result from the anticipated reactions of other? EBERHARD, Verena; MATTHES, Stephanie; ULRICH, Joachim Gerd</p> <p>The role of secondary school types for the development of gender-typical occupational aspirations BASLER, Ariane; KRIESI, Irene; IMDORF, Christian; WOLGEMUTH, Karin</p> <p>Education systems and gendered transitions into upper and post-secondary educational programmes: A three-country comparison of Germany, Norway & Canada IMDORF, Christian; EBERHARD, Verena; HEGNA, Kristinn; DORAY, Pierre</p> <p>Feminization of occupations in the German system of vocational training: The role of job deterioration and job growth reconsidered HAVERKAMP, Katarzyna; RUNST, Petrik</p>	<p>Symposium 7: Mathematics in VET - Between academic and workplace learning contexts Location: Room 117 Discussants: Eveline Wittmann (Otto-Friedrich University), Hansruedi Kaiser (SFIVET) Chair: Ursula Scharnhorst (SFIVET)</p> <p>The relevance of mathematical competencies in industrial-technical professions and its predictive information for professional performances STEFANICA, Florina; NICKOLAUS, Reinhold</p> <p>Mathematics in VET- Between Academic and Workplace Learning: Conclusions in the Perspective on Vulnerable Adolescents and Young Adults BASENDOWSKI, Sven</p> <p>Boundary-crossing" in teacher professional development - two exemplary PD course concepts MAASS, Katja; REITZ-KONCEBOVSKI, Karen</p>
12:45pm - 2:00pm	<p>Lunch Location: Piazza</p>		
2:00pm - 2:30pm	<p>Best Paper Award Location: Aula</p>		
2:30pm - 3:15pm	<p>Keynote 4: Justin J.W. Powell (University of Luxembourg, Luxembourg) Location: Aula Boundary-spanning Education and Vocational Training Programs: From Institutional Permeability to International Cooperation and Model Transfer</p>		

ABSTRACTS OF PAPERS

Wednesday, 25/Mar/2015, 1:30pm - 3:00pm, Location: Aula

Symposium 1: Teaching and learning to teach in vocational education and training schools

Discussant: Fritz Staub (University of Zurich)

Chair: Jean-Louis Berger, Carmela Aprea (SFIVET)

The Impact of the First Year of Teacher Education on Vocational Teachers' Classroom Management

Céline GIRARDET, Jean-Louis BERGER, Cynthia VAUDROZ, Carmela APREA

SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland

Teacher education aims at guiding teachers towards classroom management practices and beliefs which promote or foster student motivation and engagement. The purpose of the present study was to examine the evolution of vocational teachers' classroom management-related beliefs and practices over the first year of teacher education. A vignette instrument inspired by the Problem in School Questionnaire (Deci et al., 1981), an adaptation of items from the TALIS (Jensen, Sandoval-Hernandez, Knoll, & Gonzalez, 2012), a scale adapted from various instruments (e.g., Shalter Bruening, 2010), as well as an adaptation of items from the Ohio State Teacher Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001) were administered twice (at the very beginning of teacher education and at the end of the first year) to 102 vocational education and training (VET) teachers. Repeated measures ANOVA showed an evolution towards significantly less controlling and structuring practices. Additionally, teachers tend to believe less strongly in the utility of promoting their students' extrinsic motivation and adhere less to a direct transmission view of teaching. Finally, their self-efficacy for engaging students during class time increased with the teacher education program. Hence, teacher education seems to impact teachers' beliefs and practices about classroom management. Implications of this study for VET teacher education and for further research will be discussed.

Educational and Professional Pathways of Commercial Vocational School Teachers of "Economics and Society" in the German-speaking Part of Switzerland

Franz EBERLE, Doreen HOLTSCH

University of Zurich

There are two main paths to become a Swiss commercial VET school teacher for the subject area of 'Economics and Society': an academic-oriented and a practical

oriented one. Until now, little is known about the genuine educational and professional pathways of teachers for the subject area of 'Economics and Society'. In an empirical research project, 94 teachers were asked about their biography and the perceived instruction in their classes. Instruction can be perceived along four basic dimensions: a) cognitive activation, b) constructive learning support, c) structuring, and d) class management. The teachers answered an online questionnaire, which was semi-structured concerning the biography and closed format for the perception of instruction. The analysis of the biographical data shows that the teachers' educational biographies are highly diversified. Nevertheless, the academic pathway is dominant as only 25% of the questioned participants decided to take the practical-oriented path. The chosen educational and professional pathway leads to a different perception of the instruction in 'Economics and Society'. The differences are even more predominant, if the teaching experience is taken into consideration.

Conception, Implementation and Evaluation of a Training Program on Professional Error Competence for German Pre-service Teachers

Eveline WUTTKE, Claudia KRILLE, Franziska Theresia BOULEY

Goethe University Frankfurt am Main, Faculty of Economics and Business Administration

A central facet of teachers' competence is their ability to identify student errors and to handle them adequately to foster students learning processes. We name this competence Professional Error Competence (PEC). It covers (1) knowledge about domain specific student errors, which is mainly based on content knowledge (CK), (2) strategies for handling these errors adequately (mainly PCK), and (3) beliefs about chances of learning from errors (Seifried & Wuttke, 2010). There is empirical evidence that teacher students and pre-service teachers knowledge on accountancy contents and on typical student errors as well as on adequate handling of student errors is in deficit (e.g. Berger et al., 2013; Türling, Seifried, & Wuttke, 2012). Therefore, training programs specifically focusing on the PEC might be called for. In this study, we develop, implement, and evaluate a training program promoting pre-service teachers' PEC. We aim to train CK and PCK in the field of accountancy within two different training groups. To evaluate the training program, a quasi-experimental design with two intervention groups and one waiting-control group is used. To evaluate the effect of the training program measures on the first two levels of Kirkpatrick's (1998) evaluation model are used: participants rated their satisfaction, the utility of the program as well as their own increase of knowledge. In addition, a knowledge test and video vignettes were used to assess the learning level. 193 pre-service teachers were trained. The final paper for the conference will present an in-depth analysis of the data identifying reasons for the small effects the training program resulted in as well as suggestions for modifications of the training content and structure.

Wednesday, 25/Mar/2015, 1:30pm - 3:00pm, Room 214

Symposium 2: Boundary-crossing' in vocational education and training

Discussant: Sanne F. Akkerman (Utrecht University)

Chair: Viviana Sappa (SFIVET)

Boundary crossing skills: a review study

Viviana SAPPA, Carmela APREA

SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland

The boundary crossing perspective offers a fruitful framework for interpreting the multi-contextual nature of vocational education as a continuous process of crossing the boundaries between different forms of knowledge, learning and expertise. However, a better understanding has to be developed about how individuals can effectively learn and act across the boundaries of schools and workplaces. We aim to contribute to the development of this understanding by investigating the concepts of "boundary crossing skills" with the final intent to carry out an operative definition of the dispositions to be promoted in order to optimise vocational students' learning at the boundaries of school and the workplace. Three research questions oriented the study: a) How are "boundary crossing" defined in the research literature?; b) Which components of these skills can be identified?; c) How can "boundary crossing" can be further conceptualised with respect to the specific characteristics of the VET context? To answer these questions, a systematic review study was carried out by adopting the following key words for selecting the literature: "boundary crossing skills", "polycontextual skills", "boundary crossing competence", "boundary crossing learning" and "boundary crossing AND vocat*". Three databases are used: ERIC, PsycINFO and Google Scholar. Preliminary findings show a multi-dimensional composition of "boundary crossing skills". In particular, eight types of boundary crossing skills were defined referring to three qualitatively components, here labelled as reflective, resituating and social-participating components.

Mentoring interaction at internship as a site for learning - insights on talk as social action.

Sirpa LAITINEN-VÄÄNÄNEN¹, Ulla TALVITIE², Minna-Riitta LUUKKA², Kirsti VÄNSKÄ¹

¹JAMK University of Applied Sciences, Teacher Education College, Finland;

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This paper focused on internship of higher education student as a boundary-crossing object between university and workplace learning. The study presented in this paper analysed ten video-recorded student – mentor feedback discussion sessions taking place during the internship of undergraduate physiotherapy students. The

purpose was to determine how 'professional learning' was discussed and co-constructed between a mentor and a student. Discourse analysis, as research approach, revealed that meanings related to student professional learning were constructed through four discursive constructions that were formulated according to the student's actions in the preceding practical learning situation i.e. patient treatment encounter. The discussions were observed to consist of analysis of the student's actions in patient encounters and of analysis of student's professional development during the internship. Nevertheless, no discussion was observed, in which the student's learning experiences were tried to theorise nor further transfer to other situations. Further observational research on the student's internship is evidently needed in order to understand and develop the role of internship and mentoring especially in supporting the knowledge constructions process as a boundary-crossing object.

Can a Technology-enhanced learning journal system be an effective boundary object in initial VET?

Alberto CATTANEO¹, Elena BOLDRINI¹, Elisa MOTTA¹, Jean-Luc GURTNER², Carmela APREA¹

¹SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland;

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Finding a way to foster the integration of different forms of knowledge and learning occurring across sites is an important challenge, which specifically applies to vocational education and training (VET), and especially in those "dual" systems, grounded on the alternation between a school-based and a work-based track. In these cases, apprentices often perceive a gap between the learning locations. Against this backdrop, boundary crossing constitutes a chance to integrate theory, practice and self-regulation. Such an integration can be facilitated by mediating tools (boundary objects).

The present contribution aims at showing how technology can provide an effective boundary object to foster boundary crossing in VET, in the form of learning journal systems. In particular, starting from the assumption that boundary crossing requires learners to reflect on ones' (and others') experiences in order to find ways to recompose pieces of knowledge and skills acquired across locations into a unique sense-making and meaningful whole, learning journals represent a good means towards this aim. We will use the label "technology-enhanced learning journal system" (TELJS) to indicate a web-based personal environment which learners use to collect, document and reflect on experiences, with the final aim of monitoring their learning and competence development.

Making reference to three longitudinal studies conducted in Switzerland with apprentice chefs, bakers, and commercial employees, we investigated the usability, usefulness and effectiveness of a TELJS in VET.

Result show that 1. TELJS is an easy-to-use object, 2. TELJS usefulness for con-

necting learning locations is perceived by both apprentices and teachers, and 3. TELJS use has effects on metacognitive and reflective skills development. This supports TELJS' potential to be a powerful boundary object.

Wednesday, 25/Mar/2015, 3:30pm - 4:45pm, Location: Aula

Paper Session 1A: Different learning contexts in VET

Teaching and learning in workplace settings: characteristics and interaction with the classroom instruction

DeLi SALINI

SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland

This article presents the results of exploratory qualitative research, forming part of a broader study funded by the Canton of Ticino and the Canton of Grisons on the "transfer of competences in the workplace». In particular, our research examined the teaching/learning approaches in four different apprenticeship contexts: agriculture, industrial mechanics, retail sales and social education.

Conducted between 2012 and 2013, the research involved interviews with 33 apprenticeship trainers and 22 learners doing apprenticeships in the areas mentioned above. Basing on the theoretical and methodological framework of the situated cognitive anthropology, we identified a few core themes associated with formal and informal aspects of workplace training and learning processes. We also observed the many different facets and responsibilities emerging from such training situations.

Of the numerous aspects considered, we should mention: the various approaches used to manage and guide training processes within companies; the important contribution that host companies make in helping young people to fine-tune their occupational choices; and the interactions between workplace training at host companies and other learning locations (i.e. classroom instruction at vocational schools and/or branch courses at branch training centers).

The discussion highlights the importance of assessing the specific features of workplace learning, first of all recognising the intrinsic characteristics of workplace learning and secondly encouraging the harmonisation of workplace learning at host companies with classroom instruction at vocational schools.

Boundary objects and learning documentation: an analysis of current practices across VET contexts

Valentina CARUSO, Alberto CATTANEO, Carmela APREA

SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland

Swiss Vocational Education and Training (VET) is a dual-track system where apprentices experience the alternation between a school-based and a work-based segments. Most of the Swiss VET ordinances include a paragraph on the learning documentation apprentices have to produce at the workplace during their training. However, the role of this "Learning and Performance Documentation" (LPD) seems to be still limited and confined at the workplace in the real practice.

Our vision and ambition is that the LPD can support the articulation of different pieces of knowledge among VET locations, helping apprentices to be boundary crossers. This study intends then to shed light on the current practices and issues related to the use of the LPD in the Swiss VET system. Furthermore, it intends to clarify if a web-based LPD could offer an additional value in helping to bridge the gap among VET learning locations. N=29 semi-structured interviews were conducted in Ticino with stakeholders from all the main actors of the Swiss VET system for each main VET domain (Industrial & Handicraft, Commerce, Health & Social Care). Findings show different conceptions of the meaning and the functions of the LPD both within and across professions. Furthermore, most stakeholders agree to see the potential of a web-based LPD both to overcome current perceived problems and to facilitate the interaction among the learning locations.

Linking Experiences from different learning contexts within initial Vocational Education and Training

Nicole FURLAN, Jean-Luc GURTNER

University of Fribourg, Switzerland

Research about bridging the gap between theory and practice, which often is described as "reality shock", has a long tradition in different disciplines and especially in the field of educational research (Bromme & Tillemma, 1995; Patry & Giordano, 2006; Schön, 1984). With respect to initial Vocational Education and Training some countries have implemented a dual vocational educational system offering multiple learning contexts for apprentices in parallel, in order to decrease the gap. The Swiss VET system in particular, involves different partners and embraces the learning contexts of workplace, school and intercompany courses. Linking experiences from different learning contexts within VET, however, remains one of the most important challenges within dual systems of initial VET (Achtenhagen, 1995; Collins & Tynjälä, 2003; Tangaard, 2007; Schaap et al., 2012). As different partners are involved in the vocational education and training of apprentices in Switzerland and relatively few empirical studies exist on the dynamics between the three partners, a primary research study was realized in the context of Swiss VET. Within the

Leading House „Technologies for Vocational Education and Training“ an interview study has been conducted in order to investigate two main aspects for linking experiences from different learning contexts: (1) the potential of the instrument “learning documentation” as a tool to link experiences and its current use in different professions and, (2) the perception of the interplay between different partners by professional associations. Within the contribution the interview study will be presented in detail: analyses and results will be presented for both aspects. Perspectives will be given for future research focusing on linking experiences between different learning contexts.

Wednesday, 25/Mar/2015, 3:30pm - 4:45pm, Location: Room 117

Paper Session 1B: Training and labor market reforms in VET

Can EU-funded management and professional training programmes increase firm performance? Regression-discontinuity evidence

Pedro MARTINS

Queen Mary University of London, United Kingdom

The improvement of management practices at private firms in less-developed regions can be an important driver of economic convergence in Europe. This realisation has prompted a large amount of funding, namely in the context of the European Union structural funds. However, there is no evidence so far about the causal impact of existing large-scale management training programmes.

This paper evaluates the effects of a programme of this type, supported by the European Social Fund, and implemented in Portugal since 2008. The programme, «Training for Innovation and Management», with a budget of over 300 million euros, funded a number of activities, including professional training of blue-collar workers and management training of senior managers, focusing on areas such as innovation, marketing, supply chains, and international trade.

Our methodology is based on merged data, including both the scores of (approved and rejected) applications by firms for programme funding and information on firm performance for both types of firms over several years after the intervention started. Our analysis is based on a (sharp) regression discontinuity design, considered by many the next best alternative to an experimental design. In particular, we compare firms with similar scores in terms of their applications but that are either accepted or rejected given limited funding resources. Our data combines a matched employer-employee panel and administrative information of applications made and selected.

The results indicate that the performance of the firms that participated in the programme increased significantly, by over 25% after two years. These results hold both in terms of sales, sales per worker and equity. However, employment and earnings are not affected. We also confirm our main results from several robust-

ness checks, including from comparisons of the funded and unfunded firms several years before the programme started.

The Effect of Job Information on Gender Segregation. Evidence from a Labor Market Reform in Germany

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Gender segregation in occupational choice is a pervasive feature of labor markets in industrialized countries and contributes to persisting gender wage gaps. However, the literature has so far failed to analyze the role of information and uncertainty in creating gender segregation in the labor market. In this paper, we analyze the effect of a nation-wide labor market reform in Germany that provided job information to young people and investigate whether this job information was able to reduce gender segregation. More precisely, we use a difference-in-difference design to analyze the effect of establishing job information centers (JIC) in German counties. Using self-collected data on the exact opening dates of the 181 German JICs merged with data from the SIAB, the Sample of Integrated Labor Market Biographies, we calculate Gini segregation indices for all 440 German counties for the years 1975 till 2010. We then run county-level regressions of the Gini segregation index on treatment leads and lags providing evidence that the introduction of job information centers lowered the Gini segregation index significantly by about 3 percentage points in the long-run. We perform further analyses to assess whether the effect of JICs operates mainly through a change in the distribution of occupations or rather through a change in the share of women within occupations.

Do training vouchers increase adult learning? Evidence from a randomized information treatment

Katja GÖRLITZ^{1,2,3}, Marcus TAMM^{1,3}

¹RWI, Germany; ²FU Berlin, Germany; ³IZA, Germany

We analyze the impact of a large scale voucher program on training participation of employees by combining evidence from a field experiment providing an information treatment to a random sample of employees and from a comparison of training participation between actual program users and well-chosen comparison groups.

Wednesday, 25/Mar/2015, 3:30pm - 4:45pm, Location: Room 214

Paper Session 1C: General vs. Vocational education and social reproduction

Vocational education or general education? The impact of social origin, gender and immigrant background on the transition to upper secondary education

David GLAUSER

University of Bern, Switzerland

Research on the decision between vocational education and training and general education in Switzerland is mainly based on TREE-data. Since the observed TREE-cohort has left school more than a decade ago, it remains an open question, whether the impact of gender, immigrant background and social origin on the transition to upper secondary education has changed in recent years. Besides, the process from educational aspirations to the decision making at the end of lower secondary education cannot be analyzed adequately with TREE-data. In the presentation findings for the school leaving cohort from summer 2013 from German speaking cantons will be presented. The issue is a) What are the differences in the educational decisions made by sex, immigrant background and social origin? b) Can differences in the educational decisions be explained with the arguments of the subjective expected utility theory (SEU) of Boudon (1974), Erikson and Jonsson (1996), Breen and Goldthorpe (1997) and Esser (1999)?

Institutional structures shaping social reproduction by 'heating up' and cooling out': the role of VET in Austria

Lorenz LASSNIGG

IHS Vienna, Austria

The paper analyses the position of VET in the Austrian social structure, and the mechanisms of its contribution to reproduction and mobility. The focus is on the interaction between social origins and the differentiated and complex institutional structures, analysed from an institutionalist perspective. An important aspect is stability and change in these interactions, and how either is brought about. Institutional mechanisms of 'cooling out' and 'heating up' dynamics are explored as a theoretical base for the interpretation of the data.

The empirical basis for the analysis of social selectivity is PISA and LFS data; the development of the overall shape of the education system and of dropout and school leaving is analysed by education statistics.

(Un)intended Outcomes of Permeability in the Swiss VET

Jakob KOST

University of Fribourg, Switzerland

Since two decades, educational policymakers are discussing how to respond on the social selectivity of educational systems. They often highlight the potential of promoting permeability in vocational education and training systems, to reduce the effect of the social background on the educational success (e.g. Frommberger 2009) and the «skilled workers shortage» (e.g. Kost, 2015). For Switzerland, the permeability between the VET-System on the secondary II level and Universities of Applied Sciences are largely unexplored. The Federal Vocational Baccalaureate (FVB) is the key for entering a University of Applied Sciences (UAS). In this project I aimed to answer three questions: How can the achievement of a FVB be predicted, as a first step to realize a permeable path?, second, how can the entry on a UAS after the achievement of an FVB be predicted? And third, decreases this kind auf structural permeability the "skilled workers shortage". The presented path analyses – based on TREE-Data – show that the FVB provides a permeable path from VET to higher Education. Yet, the promise of a decrease of the social disparities couldn't be kept. Various different aspects of the socioeconomic origin of young people are still influencing educational choices, also in the VET sector.

Thursday, 26/Mar/2015, 10:30am - 11:45am, Location: Aula

Paper Session 2A: Learning in VET: writing and financial literacy

Developing a comprehensive financial literacy framework: Voices from stakeholders in European Vocational Education and Training

Carmela APREA, Seraine LEUMANN SOW

SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland

The promotion of financial literacy ought to be a core issue for Vocational Education and Training (VET) especially because apprentices at a young age start earning money through their respective apprenticeships and are required to manage their own money earlier than other young people do. This fact, in turn, presupposes the availability of an educationally sound framework for the diagnosis and promotion of financial literacy in VET. This task is addressed by the EU LLP Leonardo Da Vinci project "FLin€VET", which unified academics and VET providers from six European countries. To identify facets of financial literacy, in each country key actors in VET and the financial literacy debate were interviewed about their view of the construct. Whereas the theoretical background of the project is formed by an extended approach of financial literacy (i.e., including personal finance skills as well as understanding of relational and systemic financial issues and non-cognitive aspects of financial literacy), the analysis results point out that facets of personal

finance were dominant in the responses across the six countries and the different stakeholder groups. Within the individual-cognitive facet especially the area “planning and managing financial matters” with its various subcategories is prominently represented. Finally, the data also point to some differences between countries and stakeholder groups, even though these comparisons should be interpreted carefully due to the small sample. The findings form a basis for the development of a financial literacy framework in VET.

Learning from collaborative writing in healthcare education: Qualitative analysis of peer-feedbacks

Giulia ORTOLEVA, Mireille BETRANCOURT

University of Geneva, Switzerland

The cornerstone of vocational education is the alternation between formal teaching (school and intercompany courses) and practical training at the workplace. However, without explicit instructional intervention, the two kinds of knowledge may very well remain juxtaposed rather than integrated in coherent professional expertise. Previous research has shown that individual writing followed by peer commenting was a promising instructional mean to engage students in articulating practical and conceptual knowledge. This paper explored the types of written discussions the students developed in this activity, using criteria-based qualitative analysis of the text. Participants were 21 second-year apprentices of the Geneva school for health and social care assistants. The students had first to describe a critical situation they encountered in the workplace and share them with their classmates, who were asked to provide comments and new ideas, to which the author of the situation answered. An online collaborative writing tool (wiki) was used for writing and facilitating participants’ interactions. Three coding schemes were developed to analyse the different parts of the discussion. Four collaboration patterns were identified, differing in the way apprentices were able to provide each other with useful comments and build on the suggestions received (transactivity). On this basis, we proposed recommendations for the implementation of instructions based on collaborative writing, in particular regarding the prompting that should be given to students to promote productive interactions.

What makes students in vocational schools better writers? Promoting general writing competence in vocational schools: Results from an intervention study

Liana KONSTANTINIDOU, Joachim HOEFELE, Otto KRUSE, Sebastian DIETERICH
Zurich University of Applied Sciences, Switzerland

This paper describes a concept of teaching writing based on process approach such as is common in L1 contexts, but in this case connected with elements from German as a Second Language teaching. The concept, which should offer the teacher

a new understanding of writing and respond to the needs of apprentices with linguistically diverse backgrounds and biographies at vocational schools, was evaluated in an intervention study. Significant positive changes in writing competence of the experimental group were found after four months of intervention. Using further qualitative and quantitative data analysis the authors try to determine what exactly brought the change and to examine the relations between writing competence and motivational and psychological factors.

Thursday, 26/Mar/2015, 10:30am - 11:45am, Location: Room 117

Paper Session 2B: Educational choices, costs and returns of VET

Firms training costs in times of decreasing demand for apprenticeships - An analysis based on the BIBB-Cost-Benefit-Surveys 2007 and 2012/13

Felix WENZELMANN, Anika JANSEN, Gudrun SCHÖNFELD, Harald PFEIFER

Federal Institute for Vocational Education and Training, Germany

In this paper, we use the BIBB-Cost-Benefit-Surveys (BIBB-CBS) of the years 2007 and 2012/13 and additional data on the relation between the number of provided training positions and the number of interested people on the regional and vocational level to analyze the effect of a decreasing number of applicants on apprenticeship positions on the firms training costs. Therefore, we analyze first, whether there is a development from 2007 to 2012 concerning the costs of apprenticeship training and/or the productive contributions of the apprentices. Second, we take a closer look at the training situation in 2012/13 and especially at the relation between the market of apprenticeship places and the costs and benefits of training of the firms.

Preliminary results indicate that gross costs increased and productive contributions decreased marginally from 2007 to 2012.

Non-cognitive skills and human capital investments Competitiveness or locus of control?

Stefan C. WOLTER¹, Katharina JAIK²

¹University of Bern, Switzerland; ²University of Zurich, Switzerland

In Switzerland, pupils have to make important educational decisions before the end of compulsory schooling. They have to decide whether – given the required school grades – to continue their school career in an academically oriented baccalaureate school or in an apprenticeship. In the latter case they have to choose between more or less demanding occupations to learn and compete for vacant training positions. This paper analyses the educational intentions of a large sample of 8thgraders using a wide range of information, including measures of cognitive and non-cog-

nitive skills. Although the educational decisions are taken in a highly competitive environment, our measure of competitiveness has not much explanatory power once gender and other background information are controlled for. Conversely, locus of control is a strong statistically significant explanatory variable in all of our specifications.

Do wage expectations influence the decision to enroll in nursing college?

Juerg SCHWERI¹, Joop HARTOG²

¹SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland;

²University of Amsterdam, Netherlands

As Switzerland experiences a severe shortage of nurses, this paper investigates Swiss students' choice to undergo nursing college education and the impact of their ex ante wage expectations on college enrollment. The analysis contributes to a small yet rapidly developing literature that uses subjective expectation data to predict education choice. We surveyed a full cohort of healthcare trainees in their third year of training. The main result is that trainees (in upper-secondary education) who expected a higher return from nursing college (tertiary education) are more likely to enroll in college later on. This suggests a role for policies that increase returns from studying nursing to attract students to nursing. In addition, the results confirm that subjective wage expectation data is useful in modeling individual choice.

Thursday, 26/Mar/2015, 10:30am - 11:45am, Location: Room 214

Paper Session 2C: Labor market, career and wages

How do former homemakers respond to training or workfare? Impacts of activation policies for women with means-tested benefits in Germany

Eva KOPF, Cordula ZABEL

Institute for Employment Research, Germany

A major unemployment and welfare benefit reform took place in Germany in 2005. One objective of this reform was to more strongly encourage an adult worker model of the family for means-tested unemployment benefit recipients and to activate the formerly inactive. Much emphasis has since been given to assignments to active labor market programs. Our research question refers to the extent to which women in households with a formerly traditional division of labor actually can improve their chances of employment by participating in active labor market programs, thus potentially changing role allocations in the household. Our focus is on short training programs as well as workfare. For our analyses, we develop household types on the basis of women's and their partner's previous employment

experience and earnings. Accordingly, we differentiate between former male breadwinner households, female breadwinner households, dual earner households, as well as no earner households. Effects of active labor market programs are then compared between women in these different household types. We analyze large-scale administrative data, applying a timing-of-events approach. This allows controlling for selectivity in program entries. We find that program participations are particularly selective for women in former male breadwinner and no earner households. Nonetheless, even when accounting for selectivity in program entries, effects on entering employment are still considerably larger for women in former male breadwinner and no earner households than for women in former dual earner and female breadwinner households.

Wage inequality and returns to workplace training for men and women employees.

A Quantile Regression analysis.

Rossella ICARDI

University of Southampton, United Kingdom

Whereas several studies explore how schooling could influence the existing level of inequality, the link between workplace training and inequalities has been so far highly neglected. This work explores the potential of workplace training in reducing wage disparities by examining how training returns differ between men and women. Moreover, this investigation provides comparative evidence by performing a cross-country comparison between Germany and England.

Using data from the Programme of International Assessment of Adult Competencies (PIAAC), this paper performs quantile regression analyses to examine how training returns vary across the wage distribution of men and women. For both countries, the association between training and hourly wages varies across the conditional wage distribution. However, no significant differences exist by gender.

Career decisions after an apprenticeship in healthcare. The role of the training institution.

Ines TREDE, Irene KRIESI

SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland

Many studies highlight the role of firm characteristics and work rewards in explaining work satisfaction and career trajectories. Whether such structural aspects also matter for young people in firm-based vocational education and training (VET) has, to our knowledge, hardly ever been investigated. This paper attempts to fill this gap by investigating the role of the training firm in explaining educational and occupational choices of healthcare apprentices (Fachfrau / Fachmann Gesundheit "FAGE") after completion of upper-secondary vocational education and training.

Our analyses are based on a longitudinal sample of FAGE students in all parts of

Switzerland who were surveyed first in the last year of their apprenticeship (2010), and second one year after completion (2012). Descriptive and multivariate results show that structural characteristics of the training firm and individual work satisfaction matter for transitions into tertiary nursing education and for career decisions.

Thursday, 26/Mar/2015, 1:15pm - 2:45pm, Location: Aula

Symposium 3: Crossing boundaries and connecting learning experiences in vocational training programs: empirical evidence and methodological consideration

Discussants: Sanne F. Akkerman (Utrecht University) & Päivi Tynjälä (University of Jyväskylä)

Chair: Laurent Fillietaz (University of Geneva)

Negotiating social legitimacy in and across contexts: examples from apprentices in a « dual » training system

Stefano LOSA

University of Geneva, Switzerland

In this contribution, we focus on the relationship between trainers and apprentices within dedicated training centers and workplaces and wish to highlight how discursive and interactional processes can lead participants to establish legitimate, recognized and valued social positions within specific communities of practice. Within apprenticeship programmes in the context of Switzerland, the dominant form of training consists in a complex combination of school-based teaching and practice-based learning. In this particular context, apprentices are not only exposed to vocational knowledge in the range of contexts in which training takes places. They also encounter specific discourse practices and face numerous and often implicit or invisible expectations regarding the ways these discourses may be enacted and conducted. In a research program recently conducted at the University of Geneva and sponsored by the Swiss National Science Foundation (SNF), these various ideas have been elaborated and discourse analytic methods have been implemented to address vocational education issues. A contrasted data analysis based on audio-video recordings collected in the Geneva area shows how various apprentices in the field of automation may respond differently to the specific requirements set towards communicative tasks. Depending on the contexts in which they engage, complex social expectations emerge, regarding how apprentices should participate in interaction. By contrasting the contexts of a training centre and a workplace, we question the continuities and discrepancies between learning experiences and illustrate how the “crossing of boundaries” is very much a matter of interactional accomplishment by participants themselves. Our analysis

shows that such boundaries are not fixed and linked to specific places but rather constructed by the participants who give them contextual saliency. It appears that participants use discursive and multimodal resources in interaction to establish links between the different epistemological spaces and to cross borders.

“I am your assistant”: Analyzing interactional positioning to identify trajectories of professional socialization among VET students

Isabelle DURAND, Laurent FILLIETTAZ

University of Geneva, Switzerland

In this contribution, we pay attention to the multiple forms of transitions and boundary crossing experiences faced by students, when engaging in training interactions in the workplace. We address this issue in the context of a research project, which currently investigates early childhood educators' VET programs. Practicum sessions, planned within such a training program, comprise various training practices. Students have access to educational activities under the guidance of mentors, with whom they also accomplish weekly pedagogical interviews. In such workplace training contexts, students engage in a variety of communication settings, in which they endorse complex interactional positions. In this paper, we are interested in understanding how students position themselves across diverse training practices, and as time unfolds during training. To start, we will expose our theoretical perspective, at the intersection of linguistics and work and training sciences. This perspective contributes to the establishment and development of the field of linguistics applied to vocational education, by approaching training practices through the multimodal analysis of interactions. Consistent with such a perspective, empirical data were collected from students during their practicum, taking place in the first year of training. Professional activities conducted by these students in the presence of their mentors were audio-video recorded, and pedagogical interviews were audio recorded. When analysing these data, we identified unexpected Professional Events occurring during professional activities. These events often gave rise to elaborations during feed-back sessions and pedagogical interviews. In the paper, we will present data illustrating how participants' positions move when an event occurs, and how these transformations are reframed as training opportunities in pedagogical interviews. These results illuminate how students' positions in training interactions at work are complex and become vulnerable to change when an unexpected professional event occurs.

Work as an object of analysis in an across training spaces: The case of the vocational training of early-childhood educators in the Swiss VET context

Laurent FILLIETTAZ, Dominique TRÉBERT

Université de Genève, Switzerland

In this contribution, we aim at presenting some aspects of the complex learning experiences encountered by students in the field of early childhood education, when they engage in reflexive thinking about their “activities” in different settings such as vocational schools and workplaces. In particular, we wish to show how work activities become a central object of analysis in both school-based teaching and workplace learning environments, and how these processes of work analysis can be seen as resources for boundary crossing in vocational education pathways. By adopting a situated and interactional perspective on vocational training, we will point how, in both places, processes of activity interpretation emerge among participants engaged in interaction. Two main ideas will be presented and illustrated empirically. The first idea consists in considering that reflections that actors construct about the activities they are engaged in can be designated and described as “interpretative spaces of activities”. The second idea consists in observing that these spaces unfold in a variety of contexts and not only in formal education and training situations. Based on audio-video recordings of naturally occurring training practices as they take place in a vocational school and in the context of practicums, the paper will analyse how a specific and typical activity – that of accomplishing consistent “transitions” between educational activities involving children – becomes an object of analysis about which students enrolled in a training program in early childhood education are invited to reflect when interacting with vocational teachers at school and/or mentors in the workplace. Our results show that students produce similar and complementary sorts of reflexive elaborations about “transitions” during pedagogical interviews at work and during training sessions at school. These continuities can be seen as resources for connecting the diverse learning experiences encountered during training pathways.

Thursday, 26/Mar/2015, 1:15pm - 2:45pm, Location: Room 214

Symposium 4: Helping youth at-risk entering into the working world in different cultural contexts of Switzerland and South Africa

Discussant: Ellen Laupper (SFIVET)

Chairs: Jace Pillay (University of Johannesburg) Lars Balzer (SFIVET, University of Johannesburg)

How to help young people at risk entering the world of work in Switzerland: The example of the project LIFT

Lars BALZER

SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland

In Switzerland, the educational policy aims to ensure that 95 % of all youths gain a post-obligatory education qualification at upper secondary level (Swiss Conference of Cantonal Ministers of Education 2006). As vocational education is the prevailing form of upper secondary post-compulsory education in Switzerland with two thirds of young people enrolling in VET programs (SERI, 2014), here is one good place to invest energy to reach the 95% criteria, because there is a too high number of youths leaving schools who are not able to find an apprenticeship. According to statistics not less than 6% of the total students population – about 9000 young people in Switzerland in 2009 - belong to this group (BBT, 2009).

Several projects have been developed and implemented to help such youth at risk, the program LIFT (“Leistungsfähig durch individuelle Förderung und praktische Tätigkeit” - Performance by individual support and practical activity) being among them.

This paper describes the design of the program LIFT and presents promising results from various evaluation studies about LIFT, addressing evaluation steps like the following:

- Asking participants and stakeholders about their satisfaction, opinion and experiences about project effects.
- Looking into project details and checking compliance to programme goals.
- Measuring, among others, the development of generic competences of LIFT-participants.
- Checking out in detail, where LIFT-participants find their place in the world of work after the program is finished.
- Comparing solutions after school-to-work transitions with predefined project goals.
- Doing a follow up several months and again 3.5 years later to check sustainability of the transition.
- Comparing LIFT-transition with official statistical material about transition-rates of non-LIFT young people.
- Comparing LIFT-participants with a control group outside LIFT.

Benefits of Vocational Educational and Training (VET) for South Africa and its youth at risk

Jace PILLAY

University of Johannesburg, South Africa

In South Africa, there are three main categories of education, namely general, vocational and vocationally-oriented education. General education, which forms

the main domain, usually prepares learners for general life as well as for higher education studies. Vocational education, provided in further education and training (FET) colleges, prepares learners to be skilled in specific occupations so that they could be immediately productive in the workplace. Vocationally-oriented education, which could be part of either the school or FET system, prepares learners in specific occupations but they still need further training before entering the workplace. South Africa would do well by investing in the last two education categories because of its critical shortage of technical and artisan skills. However, this has been a challenge due to the historical stigmatisation of vocational education. This paper provides an understanding of youth at risk in South Africa and argues that VET could benefit the South African economy as well as youth at risk in preparing them for the world of work. Before embarking on a mixed methods study the author presents research that identifies the challenges confronting VET in South Africa and possible lessons that could be learned to make it a reality.

Advocating for the need to introduce Technical Vocational Education and Training (TVET) at South African Primary Schools

Boitumelo DIALE

University of Johannesburg

South Africa is currently struggling with the high rate social challenges such as juvenile crime, poverty and unemployment. These challenges have had a negative impact not only on the economy of the country, but also on the education and training of children and youth in general. Most of all, the scourge of HIV and AIDS has left many teenagers in an unfortunate position of managing Child Headed Households (CHH). This has led to a special group of youth at risk, most of them having to either find part time jobs after school or leave school to go seek employment to support their sibling. They then find themselves in an unfortunate situation where they do not have any skills to support them to find any form of employment, leading to high rate of youth unemployment and possible involvement in antisocial and criminal activities as a form of survival. To address these challenges, South Africa needs currently invest in efficient job training through technical and vocational training as one of the core means of strengthening sustainable economic development. However, starting this at grade 9 when learners are exiting the compulsory school going phase is rather late. There is therefore a need to investigate the importance of introducing technical vocational education and training even at an earlier age, meaning we need to relook at how such interventions can be started as early as in grade 6 to reduce the challenges of youth unemployment and to improve the process of upskilling the nation.

Thursday, 26/Mar/2015, 4:00pm - 5:15pm, Location: Aula

Paper Session 3A: New media and video analysis in VET

Crossing the boundaries of schools and workplaces by leveraging the convergence of mobile and social media. Tentative considerations from an apprenticeship study from the Global South.

Christoph PIMMER, Urs GRÖHBIEL, Daniel GWANDIWA, Michael FRIEDLI
FHNW, Switzerland

This paper investigates the affordances offered by the increasing convergence of mobile and social media to connect work-based and school-related learning practices. To understand the meaning of these developments for apprenticeship education in the Global South, a small-scale study that followed the principles of design-based research was conducted in a technical college in Zimbabwe. In a second step, these tentative empirical observations were connected with related studies and discussed through the lenses of workplace learning and apprenticeship theory. Particular attention was paid to the interplay of cognitive processes, social interaction and the formation of identities.

Social regulation in small groups learning activities: an experience with apprentice chefs.

Elisa MOTTA¹, Alberto CATTANEO¹, Jean-Luc GURTNER²

¹SFIVET, Switzerland; ²University of Fribourg, Switzerland

Recent trends in the debate on learning sciences pay attention to the social dimension of self-regulated learning. The present study aims at investigating the process of learning regulation in the context of collaborative group activities in the peculiarity of Swiss Vocational Education and Training system. We involved 22 apprentice chefs from the Vocational Centre of Trevano (Canton Ticino, Switzerland) for one semester (January 2012 – June 2012). We videotaped apprentices while performing problem solving activities related to their professional learning in groups of 3 to 4 persons. Through nVivo software, we analysed protocols using a fitting coding-scheme inspired on Volet, Summers, and Thurman (2009) and Rogat and Linnenbrink-Garcia (2011). We analysed how the nature of the content discussed within the groups and the form of regulation observed (four typologies of episodes: respectively high and low level content individual regulation and high and low level content co-regulation) combined each other.

The quantitative analysis on regulation episodes and the preliminary qualitative analysis on two extracts seem to show meaningful results: groups engaged in problem solving activities regularly operate social regulation of their functioning and proves that content processing levels and metacognitive processes are closely related within such episodes.

Promoting Reflection at the Workplace: Combining a Smartphone App with Coaching Groups

Karen D. KÖNINGS, Jean VAN BERLO, Richard KOOPMANS, Henk HOOGLAND, Ingrid SPANJERS, Jeroen TEN HAAF, Cees VAN DER VLEUTEN, Jeroen VAN MERRIËNBOER

Maastricht University, Netherlands

Purpose

Reflection on experiences at the workplace is necessary for professional development. Support is needed to stimulate reflection, as learners do not automatically reflect. Reflection requires awareness of valuable moments for learning and thoughtful analyzing them later on. This study aims to promote both aspects of reflection in medical residents. Reflection was focused on general competencies, like communication, collaboration, patient safety, ethics, and professionalism.

Method

Catching valuable moments at work was promoted by a newly developed smartphone app for straightaway registering them as a note, audio recording, picture or video. For supporting deep reflection of caught learning moments, coaching groups were organized every fortnight. In a 2x2 experimental design, 64 residents were randomly assigned to one of four conditions: only app, only coaching, app plus coaching, control. Effects on reflection and frequency of capturing learning moments were investigated.

Results

Results showed positive effects of both app and coaching on change in reflection between pretest and posttest: Self-reported learning gain from work was higher for app-users, and alertness and performed learning activities on general competencies improved by coaching groups. An interaction effect was found for alertness with highest scores in the app-plus-coaching condition. Number of registered reflections tended to be higher for app-users.

Conclusions

The app for learning moments increases capturing of learning moments and reflection. Coaching groups for discussion of experiences are essential for reflecting on general competencies. Reflective alertness is best stimulated by a combination of support measures. A simple mobile app for registering learning moments has high added value for learning from work.

Thursday, 26/Mar/2015, 4:00pm - 5:15pm, Location: Room 214

Paper Session 3B: Career outcomes of VET**The effect of increasing school-based education of apprentices**

Michael SIEGENTHALER, Andreas BEERLI, Thomas BOLLI

ETH Zurich, Switzerland

We study the differences in how formal, school-based education and occupation-specific training at the workplace differ in their effects on employability, occupational mobility, and educational attainment of apprentices later in life. Does occupation-specific education improve labour market chances of young apprentices but comes at the cost of decreased employability when they are old? Are the relative differences particularly sizable for apprentices that were trained in occupations that became obsolete later on, e.g. due to routinization? We study these questions exploiting an educational reform which led to the gradual introduction of a school track in Switzerland 1968-1978 that increased the extent of formal education for able apprentices at the cost of a reduction in occupation-specific training in firms, leaving the quantity of schooling unchanged. We address biases due to ability-based sorting into the school track by exploiting regional variation in the numbers of vocational schools offering the new track.

Does VET in schools help or hinder access to higher education?

Domenico TABASSO¹, Cain POLIDANO²

¹University of Geneva, Switzerland; ²University of Melbourne

Taking a vocational and training (VET) course while at school can influence the likelihood of accessing University in different ways. For example the 'real world' context used to teach vocational subjects may improve the learning experience of less academic oriented students and their university entry scores. But taking a VET subject may also hinder access to university: students who intend to go to university who choose a VET subjects may focus their efforts on attaining a qualification and neglect other subjects. In this paper we use rich datasets from the Australian State of Victoria to investigate the efficacy of VET programs that count towards university entry by examining the relationship between taking VET courses and attaining university entry. Our results indicate that students who intend to go to university and who complete a VET subject while at school experience on average an estimated 5% reduction in university entry scores. This reduces the chances of receiving a university offer from 79% to 67% on average. However, part of this reduction in the scores is due to the scaling methods employed in the determination of the university entry scores and can therefore be limited by using alternative scaling methodologies.

Horizontal Mismatch and Vocational Education**Annina EYMANN, Juerg SCHWERI**

Swiss Federal Institute for Vocational Education and Training, Switzerland

In this paper, we analyze horizontal mismatch in Switzerland defined as a mismatch between the type of skills acquired by students and the skills required for their job. We investigate the argument in the literature (Nordin, Persson, and Rooth, 2010) that the more specific an education system is, the higher are the wage penalties due to horizontal mismatch. Switzerland is an ideal case to test this hypothesis because it relies heavily on vocational education and training. The data stems from the longitudinal Swiss Household Panel in the years 1999 to 2012 and contains subjective and objective measures of mismatch. Controlling for time-invariant heterogeneity in fixed effects regressions, the wage penalty for self-reported horizontal mismatch is 7% for women and 8.5% for men. However, if we compare learned and current occupation as an indicator of horizontal mismatch, results differ between genders: Not working in a learned occupation is harmful on average for women (-10%), but not for men. Overall, the wage penalties found are similar for workers with general and vocational education background.

Thursday, 26/Mar/2015, 4:00pm - 5:15pm, Location: Room 117

Paper Session 3C: History and Politics of VET**From Apprenticeship to the Dual System of Vocational Education: The Discursivation of the "Freedom to Choose Problem" in the Context of Reforms of the System of Vocational Education in Switzerland (1960-2010)****Esther BERNER^{1,2}, Karin BÜCHEL¹, Lea ZEHNDER¹**¹University of Zurich, Switzerland; ²University of Potsdam, Germany

The goal of our analysis is the reconstruction of the discursivity of the freedom to choose problem in the context of reforms of the system of vocational education in Switzerland in the years 1960-2010. During this period of time vocational education was incorporated into the overall educational system in Switzerland. This is the most significant reform of vocational education, because we assume that this integration and differentiation process is a condition sine qua non for the ongoing prioritisation of apprenticeships in Switzerland.

Starting out from our project (SNF) "From master apprenticeship to the dual system of vocational education. On the development of and enforcement of the dual system in Switzerland in the context of educational expansion (1960-2010)" our analysis distinguishes three phases: 1. 1960s/1970s, further professional training offensive (keyword: mobilisation of stocks of the gifted); 2. 1970s/1980s, first differentiation of vocational training in the context of the critical-emancipatory discourse on the disadvantaging of female vocational training graduates in comparison to female

graduates of general education courses; 3. After 1990, further differentiation and finally the integration of vocational education into the overall educational system. Concerning its theoretical background, the analysis is oriented at historical institutionalism. In concrete terms, the positions of the main actors of vocational education in Switzerland are supposed to be identified and the discursive negotiation processes are supposed to be reconstructed. As sources there serve analyses and statements from the Federal Government (as well as from the relevant commissions), from the Cantons and from organisations from the world of work, as well as other documents relevant for the discursivation of the freedom to choose problem, coming from professional organisations and scientific circles.

Back to the roots? Institutional Legacies and the Creation of Collective Skill Formation in Liberal Market Economies**Marius BUSEMEYER, Janis VOSSIEK**

Universität Konstanz, Germany

A pressing question of current discussions in vocational training is how far models of training are transferable from one national institutional context to another. This paper argues that although institutional legacies are important in shaping policy choices, significant reforms and institutional transformations are possible under specific conditions. We demonstrate this by studying the emergence of collective skill formation regimes in Liberal Market Economies. Here, common wisdom would lead us to expect that collective skill formation should not be sustainable in the long term, because the market-oriented character of the political economy prevents collective approaches to human capital investment. However, studying two LMEs, Ireland and Britain, since the 1980s, we find that Ireland has moved towards collective skill formation, whereas Britain has transformed VET from a collective skill formation institution towards an employment policy program, complemented by a training market.

Our explanation for these divergent development centres on the role of partisan governments: they have preferences not only with regard to specific policies, but also with regard to how the political process should be organized and how different types of organized interests are represented in policy-making. The Thatcher government adopted a „class-war“ approach by deliberately designing policies that reduced the political influence of unions, whereas the Irish government adopted a „social partnership“ approach, supporting and facilitating cross-class compromise in the reform of VET. These decisions in the critical phase of the 1980s shaped the menu of options for subsequent governments: In the 1990s, the corporatist model proved to be more sustainable in creating collective skill formation, whereas the British system remained stuck in a „voluntarist“ system with limited employer involvement. In conclusion, while institutional legacies matter and partly explain the limited role of VET for skill formation in LMEs, even in unlikely settings politics play a crucial role in transforming training.

Political feasibility in Switzerland of a three-way cofinancing continuous vocational training demand-oriented model

Isabel VOIROL-RUBIDO

Université de Genève, Switzerland

The results which would be presented refer to the political feasibility of a three-way continuous vocational training (CVT) demand-oriented financing model involving employees, employers and public authorities and supporting a social drawing right to train to every employee.

They refer to part of a research which took place in Switzerland during the legislative CTV worksite background, concerning CVT financing. This part of the research applies a qualitative methodology consisting in a field-survey supported by semi-directive individual interviews to a dozen of main CVTS Swiss national partners. Those interviews have been analyzed in a comprehensive way.

The acceptance chances of our three-way CVT cofinancing demand-oriented model which involves employees, employers and public authorities are almost hopeless in Switzerland at the moment. The main reasons are the non-pertinence of a demand-oriented public financing in case of low-educated people, the training responsibility which must remain individual, the necessity to remain CTV close to labour market needs and the pertinence to combine demand and offer-oriented financing in order to reach a wider part of workers.

Friday, 27/Mar/2015, 9:15am - 10:30am, Location: Aula

Paper Session 4A: Learning, teaching and careers in VET

Combining teaching with other jobs: a possible resource to face professional challenges in VET? Preliminary data from a Swiss study.

Viviana SAPPA, Elena BOLDRINI, Carmela APREA

SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland

A wide consensus about the stressful nature of the teaching profession has been reached and an extensive literature has been developed in the last decades concerning various categories of teachers and their specific challenges and resources. However, there is a lack of knowledge dealing with vocational school teachers (VET). The present study is part of a wider quali-quantitative research project aiming to fill this gap by investigating threatening challenges, protective resources and professional well-being of VET teachers in Switzerland. Based on previous findings derived from the qualitative phase of the project (interview study), the present study aims to explore the possible protective role of combining teaching profession with other jobs with respect to VET teachers' professional well-being. Data of perceived threatening factors, professional well-being and job conditions (only teacher; teaching activity combined with another job close to the field of teaching; teaching

activity combined with another job in a completely different field with respect to teaching subject) were collected by questionnaire on 604 VET teachers in Canton Ticino. Data analysis included one-way ANOVA and multiple regression analysis. Preliminary findings showed teachers who combine teaching with another professional activity as being less exposed to threatening factors. In addition, a lower number of threatening factors seemed to undermine the professional well-being of this population. Data will be interpreted in relation of the possible role of combining teaching with other jobs as a resource to face professional challenges.

The contribution of youth voluntary work to create a stimulating learning environment

Saskia WEBER GUIBAN, Sandrine CORTESSIS

SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland

This research addresses the question of young people who are involved in voluntary activities. In fact, we assume that voluntary work provides opportunities for developing specific skills which are valuable elements for future employment. Our research aims to expand our understanding on how, when, and in which circumstances youth voluntary work can be a fruitful and a stimulating learning environment.

40 semi-structured interviews have been conducted with young people aged 16 to 25, who are attending school, apprenticeship, or are in transition. They are all volunteers in various non-profit organisations.

Our first results show that the impact of the resources afforded by the organisations for the young volunteers coupled with the willingness of young people to engage in voluntary activities, make visible the fact that voluntary work can be considered as an interesting way to learn and develop skills which are not necessarily taught at school. Voluntary work provides access to construct experience, to act and to interact in a variety of situations, to practice with others, to achieve collective goals and finally is a safe place where mistakes can be tolerated. These collective and targeted experiences are mediated by communities, groups, pairs, or more experienced partners, and thus offer a smooth transition between school and work. For these reasons, voluntary youth work seems to be a valuable way to understand how young people engage in activities and at the same time learn.

Occupational career patterns over 30 years: Influences of family of origin, personality and life situation

Claudia Patricia SCHELLENBERG¹, Kurt HÄFELI¹, Achim HÄTTICH¹, Alexander GROB²

¹Hochschule für Heilpädagogik, Switzerland; ²University of Basel, Switzerland

Results from different life-course studies show, that vocational development is

influenced by the interplay of various factors such as personal skills, personality and socio-demographic background (Schoon, Martin, & Ross, 2007). Occupational career patterns can be described in several ways: Mobility in occupational status, occupational change, workload (fulltime or part-time), interruptions of the career, and others. This study will discuss questions concerning relevant predictors of career patterns: How stable or unstable are career patterns from school to middle adulthood? What kind of job changes do we see? To what extent are early influences in adolescence relevant for later career development and success? The data base for the analyses is the Zurich Longitudinal Study „From School to Middle Adulthood“, which encompasses ten surveys and covers the 15th to the 49th year of life. Analyses are based on a Swiss representative sample of 485 participants, who collaborated in the study for over 30 years. As methods we used latent class analysis to identify career patterns and predictors. We expect that the career paths of men and women are different. Men will change more often their occupational status and display more “upward mobility” than women. Women show more interruptions in their career and as a consequence of that more “downward mobility”. So far analyses have been calculated for career success (upward mobility) at the age of 49: These results show that the individual situation over the life course (for example interruptions in the career) and level of education play an important role, but also factors from adolescence such as social origin and personality traits are significant.

Friday, 27/Mar/2015, 9:15am - 10:30am, Location: Room 214

Paper Session 4B: Skill formation in changing labor markets

Training networks as an innovative form of VET to foster a flexible and individualized profile of qualifications and competencies

Lorraine BIRR

University of Applied Sciences of Northwestern Switzerland

During the past decades flexibility has become a main characteristic of labour markets in western developed countries one the hand and a central principal of the organization of working processes on the other hand. Along with these structural and organizational changes, a new profile of qualifications and competencies, which can be characterized as individualized and flexible, is experiencing an ongoing increase of importance in the labour market.

In contrast to these developments, the structural elements of the dual VET system, the principles of organizing training processes and the characteristics of the provided profile of qualifications and competencies has mainly stayed unchanged. As a result of this persistency of orientation, the claim of the dual VET system to foster qualifications and competencies, which allow employees to manage the requirements of their professional life is increasingly challenged. Training Networks – a

new organizational form of dual VET – promise to overcome these critiques.

The proposed contribution investigates the potential of Training Networks to provide a profile of qualifications and competencies, which corresponds to the challenges employees are confronted with today. The paper refers to a single case study, which is based on interviews and document analysis. The French sociology of conventions serves as the theoretical framework of the study. Referring to structural and organizational changes within a specific vocational field of the service sector, my contribution explains, why today different qualifications and competencies are required. Furthermore it shows, how different elements of the network structure of Training Networks allow to foster this new profile of qualifications and competencies.

The relevance of training institutions for knowledge skills

Michael TIEMANN

Federal Institute for Vocational Education and Training, Germany

Questions of permeability are, at their core, bound to specific knowledge- and skill-domains, or least to specific occupations as skills are domain-specific, except for those few we tend to call “cross-sectoral” or “soft”. If we were to determine how people are best trained for their working life, meaning: how they would best be equipped with the necessary skills, we would have to do the same analysis for every occupation(al field) or profession(al domain) we are interested in. This is highly problematic, because most occupations (at least in German-speaking countries) are accessed only through a specific education, either in firms, the dual system, vocational full-time schools, academies or universities. Also, occupational positions are mostly accessed through an occupational certificate: job openings are advertised by searching for workers with specified occupational qualifications. Instead, I propose a way to assess the relevance of learning institutions for obtaining the knowledge-skills people need at work.

Thus, it will be possible to assess the relevance of individual qualifications (and with them, learning institutions) for working as one of the four types of knowledge worker (or, in the dichotomous case: working in a job with high knowledge requirements), controlling for knowledge domains (as in occupational fields) and qualification requirements. It links sociological theories of knowledge hermeneutics with working situations, working characteristics and occupation-specific characteristics.

The relationships between Vocational Education and Training (VET), industry and innovation in Spain: An exploratory analysis

Mikel OLAZARAN, Beatriz OTERO, Cristina LAVIA, Eneka ALBIZU

University of the Basque Country (UPV-EHU), Spain

The aim of this study is to carry out a first analysis of the role of workers with a

Vocational Education and Training (VET) profile in industrial firms and, in particular, regarding their contribution to improvement and innovation processes. Starting with a survey of the relations between educational centers and firms, the study then focuses its attention on the significance of staff with a VET profile in companies and their participation in activities of improvement and innovation. Preliminary descriptive results from a survey of 1283 industrial SMEs from four Spanish regions (Basque Country, Navarre, Aragon and Catalonia) are presented. Some qualitative evidence from advanced firms is also used with the aim of illustrating different levels of VET worker participation in innovation. The paper looks at VET worker participation in activities such as machine maintenance, technical office, R&D department and production engineering.

Friday, 27/Mar/2015, 9:15am - 10:30am, Location: Room 117

Paper Session 4C: Premature apprenticeship contract terminations and occupational stigmas

Retail apprentices occupational identification: identity work in light of a stigmatized occupation

Kerstin DUEMLER, Isabelle CAPRANI, Elettra FLAMIGNI

SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland

Vocational learning not only involves acquiring technical skills and theoretical knowledge but entails wider social and cultural processes. Vocational cultures socialize apprentices and help them (or not) to feel as 'professionals'. Adopting a sociological perspective, this paper is interested in the development of occupational identities among retail apprentices. It draws on the concept of vocational habitus understood as dispositions (values, attitudes, beliefs, and norms) defined by the vocational field that characterize the right person for a job. Apprentices actively orient themselves towards this habitus when constructing occupational identities, meaning they negotiate between the idealized image of the right professional and the image that they aspire. In order to examine retail apprentices' occupational identification in its complexity and understand how it is mediated by institutional and structural conditions at the VET school and host company, a qualitative approach was chosen involving classroom observations in three different VET schools, group discussions, semi-guided interviews (with apprentices, teachers, and other VET experts), and document analysis.

Preliminary findings indicate that apprentices' occupational identification is intimately linked to the low prestige of the retail sector. Apprentices report that outsiders (e.g. clients) perceive their work as simple (e.g. work at the cash point) requiring only basic knowledge and competences. We analysed the identity defense tactics of apprentices responding to this occupational stigma. While apprentices do not profoundly question the low occupational prestige as retail clerks, they hope

for individual social mobility and/or construct internal differences within the occupation (e.g. based on prestige of shops or products). Building on a vocational habitus, however, is only one resource among others to respond to the devalued image of the working self. The tactics aiming to overcome low status reveal weak occupational feelings of belonging among retail apprentices. The paper discusses individual, institutional, and structural conditions favouring the identity tactics.

Premature apprenticeship contract terminations – the role and impact of organisational climate within the training company

Lara FORSBLOM

University of Fribourg, Switzerland

In Switzerland vocational education is predominately organized in the "Dual System", in which trainees have an apprenticeship contract with a training company. On average 25% of those contracts are prematurely terminated, which is associated with high costs for the society, the company and particularly the trainee. Most studies on premature contract terminations (PCT) focus on the characteristics of the trainee but the role of the training company has received only little attention. Existing studies in this field indicate that the reasons for PCT are normally based on various cumulating factors (Bessey & Backes-Gellner 2007; Lamamra & Masdonati 2009, Stalder & Schmid 2006). The aim of this study is to identify the influence of the organisational climate on PCT. The leading research questions are: (1) Does the organisational climate of training companies with PCT differ from the organisational climate of training companies without PCT? (2) What influence has the organisational climate on the occurrence of PCT? The investigation is based on a quantitative study with a cross-sectional design. Trainers and operation managers of 335 Swiss training companies for the professions of cooks and painters were surveyed. Half of the companies have been affected by a PCT in the past and the other half did not. The findings indicate, that companies of cooks affected by a PCT differ from companies without PCT in several aspects of the organisational climate, such as the operation managers leadership style, the trainer's autonomy in the arrangement of trainee education, the atmosphere between employees and the amount and the importance of further training. Moreover the analysis shows that the chance for PCT significantly increases, when operation managers strongly monitor their employee's actions. On the other hand a positive atmosphere between employees and great autonomy in the accomplishment of work tasks significantly reduces the chance for PCT.

The effect of trainers' beliefs on training quality and on prematurely apprenticeship contract terminations**Lucio NEGRINI**

University of Fribourg, Switzerland

The dominating organizational form of vocational education and training in the German speaking countries is the dual-track-system. In this system, trainees have signed an apprenticeship contract with a company. A main topic of concern for politics, practice and research is the fact that each year up to 25% of those contracts are terminated prematurely. Premature contract terminations (PCT) are associated with high costs for society, the company, and the young people. The existing studies indicate that the reasons for premature contract terminations (PCT) are normally based on various, cumulating factors. Most of these studies focus on the characteristics of the trainees, whereas the role and the skills of the trainers have received only little attention. However some studies give empirical hints that the professional skills of the trainers play an important role on dropouts. The professionalism of trainers can be conceptualized as a multidimensional model of components like content knowledge, motivation, values, attitudes and beliefs. The present paper aims to investigate the relationships existing between the trainers' beliefs regarding teaching and learning, the training quality of the workplace and the PCT. The study was conducted with 335 companies of cooks and painters from the German-speaking part of Switzerland. In our sample, 136 companies had been affected by a PCT in the past three years while 199 had not. Results indicate that there are considerable differences in the trainers' beliefs between the two occupations: cooks attain significant better values by the epistemological beliefs and by the constructivist beliefs than painters. Further analysis also indicated that the trainers' beliefs have a positive impact on the training quality and that a good quality can help to avoid PCT: companies with a high quality have namely a lower PCT ratio. Only few direct effects have however been found between trainers' beliefs and PCT.

Friday, 27/Mar/2015, 11:00am - 12:45pm, Location: Aula

Symposium 5: The importance of apprenticeship models for disadvantaged youths in an international comparison of Germany, Austria and Switzerland

Discussant: Frank Musekamp (University of Bremen)

Chairs: Lars Balzer (SFIVET), Marlise Kammermann (SFIVET)

Factors influencing the success and the effects of training occupations of two years duration - example: car service mechanic**Matthias BECKER¹, Georg SPÖTTEL²**¹Europa-University Flensburg; ²University of Bremen

The two years' training occupation of a car service mechanic which was being tested between 2004 and 2013 in Germany, was meant to provide improved training opportunities for disadvantaged youths in the automotive trade. In the years 2010 to 2012, the occupation was evaluated with the help of a comprehensive vocational educational scientific concept including a mixed-methods research design. Results clearly show the tensions between increasing demands for qualification and a reduced extent of qualificational measures and, hence, that the graduation from a two years' training course does not sufficiently qualify for work in an occupation. At the same time, the findings offer opportunities for shaping alternative qualification concepts.

Two-year apprenticeship in Germany: What is its relevance and which role does it play within dual VET system?**Mona GRANATO, Stephan KROLL**

Federal Institute of Vocational Training & Education, Germany

Within the dual VET in Germany, the most important post-obligatory track for school-leavers, there is a difference between 3-year and 2-year apprenticeship, which provide a limited range of skills. Given contradictory expectations towards dual VET (market based access versus fixed social target "training for all") and the lack of training places in apprenticeship-market during last decades, we ask for the assigned role of 2-year VET and if the differentiation of duration of training causes a further segmentation within dual VET system. Facing the crisis, federal authorities promoted 2-year apprenticeship to ensure especially the participation of disadvantaged youth in dual VET. Even though the increasing number of 2-year training places is not sufficient for the needs of (disadvantaged) school-leavers, in the light of neo-institutional approaches they play an important role for stakeholders: especially state actors could demonstrate their activities struggling for sufficient training places. They thereby formally integrated this powerful, by Constitution approved expectation in German society ("training for all") and could due to this legitimation strategy avoid fundamental reforms of market based access to dual VET.

Our data analyses point out: in one third of 2-year training places not-disadvantaged school leavers with an intermediate secondary school leaving certificate are trained, in particular young women. Following segmentation approaches these substantial differences – which still exist under control of important factors – indicate a further segmentation in dual VET system. Though young women more often better performed in general education than young men, become more often-than-average

trained in 2-year VET and therefore at the “bottom” of dual VET system. For dual VET system as a whole, 2-year apprenticeships represent an institutional segmentation and an enlargement towards more training opportunities providing (only) restricted skills.

Inclusive Vocational Training (IBA) in Austria - An Analysis of Career Pathways **Helmut DORNMAYR**

ibw Austria – Research & development in VET, Austria

Since the introduction of Inclusive Vocational Training (IBA) in 2003, the number of young people who are either trained within a prolonged apprenticeship scheme or in the form of a partial qualification has been rising continuously. An ibw study¹, which was commissioned by the Federal Ministry of Science, Research and Economy (BWF), covers the first comprehensive results of the career pathways and labour market integration of graduates of an IBA programme in Austria.

One specific strength of IBA in Austria is that in the (most favourite) case of a prolonged apprenticeship scheme disadvantaged young people do not get less but more time for education and training. Other key success factors of IBA in Austria are a (clearly defined) access control (exclusively for young people with specific disadvantages/needs), the adaptation to individual needs and the support by a specific social, pedagogical, and psychological assistance structure („Berufsausbildungsassistenz“). Actually 76% of IBA-participants are trained within a prolonged apprenticeship scheme and 24% in the form of a partial qualification.

The study results reveal that inclusive vocational training has ‘impact’ and positive effects because it enhances labour market integration. IBA graduates are considerably better integrated in the labour market – both in the short term and in the longer term – than those who do not complete training. But also among graduates of inclusive vocational training, striking differences can be found between graduates of company-based training and those of supra-company training establishments. Graduates of an inclusive vocational training scheme at a company still show clearly better integration in the labour market five years after completion of training.

Occupational careers in Switzerland: what influences them? - Occupational pathways of young professionals with Swiss Federal VET Certificate

Marlise KAMMERMANN¹, Lars BALZER¹, Achim HÄTTICH²

¹SFIVET Swiss Federal Institute for Vocational Education and Training, Switzerland;

²University of Applied Sciences of Special Needs Education, Zürich, Switzerland

In Switzerland, the two-year apprenticeship with Federal VET Certificate was established in 2002. It is a low-threshold VET programme offering standardised vocational training, aiming at increasing the employability and/or further training options

of 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. Data of a Swiss longitudinal study including a sample of 123 trainees on a two-year training course in the retail sales and hospitality sector are used to study the mid- to long-term success of the two-year apprenticeship. The findings confirm that the two-year apprenticeship offers suitable training, which fosters employability and upward mobility after graduation. Five years after graduation, more than 80 percent of young professionals with Federal VET Certificate had a paid job, either in their learned or another occupation. One third, in the meantime, had gained a further VET qualification – i.e. a Federal VET Diploma. The majority of the young professionals were satisfied with their current employment situation as well as with their individual occupational career. However, learners without a confirmed job or further training opportunities at the end of training were at risk to follow precarious occupational pathways within the first five years after graduation.

Friday, 27/Mar/2015, 11:00am - 12:45pm, Location: Room 214

Symposium 6: Gender-segregation in VET: Causes and development

Discussant: Regula Julia Leemann (Fachhochschule Nordwestschweiz)

Chairs: Irene Kriesi (SFIVET), Christian Imdorf (University of Basel)

Gender segregation in the German VET sector - do gender differences in vocational choice result from the anticipated reactions of other?

Verena EBERHARD, Stephanie MATTHES, Joachim Gerd ULRICH

Federal Institute for Vocational Education and Training

Starting from the observation that many of the 350 training occupations in the German vocational education and training (VET) sector are gender segregated, this paper investigates whether gender-congruent occupational choices can be explained by the human need for social approval. Based on identity theory approaches, the career choice theory of Gottfredson and the self-to-prototype-matching theory, we assume that young people make their occupational choice strongly dependent on the supposed reaction of their social environment. Although the assumption of a positive reaction from the social environment is not in itself sufficient for actually making young people take an interest in the relevant occupations, the perception of a negative reaction is in most cases likely to be enough to ensure that young people are not interested or are no longer interested in the occupation (Hypothesis 1). We also expect that young people are more likely to anticipate negative reactions from their social environment in the case of occupations in which persons from their own gender are rarely represented (Hypothesis 2).

The hypotheses are tested with the help of multi-level regression models, using data from a representative survey of 4,621 applicants for vocational training in

Germany in 2010. The results confirm our expectations, showing that applications cannot generally be observed until young people expect to receive positive reactions from their social environment. Since young persons are significantly more likely to anticipate social approval from others if the assessed occupation is appropriate to their sex, it becomes evident that gender-congruent vocational choices are indeed used as a strategic instrument of young people's own "impression management".

The role of secondary school types for the development of gender-typical occupational aspirations

Ariane BASLER¹, Irene KRIESI², Christian IMDORF³, Karin WOLGEMUTH³

¹University of Zurich; ²Swiss Federal Institute for Vocational Education and Training, Switzerland; ³University of Basel

During adolescence, young people's educational and occupational goals are often gender-typical. Young women aspire to female-typed, young men to male-typed occupations. Gender-typical aspirations lead to occupational sex segregation and thus to unequal opportunities of men and women in the labour market.

Recent research provides evidence that the extent of educational and occupational gender segregation is linked to a country's educational system (Imdorf et al. 2014). In countries with highly differentiated upper-secondary education, a large initial vocational education and training (IVET) sector and low track mobility – such as Switzerland or Germany – occupational gender-segregation is considerably more pronounced (Charles & Bradley 2009). Furthermore, young people's aspirations in such educational systems are strongly determined by the type of school they attend (Buchmann & Dalton 2002).

Our contribution examines the following research questions for Switzerland: Are gender-typical aspirations at the age of 15, shortly before the transition to upper-secondary education, related to the track of lower-secondary school? To what extent do gender-typical occupational aspirations change between lower-secondary school, the end of upper-secondary education and early adulthood? How can such changes be explained? Are they related to the type of attended upper-secondary school or rather to individual values and educational performance?

Departing from an institutional perspective, which we combine with socialization and identity theory, we test our research questions by making use of the Swiss longitudinal study COCON. The data was collected in 2006, 2007, 2009 and 2012 when the respondents were 15, 16, 18 and 21 years old.

Sequential logit models show that the formation of gender-typical occupational aspirations at the age of 15 is related to the track of lower-secondary school. Whether these gender-typical aspirations change at a later age depends on the type of upper-secondary school, on academic performance and on values.

Education systems and gendered transitions into upper and post-secondary educational programmes: A three-country comparison of Germany, Norway & Canada **Christian IMDORF¹, Verena EBERHARD², Kristinn HEGNA³, Pierre DORAY⁴**

¹University of Basel; ²Federal Institute for Vocational Education and Training, Bonn; ³NOVA, Oslo and Akershus University College of Applied Sciences; ⁴Université du Québec à Montréal

Against the background of high degrees of gender segregation in 'vocalised' education systems, we ask how organisational settings and institutional logics of national education systems reproduce gender segregation in education. Institutional dimensions such as stratification, vocational vs. general educational offers, occupational specificity, permeability of educational programmes and the institutional timing of educational transitions are assumed to impact the gender-typed career decisions. We propose that educational programmes are more gender-typed the more 'vocalised' they are and the earlier students have to decide on them. To test our hypotheses, we compare individual transitions from lower secondary to post-compulsory education in Germany (DE), Norway (NO), and Canada (CA). We use youth panel data in all three countries (DE: BIBB Transition Survey 2006; NO: Young in Norway YIN; CA: Youth in Transition Survey YITS) and multinomial logistic regression models to analyse the vocational and academic effects on educational gender segregation in each country.

Our results provide clear evidence for vocational effects on students' choice of gender-typed programmes and on educational gender segregation, respectively, in all three countries. In general, gender segregation in education is higher in countries where vocational education is prevalent at the upper secondary level. The effect of the institutional timing on gender-typed career choice is especially relevant for men, who more often escape gender-typed programmes through university enrolment in comparison to women. Hence, national educational policies indeed affect gender segregation in education. The more the upper and post secondary programmes are of the vocational kind, the more the respective programmes are gender segregated. Finally, the Norwegian case shows that a universalistic education system doesn't necessarily reduce gender inequalities in education.

Feminization of occupations in the German system of vocational training: The role of job deterioration and job growth reconsidered

Katarzyna HAVERKAMP, Petrik RUNST

Institute for Small Business Economics, University of Göttingen

This paper examines the dynamics in the occupational segregation by gender in the German system of vocational training and identifies training occupations presently experiencing the process of feminization. Using the official enrollment data for the period 1997-2014 provided by the German Chamber of Skilled Crafts we show, that in the vocational training system of skilled crafts men are stronger

segregated that women and that women tend to reallocate more strongly between different occupational categories than men. We further identify five single training occupations which have experienced a strong rise in the proportion of female apprentices. Our analysis shows, that the rising share of female apprentices within these occupations was not due to an increased entry of young women (occupational growth) but to a disproportionate withdrawal of men from these professions. We discuss the role of relative income prospects in individual professions in the process of reallocation of graduates to training occupations.

Friday, 27/Mar/2015, 11:00am - 12:45pm, Location: Room 117

Symposium 7: Mathematics in VET - Between academic and workplace learning contexts

Discussants: Eveline Wittmann (Otto-Friedrich University), Hansruedi Kaiser (SFIVET)

Chair: Ursula Scharnhorst (SFIVET)

The relevance of mathematical competencies in industrial-technical professions and its predictive information for professional performances

Florina STEFANICA, Reinhold NICKOLAUS

University of Stuttgart

The state of research on mathematical requirements within professional activities is relatively scarce. The existing statements are mostly based on interviews with employees from different professions, showing clear differences in the attributions of mathematical requirements between the different professions. We cannot find any systematic analyses of mathematical requirements within professional activities.

However, there is more evidence on mathematical requirements within professional tests situations. As, in many cases, the tests were validated by experts, they provide an approximation of the real job requirements. Furthermore, we have findings on the prognostic validity of mathematical competencies for the development of professional competencies (an overview in Geißel et al. 2013).

The submitted contribution presents (1) findings on the mathematical requirements in professional activities and in professional competency tests for selected industrial-technical professions and (2) results of studies on the predictive information of mathematical competencies for the development of professional competencies.

Mathematics in VET- Between Academic and Workplace Learning: Conclusions in the Perspective on Vulnerable Adolescents and Young Adults

Sven BASENDOWSKI

University Hamburg, Faculty of Education

In a canteen kitchen, tomato sauce for 123 people has to be prepared. The respective recipe was written for 100 people. While it provides specific quantities for the main ingredients, no information about the amount of spices is given.

This job situation was described within a study about mathematical requirements for typical unskilled jobs of vulnerable people. It exemplarily reveals the limits of formal basic mathematical application, which is traditionally practiced in math class at schools of general education. Among others, these limits appear within the problem-solving process: The vocational context imposes other requirements than an objectively exact solution achieved through, for example, the reproduction of mathematical algorithms. Furthermore, basic mathematical contemplation is not required. Thus, there are also differences in evaluation. In regards to the example above, this means that a calculation by a proportional function executed accurately to the milliliter is uncalled for in this situation.

This paper presents the necessary modifications of the mathematical modeling that concern the indicated limits of formal basic mathematical education. These modifications manifest a critical position towards the primacy of strict academic mathematical problem-solving processes in connection with their utility in vocational situations.

The conclusion discusses labor market oriented and pedagogically ideal education, which in Europe is diversely organized and either qualifying or preparing for a profession. In the course of this, pedagogical transfers address a missing debate: a mathematical education for vulnerable adolescents and young adults that incorporates both their lived-in world and the range of social functions of mathematics.

"Boundary-crossing" in teacher professional development - two exemplary PD course concepts

Katja MAASS, Karen REITZ-KONCEBOVSKI

University of Education Freiburg

Referring to the congress topic 'teaching and learning across different learning locations', we present two innovative models of teacher professional development (PD) in the area of teaching mathematics in rich vocational contexts, which were developed within the framework of the European project mascil (mathematics and science for life). The overall mascil professional development concept is based on research findings about the characteristics of effective continuous professional development, promotes inquiry-based learning (IBL) and connects mathematics and science to authentic contexts or practices of the world of work (WoW). In its structure, the PD concept follows a spiral model in which teachers work in cycles

of planning-implementing-reflecting. It is sustained over time, fosters collaboration between teachers and encourages reflection and mutual support.

The paper focuses on the different kinds of 'boundary-crossing' involved in the exemplary PD courses (teachers in vocational schools – teachers in general education schools; instructors in industry – teachers in general education schools; representatives of the WoW applying mathematics in their fields – experts on mathematics teaching in university) and on the underlying design research approach. The formative evaluation is based on the scientific case study approach. The key research question is: What impact has the overall mascul PD concept on participants? A status-quo study analysed the situation in the 13 countries involved in the project by means of a teacher survey. The data indicated that IBL and WoW have not found their way into daily teaching practice so far, but teachers are positively oriented towards both aspects; the problems teachers have with the implementation can be assigned to three categories: classroom management, resources, and system restrictions; all three of them have to be addressed by PD courses. A pre-post study, starting in autumn 2014, will analyse the impact of professional development courses in all countries.

HOW TO GET TO THE SFIVET

The Swiss Railway SBB runs an extensive network of services. Thanks to half-hourly clock face service on most main routes and its punctuality the passenger trains are firm favourites with the public. Please check the timetable under www.sbb.ch. Your destination from the airport is going to be Bern.

Bern to SFIVET, Zollikofen by bus:

After arriving at the train station of Bern, do as follows:

- Go to the PostAuto station (4th level of the train station building) and take the bus n° 106 (direction Zollikofen Bahnhof)
- Step off at the bus stop Zollikofen Schäferei, walk for about 50 meters – you will see the SFIVET on your right hand side.

Total time from Bern main station: 20-30 minutes

Bern to SFIVET, Zollikofen by train and bus:



After arriving at the train station of Bern, do as follows:

- Go to the train station RBS (lower level of the train station building) and take the train S8 (direction Jegenstorf or Urtenen)
- Step off at the station stop Zollikofen and take bus n°. 106 (direction Bern Hauptbahnhof)
- Step off at the bus stop Zollikofen Schäferei, cross the street and walk for about 50 meters – you will see the SFIVET on your right hand side.

Total time from Bern main station: 15-20 minutes

Bern to SFIVET, Zollikofen by taxi:

After arriving at the train station of Berne you can take a taxi (4th level of the train station building) to get to the SFIVET (price around CHF 40.-).

There are different local taxi companies in Berne:

Nova Taxi: (+41) 0800 879 879
Bären Taxi: (+41) 0800 55 42 32
Taxi-Kull: (+41) 0800 830 840

GENERAL PLAN OF SITE



TIMETABLE OF THE POST AUTO N° 106



- take the bus (Postauto) N°106 from Bern main station (Hauptbahnhof)
- step off at the bus stop „Zollikofen Schäferei“

Direction “Zollikofen”

Departure station: Bern main station

Departure	Arrival Zollikofen-Schäferei	Duration
07:08	07:36	28 min.
07:38	08:06	28 min.
08:08	08:36	28 min.
08:38	09:06	28 min.
09:08	09:36	28 min.
09:38	10:06	28 min.
10:08	10:36	28 min.
10:38	11:06	28 min.
11:08	11:36	28 min.
11:19	11:57	28 min.
11:38	12:06	28 min.
11:49	12:27	28 min.
12:08	12:36	28 min.
12:19	12:57	28 min.
12:38	13:06	28 min.
12:49	13:27	28 min.
13:08	13:36	28 min.
13:38	14:06	28 min.
14:08	14:36	28 min.
14:38	15:06	28 min.
15:08	15:36	28 min.
15:38	16:06	28 min.
16:08	16:36	28 min.
16:19	16:57	28 min.
16:38	17:06	28 min.
16:49	17:27	28 min.
17:08	17:30	28 min.
17:19	17:57	28 min.
17:38	18:06	28 min.
17:49	18:27	28 min.
18:08	18:36	28 min.
18:19	18:57	28 min.
18:38	19:06	28 min.
18:49	19:27	28 min.
19:08	19:36	28 min.
19:38	20:06	28 min.

Direction “Bern Hauptbahnhof”

Departure station: Zollikofen Schäferei

Departure Zollikofen	Arrival Bern	Duration
08:18	08:49	31 min.
08:48	09:19	31 min.
09:18	09:49	31 min.
09:48	10:19	31 min.
10:18	10:49	31 min.
10:48	11:19	31 min.
11:18	11:49	31 min.
11:48	12:19	31 min.
12:03	12:43	40 min.
12:18	12:49	31 min.
12:33	13:13	40 min.
12:48	13:19	31 min.
13:03	13:43	40 min.
13:18	13:49	31 min.
13:33	14:13	40 min.
13:48	14:19	31 min.
14:18	14:49	31 min.
14:48	15:19	31 min.
15:18	15:49	31 min.
15:48	16:19	31 min.
16:18	16:49	31 min.
16:48	17:19	31 min.
17:03	17:43	40 min.
17:18	17:49	31 min.
17:33	18:13	40 min.
17:48	18:19	31 min.
18:03	18:43	40 min.
18:18	18:49	31 min.
18:33	19:13	40 min.
18:48	19:19	31 min.
19:03	19:43	40 min.
19:18	19:49	31 min.
19:48	20:19	31 min.
20:18	20:49	31 min.
21:18	21:49	31 min.
22:22	22:53	31 min.
23:22	23:53	31 min.

TIMETABLE OF TRAIN S8 AND BUS



- take the train S8 from Bern main station
- step off the train at „Zollikofen“
- take the bus 106 direction “Bern Hauptbahnhof”
- step off at the bus stop „Zollikofen Schäferei“

Direction “Jegenstorf”

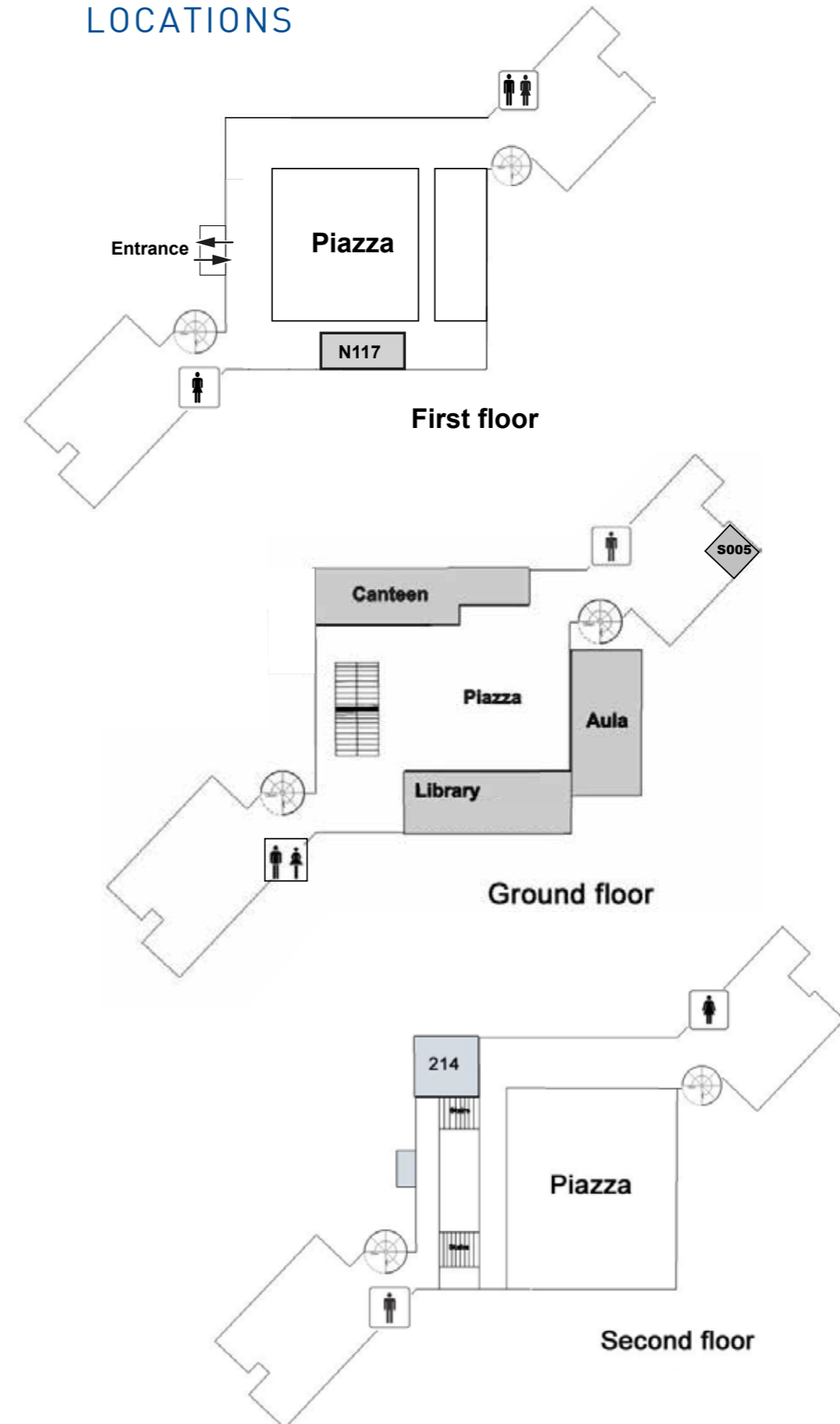
Departure station: Bern main station

Direction “Bern Hauptbahnhof”

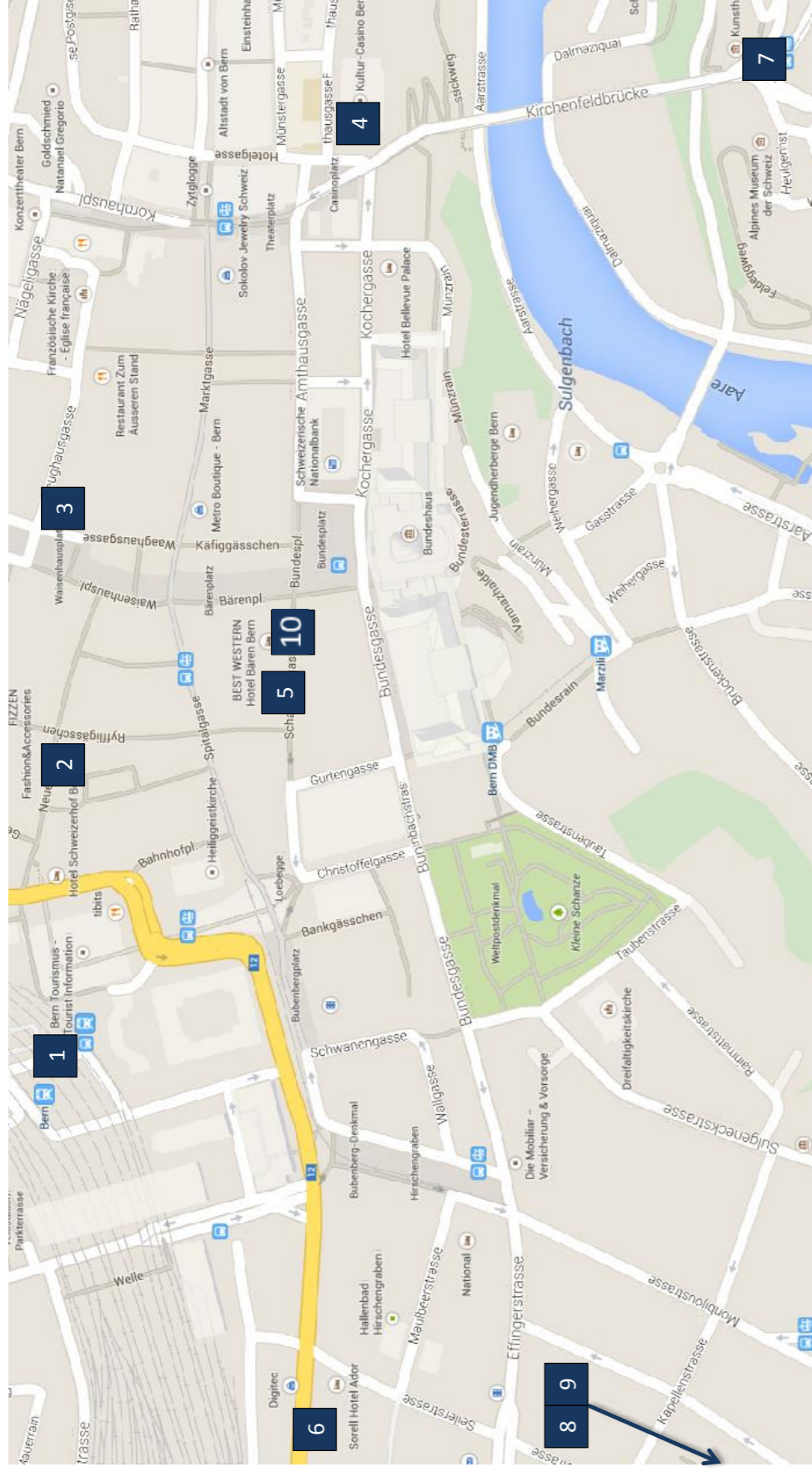
Departure station: Zollikofen Schäferei

Train S8		Bus 106		Duration	Bus 106		Train S8		Duration
Departure	Arrival	Departure	Arrival		Departure	Arrival	Departure	Arrival	
Bern RBS	Zollikofen	Zollikofen	ZO, Schäferei		ZO, Schäferei	Zollikofen	Zollikofen	Bern RBS	
07:37	07:45	07:48	07:50	13 min.	08:30	08:36	08:39	08:48	18 min.
07:52	08:00	08:03	08:05	13 min.	09:00	09:06	09:09	09:18	18 min.
08:07	08:15	08:18	08:20	13 min.	09:30	09:36	09:39	09:48	18 min.
08:37	08:45	08:48	08:50	13 min.	10:00	10:06	10:09	10:18	18 min.
09:07	09:15	09:18	09:20	13 min.	10:30	10:36	10:39	10:48	18 min.
09:37	09:45	09:48	09:50	13 min.	11:00	11:06	11:09	11:18	18 min.
10:07	10:15	10:18	10:20	13 min.	11:30	11:36	11:39	11:48	18 min.
10:37	10:45	10:48	10:50	13 min.	12:00	12:06	12:09	12:18	18 min.
11:07	11:15	11:10	11:20	13 min.	12:30	12:36	12:39	12:48	18 min.
11:37	11:45	11:48	11:50	13 min.	13:00	13:06	13:09	13:18	18 min.
11:52	12:00	12:03	12:05	13 min.	13:30	13:36	13:39	13:48	18 min.
12:07	12:15	12:18	12:20	13 min.	14:00	14:06	14:09	14:18	18 min.
12:37	12:45	12:48	12:50	13 min.	14:30	14:36	14:39	14:48	18 min.
12:52	13:00	13:03	13:05	13 min.	15:00	15:06	15:09	15:18	18 min.
13:07	13:15	13:18	13:20	13 min.	15:30	15:36	15:39	15:48	18 min.
13:37	13:45	13:48	13:50	13 min.	16:00	16:06	16:09	16:18	18 min.
14:07	14:15	14:18	14:20	13 min.	16:30	16:36	16:39	16:48	18 min.
14:37	14:45	14:48	14:50	13 min.	17:00	17:06	17:09	17:18	18 min.
15:07	15:15	15:18	15:20	13 min.	17:30	17:36	17:39	17:48	18 min.
15:37	15:45	15:48	15:50	13 min.	18:00	18:06	18:09	18:18	18 min.
16:07	16:15	16:18	16:20	13 min.	18:30	18:36	18:39	18:48	18 min.
16:37	16:45	16:48	16:50	13 min.	19:00	19:06	19:09	19:18	18 min.
16:52	17:00	17:03	17:05	13 min.	19:30	19:36	19:39	19:48	18 min.
17:07	17:15	17:18	17:20	13 min.	20:00	20:06	20:09	20:18	18 min.

LOCATIONS



How to get to the Congress Dinner / Social programme



1 Bern mainstation / Tourist information center

- 2 Hotel Savoy
- 3 Hotel Kreuz
- 4 Kultur-Casino Bern
- 5 Hotel Bristol
- 6 Hotel Ador

7 Bernisches Historisches Museum

- 8 Hotel Astoria
- 9 Hotel La Pergola
- 10 Hotel Bären

Bernisches Historisches Museum (social programme: Albert Einstein): Take the tram nr. 7

(direction Ostring) or 8 (direction Saali) from the main station Bern. Ride 3 stations until "Helvetiaplatz" and then walk straight approx. 50m from the tram station.

Kultur-Casino Bern (Conference dinner): Take the tram nr. 7 (direction Ostring) or 8

(direction Saali) from the main station Bern. Ride 2 stations until "Zytglogge". Cross the street from the station. You are standing in front of the Kultur-Casino.

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