Two-year apprenticeships – a successful model of training?

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Educational policy is asked to support young people in their successful transition from education to employment. In Switzerland, a two-year apprenticeship with Federal VET Certificate was established in 2002 aimed at increasing the employability of low-achieving school leavers. It is a low-threshold VET programme offering standardised vocational training to low-achieving youths. It leads to a VET Certificate, which is different from the Federal VET Diploma obtained after a three- or four-year apprenticeship. Data of two Swiss longitudinal studies including a sample of apprentices on a two-year training course with either a special needs (N=28) or a regular school (N=261) background at lower secondary, and a sample of graduates on a three-year training course (N=118) are used to study the success of the two-year apprenticeship from a comparative perspective. The findings confirm that the new apprenticeship offers favourable learning opportunities that foster employability and upward mobility after graduation. However, the findings also indicate limitations of the two-year apprenticeship, such as the least successful learners can only profit from the new form of apprenticeship to a certain degree.

Keywords: apprenticeship, school-to-work transition, low achievers, VET reform, longitudinal study, Switzerland
Introduction

Preparing young people for the labour market and facilitating their successful transition from school to work is becoming more and more important in modern society. Apprenticeships have not only been seen as a specific model of training and learning, but also as a specific institutional form of vocational education and training (VET) that ensures smooth school-to-work pathways (Raffe 2008). More specifically, apprenticeships have been seen as an appropriate means to integrate learners who have low school achievements in the labour market. This has always been the case in countries with a long tradition in apprenticeship training, such as Germany and Switzerland (Kammermann, Hübischer, and Scharnhorst 2009; Stalder and Nägele 2011; Wettstein and Gonon 2009; Euler and Severing 2006), but also in other countries whose VET systems are mainly school based (e.g. France with the ‘certificat d'aptitude professionnelle’ (CAP) [Ministère de l'éducation nationale 2010; Brockman, Clarke, and Winch 2008], or England with the skill-based ‘National Vocational Qualifications’ [Frisch 2006; Brockmann, Clarke, and Winch 2008; Fuller and Unwin 2003, 2009]). In recent years, however, political concern has grown for those young people who seem to lack sufficient school achievements to: enter apprenticeship programmes, follow such a programme without dropping out, graduate successfully and find gainful employment afterwards (see e.g. Descy 2002; Ecoplan 2003; Kammermann 2009; Stalder 2010; Stalder, Meyer, and Hupka-Brunner 2008; Bertschy, Cattaneo, and Wolter 2009). Consequently, educational means were sought that would increase the employability of those weaker learners and support their school-to-work transition.

In Switzerland, which is internationally praised for its apprenticeship system (Ryan 2001; Raffe 2008), a new type of two-year apprenticeship programme has been introduced to counter the problem of dropout and lack of employability of academically lower achieving youth. In this paper this VET reform will be presented and discussed on the basis of a four-
year evaluation. The paper is divided into six sections. Following this introduction, the second section gives an overview of the Swiss apprenticeship system focusing on the introduction of the two-year apprenticeship, the so-called two-year basic training course with Federal VET Certificate that was established by the new Vocational Training Act in 2002 (Swiss Confederation 2002). In the third section, referring to the concept of earning-oriented pedagogy, three assumptions related to the introduction of this two-year apprenticeship are discussed:

(a) creating favourable learning opportunities for lower achieving youth,
(b) fostering employability for young people with a Federal VET Certificate and providing possibilities for upward mobility to three-year apprenticeships within the VET system,
(c) ensuring satisfaction with the apprenticeship as well as general satisfaction with life.

These assumptions will be empirically tested in Sections four (Methods) and five (Results). The findings are discussed in the Conclusions in the last section.

**Apprenticeship as a successful model of training in Switzerland**

The Swiss educational system is highly differentiated and selective. At the end of primary school (ISCED 1), pupils are channelled into different lower secondary school tracks with so-called “special needs”, “basic” or “expanded” curricula (ISCED 2, years 7 to 9; ages 13/14 to 15/16). As research shows, people with low academic achievements encounter several difficulties in the transition from school to work. They are not only more likely to follow a school track with special needs and basic curriculum, but also have reduced chances to enter an apprenticeship or another educational programme at the upper secondary level (Hupka-Brunner, Sacchi, and Stalder 2010; Meyer, Stalder, and Matter 2003; Imdorf 2007).
Swiss educational policy aims to ensure that by 2015 95 per cent of all youths accomplish a post-obligatory education qualification at upper secondary level (Swiss Conference of Cantonal Ministers of Education 2006). The introduction of a new two-year apprenticeship can be seen as one measure to achieve this aim and to optimise the transition from school to work for young people including those with low academic achievements.

Vocational education and training is the predominant form of upper secondary post-compulsory education in Switzerland. Two thirds of young people enrol in VET programmes (OPET [Office for Professional Education and Technology] 2010b). Most of them enter apprenticeship training that combines school-based education at vocational school and work-based learning in a company (OPET 2010b; Stalder and Nägele 2011; Wettstein and Gonon 2009). There are two types of apprenticeships: three- to four-year apprenticeships for the higher achieving youth that lead to a Federal VET Diploma (EFZ, Eidgenössisches Fähigkeitszeugnis); and the new two-year apprenticeships for the lower achieving youth that lead to a Federal VET Certificate (EBA, Eidgenössisches Berufsattest) that focus on practical activities and include support measures if needed (Swiss Confederation 2002; OPET 2005; 2007) (see Figure 1 and Table 1).

< -- Insert Table 1 here -->

Both types of apprenticeship programmes are standardised at national level; both are regulated by ordinances that are individually set up for every occupation. Permeability between the two-year and the three- or four-year programmes is ensured within occupational groups by following the principle of potential upward mobility and by aiming at avoiding dead ends (Hoeckel, Field, and Grubb 2009).
By 2010, over 200 ordinances for Federal Diploma-VET programmes and 29 ordinances for Federal Certificate-VET programmes were in force (OPET 2010a). In 2007, the first graduates completed a two-year apprenticeship with Federal VET Certificate in retail sales (retail business assistant) and hospitality (kitchen, restaurant and hotel employees). At present, approximately four per cent of all VET programmes run for two years (they include 9351 apprentices from a total of 209,301) (FSO 2009, 4).

Standardisation and upward mobility towards the three-year apprenticeship are crucial elements of the two-year apprenticeship. The standardisation of the training should ensure that young professionals with a Federal VET Certificate meet labour market needs. At the end of the training, apprentices should not only have the needed skills and professional attitude to enter gainful employment, but also to transfer to a higher level of training (three-year apprenticeship) (OPET 2005; Barmettler 2008).

The introduction of the two-year apprenticeship under the new Swiss Vocational Training Act (Swiss Confederation 2002) represents a shift in paradigm. It follows the former elementary training programme, which lasted one to two years and ensured vocational training of the lower to lowest achieving youth. Elementary training programmes focused on the individual ability of the learner, rather than aiming to reach the goals of a standardised programme. The programmes had a strong special needs-oriented pedagogy and they specifically welcomed learners from special needs schools. In contrast to the new two-year apprenticeship, elementary training did not lead to a standardised, federally recognised certificate of upper secondary level education (Kammermann, Hübscher, and Scharnhorst 2009; Wettstein and Broch 1979).
Integrating youths with a special needs background can be seen as a major challenge for the standardised two-year apprenticeship. There is some concern among experts in the field of special education that – due to standardisation – the requirement to enter and successfully complete the two-year apprenticeship would rise above the academic skills of school leavers who formerly entered the elementary training programme (Kammermann 2010; Kammermann, Hübscher, and Scharnhorst 2009; Lischer 2007). Thus, when discussing the potential of the new two-year apprenticeships as regards their learning opportunities, employability and options to transfer onto the VET Diploma-level, the individual academic background of the learners has to be considered and integrated as a main feature in the evaluation model. This is being done by paying particular attention to the apprentices with a special needs background: by comparing their school-to-work transition with apprentices who attended basic-level regular classes at lower secondary and with apprentices on a three-year programme with regular school background.

The concept of employability: an earning-oriented perspective

Modern societies are characterised by a strong relationship between education and work. Vocational education and training is the linking factor; it provides competences and skills for development and wealth, and focuses on learning while working (Gonon et al. 2008). Conceptual perceptions and explanations of the relationship between work and education are supposed to be relatively stable within societies, but to differ between different societies (Kraus 2008). Employability as a main objective for VET is however crucial for all VET systems.

The concept of employability has been discussed from psycho-social (see Fugate, Kinicki, and Ashforth 2004), economical (see de Vries, Gründemann, and van Vuuren 2001) and educational perspectives (see Groot and Massen van den Brink 2000; Knight and Yorke 2002; Kraus 2008). Generally, employability is defined as the ability of the individual to...
fulfil requirements for employment: ‘Employability is the capability to adjust and apply professional, social and methodological competences purposefully and self dependently under constantly changing framework requirements in order to find and stay in employment’ (Rump and Eilers 2006, 21; translated by Kraus 2008).

The theoretical framework for the investigation of our core assumptions regarding employability and upward mobility (see Section one) is built on earning-oriented pedagogy (erwerbsorientierte Pädagogik; Kraus 2006; 2008). Expanding the definition of employability as an individual’s qualification towards gainful employment – which emphasizes the individual and her or his achievements (Kraus 2005) – this German understanding of employability stresses the roles of employers, society and pedagogical institutions in defining the meaning of “employability” and in fostering employability. One of the main elements of earning-oriented pedagogy is the conceptualisation of the earning schema that refers to a historically grown, socially embedded and constantly developing understanding of significant preconditions for employability (see Figure 2).

Earning, as an elementary function, comprises the societal context on the one hand and the means by which people can gain the individual capacity to deal with the requirements of the working society on the other hand.

The approach of earning oriented pedagogy assumes that within a given society we find historically developed patterns of how the relation between individual and earning sphere, i.e. the sphere in which income-earnings take place, is conceptualised and regulated. Theoretically, these patterns can be described as earning schema. In practice, they are part of the cultural and structural foundations of a society that, on the one hand, allow a person to make a living by earning and, on the other hand, provide society and economy with the manpower that is needed in a certain social and economical order. (Kraus 2008, 57)

The introduction of the earning schema permits a theoretical approach to the relationship between work and education that is independent of specific cultural, social, economical and political contexts. The contents of the earning schemata might be different in different societies, however, structurally they always cover the dimensions of expertise
(technical knowledge and skills), general competencies (behavioural and interpersonal competencies) and earning orientation (a person’s relation to his/her own manpower, both in a concrete working context as well as more general in his/her biography and daily life).

The earning schema combines societal, economical and individual interests into a bundle. Its specific content is constructed through a negotiation process between the three dimensions of the earning sphere, the earning-oriented pedagogy and the individuals and their specific expectations (Kraus, 2006). Moreover, the earning schema builds a frame of reference to the persons and institutions involved in the three dimensions. This is especially true for the dimension of pedagogy: one of pedagogy’s tasks is to explicitly focus on the development of the individual preconditions for gainful employment. This means that, on the one hand, the individual has to take on the responsibility for his or her actions (and learning process) and for his or her well-being. On the other hand, the company and vocational schools (the earning-oriented pedagogy) are responsible for offering appropriate general conditions while supporting the apprentices in their employability acquirement (Kraus 2005, 96; 133). These conditions can be defined as a learning environment that is well adapted to the apprentices.

An asset of the concept of earning schema as a specification for employability is its focus on the interdependence of the three dimensions earning sphere, earning-oriented pedagogy and individual. Employability, in its earning-oriented concept, depicts a compromise between subject orientation (individual’s perspective) and object orientation (economic conditions). However, the crucial question of whether a balanced interplay can
really be guaranteed has to be raised. Is not the labour market the predominant element? There seems to be a mismatch rather than an equilibration because in fact the employers define the conditions for employability. Nevertheless, the earning schema with its special focus on the pedagogical dimension through earning orientation does form an ideal framework for an evaluation of VET reforms – here the new form of two-year apprenticeship – because it links overall structural orientation with the individual learner’s perspective. This linkage is an important characteristic of the dual VET system.

To study the employability of youths with a VET Certificate we take into account all three dimensions of the earning schema developed by Kraus. The dimension of the earning sphere is accounted for by examining the working and further employment conditions of young people with a VET Certificate (see Section one, assumption b). Successful placement in the labour market can be seen as indicator that young people’s training corresponds to the needs of the labour market, the specific employer and the workplace. Similarly, upward mobility can be looked at from an earning sphere perspective and interpreted as a demand of the labour market for more qualified workers (of course, it also includes the individual who adapts to those demands). The dimension of earning-oriented pedagogy, concentrating on the duty of pedagogical institutions to mediate between expectations of the individual and the earning sphere, is included through the assessment of the learning opportunities offered by companies and vocational schools (see Section one, assumption a). The dimension of the individual, as the third important perspective, is taken into account by including the individuals’ educational achievement, and by assessing their satisfaction with the apprenticeship, and their general satisfaction with life (Section one, assumption c). Satisfaction scores are used as an indicator for individual interests and expectations towards their apprenticeship, and show whether or not those interests are met by the learning opportunities.
In general, the three assumptions which are used to study employability, clearly reflect the context-specific meaning of employability: the first two assumptions, (a) creating favourable learning opportunities for lower achieving youth, and (b) fostering employability and providing possibilities for upward mobility are based on criteria defined by educational and labour market policy (OPET 2005; Barmettler 2008; Kammermann, Hübscher, and Scharnhorst 2009). The third assumption (c), ensuring satisfaction with the apprenticeship as well as general satisfaction with life, is based on an individual and subjective perspective of the learner (Stalder 2009).

Method

Data
Three groups of apprentices are studied in a comparative perspective to test the core assumptions related to the introduction of the two-year apprenticeship described above: 1) apprentices from two-year apprenticeships who finished lower secondary education in a special needs school (2-Yr-Spec), 2) apprentices from two-year apprenticeships with a regular school background (track with basic demands) (2-Yr-Reg), and 3) apprentices from three-year apprenticeships and with a regular school background (3-Yr-Reg). The data are taken from two Swiss longitudinal studies that both included apprentices from the German, the French and the Italian parts of Switzerland.

The first study, the VET Certificate-Career Study (VET-CCS) studied the school-to-work pathways of apprentices who graduated from the two-year apprenticeship with Federal VET Certificate (Eidgenössisches Berufsattest) in the hotel and restaurant sector or in the retail sales sector in 2007. Apprentices were surveyed at three points in time: first, towards the end of the two-year apprenticeship (sweep 1); second, 14 months after graduation (sweep 2) and third, 30 months after graduation (sweep 3) (Kammermann et al. 2009; Kammermann
and Hättich 2010). For the purpose of our analysis (see Introduction section), the apprentices with Federal VET Certificate were split into two groups: those who had completed lower secondary in a special needs education track (2-Yr-Spec) (N=28), and those who had finished lower secondary in a regular school track with basic requirements (2-Yr-Reg) (N=261).

The second data set used is based on the longitudinal study Transition from Education to Employment (TREE) that analyses post-compulsory pathways of over 6,000 young people in the years 2000 to 2010 (Stalder, Meyer, and Hupka-Brunner 2011). The sample used here comprises a TREE subsample of 118 apprentices who finished lower secondary school in a regular school track with basic academic requirements and who afterwards completed a three-year apprenticeship with Federal VET Diploma (Eidgenössisches Fähigkeitszeugnis, EFZ) (3-Yr-Reg), in the hotel and restaurant sector or the retail sales sector. Again, data from three measurement points in time were used: the first, just before the end of the apprenticeship (sweep 1); the second, 19 months (sweep 2) and the third, 31 months (sweep 3) later.

Sample characteristics varied considerably between the three groups of apprentices (see Table 2). The group comprising people from 2-Yr-Reg is marked by a relative high proportion of apprentices from the hotel and restaurant sector and apprentices with a migration background (i.e. who themselves or whose mother or father were born abroad). In the two other groups, distribution between occupations was more even, and fewer apprentices had a migration background.

Return rates for sweep 2 in relation to sweep 1 ranged between 64.3% and 80.5%; and for sweep 3 in relation to sweep 1 they ranged between 52.1% and 69.5%. As expected and shown in other research, response rates were highest for the group of apprentices with the highest educational level: 3-Yr-Reg (see e.g. Sacchi 2008).

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1 Until 2005, two of the apprenticeships in the sample, which led to the Federal VET Certificate (EFZ), lasted only two years. This has changed with the introduction of the new ordinances.
Measures
Measures were mostly taken from the TREE questionnaire (Stalder, Meyer, and Hupka-Brunner 2011).

Learning opportunities at the end of the apprenticeship in both studies (sweep 1) were measured by the *variability of learning* at the company (3-item scale [e.g. ‘At work, I can learn a lot of new things’] adapted after Prümper, Hartmannsgruber, and Frese 1995, range 1–5, Cronbach’s Alpha=.75), the *workload* at the company and at vocational school (two 5-item scales [e.g. ‘At work, I have too much to do’, ‘At school, I have too much to do’] adapted after Prümper, Hartmannsgruber, and Frese 1995, Cronbach’s Alpha_company=.68, Cronbachs Alpha_school=.81), and the perceived *competencies of apprenticeship trainer* (5-item scale [e.g. ‘My apprenticeship trainer is good at explaining things’], TREE 2008, range 1–4, Cronbach’s Alpha=.90).

Employability and upward educational mobility were investigated by looking at the employment and education situation at sweep 2 and 3. We were especially interested in stable versus precarious work situations, the latter being marked by work contracts with limited duration and wages that did not ensure a minimum living standard (see Maier and Dörau 2010). As regards upward mobility, that is permeability to further training, specific attention was given to the enrolment in three-year apprenticeships in sweep 2.

Satisfaction included measures at a specific level (satisfaction with apprenticeship) and a general level (satisfaction with life). At the specific level, overall *educational satisfaction* (single item with Kunin-faces [e.g. ‘All in all, I’m satisfied with my apprenticeship’], TREE 2008, range 1–7), as well as *satisfaction with the occupation* (4-item scale [e.g. ‘I’m very pleased with the work I do in my occupation’], TREE 2008, range 1–4,
Cronbachs Alpha_{occu}=.84) and with the company (3-item scale [e.g. ‘My training company is a place where I like to be’], TREE 2008, range 1–4. Cronbachs Alpha_{company}=.80) was measured. In addition, a retrospective evaluation with three single items in sweep 2 assessed whether, in their present employment, former apprentices could use the skills they had acquired at vocational school and in the company, and whether they would choose their apprenticeship again (TREE 2008, scale 1–4). Finally, as a more general measure, overall satisfaction with life was assessed (5 items, [e.g. ‘I am happy with the way my life plan unfolds’], Grob et al. 1991, range 1–6, Cronbachs alpha_{sat}=.86).

Results

Learning opportunities (sweep 1, end of apprenticeship)

Group differences as regards the learning situation shortly before completing the two- or three-year apprenticeship were measured with ANCOVAs, with gender, occupational group and migration background (i.e. oneself, mother or father being born abroad) as control variables. Means, standard deviations and test statistics are presented in Table 3.

Apprentices’ ratings as regards their learning opportunities in the final months of their apprenticeships were on the positive side for all three groups. On average, apprentices’ assessment of workload at school and at the company was at a medium level, whereas variability of learning and pedagogical competencies of apprenticeship trainers were judged to be at a high level. Apprentices in two-year apprenticeships did not differ from those in three-year apprenticeships. Differences between the three groups of apprentices were not statistically significant.

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**Employability and upward mobility (sweep 2 and 3, after graduation)**

**Employment and education situation after graduation**

Table 4 shows the educational and work situation of the three groups of apprentices approximately 18 months (sweep 2) and 30 months (sweep 3) after they had graduated from their apprenticeship.

Results show significant differences for sweep 2. Apprentices with 2-Yr-Reg were more often than expected enrolled in a three-year apprenticeship. Apprentices with 2-Yr-Spec were more often in another situation, that is, mostly neither in education nor in employment. By contrast, apprentices having finished a 3-Yr-Reg were significantly more often in employment.

No differences were found for sweep 3, which is 30 months after the apprentices had obtained their VET-Certificate or VET-Diploma. Approximately 80% of all three groups were in employment.

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**Salary level**

Group differences as regards monthly net salary levels were measured with ANCOVAs, with gender, occupational group and migration background (i.e. oneself, mother or father being born abroad) as control variables.

For those graduates who were employed in sweep 2 or sweep 3, salary levels (net) seemed to be lowest for 2-Yr-Spec. In sweep 2, they earned on average 2923 SFR, whereas apprentices from 2-Yr-Reg earned 3375 SFR and apprentices from 3-Yr-Reg earned 3272 SFR. In sweep 3, apprentices from 2-Yr-Spec earned on average 2999 SFR, whereas apprentices from 2-Yr-Reg earned 3396 SFR and apprentices from 3-Yr-Reg earned 3246
SFR. Due to the small sample size of the special needs group, group differences were not statistically significant for sweep 2 and neither for sweep 3 (sweep 2: F=1.516, p=.223; sweep 3: F=1.076, p=.345).

Similarly, group differences as regards the proportion of young people whose salary is below the minimum level of SFR 3000 was not statistically significant in sweep 2 and not significant in sweep 3.

Type of work contract

In sweep 2, 2-Yr-Spec were more often in work contracts with limited duration than the other two groups. By contrast, 3-Yr-Reg had a permanent work contract more often than the two other groups. Permanent contracts were held by: 95% of the three-year-apprentices, 87% of the apprentices from a two-year-apprenticeship and a regular school background and only 67% of the apprentices with a special needs education background (Chi2(2)=7.493; p<.05).

In sweep 3, more than 90% of all the three groups of apprentices had a permanent work contract. Group differences were not statistically significant (Chi2(2)=1.266; p=.513).

Satisfaction with apprenticeship (sweep 1 and 2) and with life (sweep 1, 2 and 3)

Satisfaction with apprenticeship

Group differences as regards satisfaction with the apprenticeship were measured with ANCOVAs, with gender, occupational group and migration status (i.e. oneself, mother or father being born in Switzerland or abroad) as control variables.

Satisfaction with the apprenticeship at sweep 1 – be it general or more specifically with the occupation and the company – was rather high. Results show, however, significant differences between the three groups analysed (see Table 5). The analyses confirmed that general satisfaction and satisfaction with the company was lower for 2-Yr-Reg in contrast to
3-Yr-Reg ($p_{\text{general satisfaction}} < .05$; $p_{\text{satisfaction company}} < .001$). 2-Yr-Reg were generally less satisfied and specifically less satisfied with their occupation than 2-Yr-Spec ($p_{\text{general satisfaction}} < .05$; $p_{\text{satisfaction company}} < .05$).

--- Insert Table 5 here ---

Looking back retrospectively, VET graduates, who were in employment in sweep 2, judged skills and competencies acquired at vocational school and in the company as being useful for their current job. Similarly, all three groups were rather positive about their training occupation, claiming that they would choose the same occupation again if they had to restart their apprenticeship. No differences were found between the three groups.

*Satisfaction with life*

Finally, satisfaction with life was measured with a repeated measurement ANCOVA, assessing differences between the three groups of apprentices (between effects) and development between sweep 1, 2 and 3 (within effect). Again, no statistical differences were found. Satisfaction scores ranged between 4.7 and 5.0 on a scale between 1 and 6 ($F_{\text{group differences}}=1.140; \text{df}=2; p=.324; F_{\text{life satisfaction}}=.555; \text{df}=2; p=.574$).

**Discussion**

The assessment of employability of apprentices after a two-year apprenticeship furnishes predominantly positive evidence for all three dimensions of the earning schema that formed the theoretical framework of the analyses presented in this paper.

Our findings show that the two-year apprenticeship is creating favourable learning opportunities for young people and supporting them on their way towards the Federal VET Certificate (*dimension of earning-oriented pedagogy*). Apprentices on two-year
apprenticeship, whether coming from special or from regular classes, are coping rather well with the workload in the company they work for and at vocational school. They attribute high competencies to their apprenticeship trainers and judge that the variability of learning is ample. Their level of satisfaction (individual’s dimension) is high, be it regarding the training itself, the occupation or at a general level. These results do not differ from the results of the apprentices on three-year apprenticeship. It can be said that the two- (and the three-year) apprenticeships meet their learners’ requirements, and are judged by the latter as providing suitable training for them. However, the 2-Yr-Reg learners seem to be less satisfied than the 2-Yr-Spec learners and the 3-Yr-Reg learners. In-depth analyses show that for more than half of the 2-Yr-Reg learners the chosen occupation did not correspond with their initially desired occupation. These results – taking into account the still high level of satisfaction – could mean that the apprentices try to adapt to their particular situation and “make the best” of the situation. However, they also show that the Swiss VET-system is not able to offer sufficient occupational choice to people from regular schools, forcing some of them to do a detour on their occupational pathway and to prolong their training by at least one year to gain a VET Diploma. Further analyses will have to take a closer look at these findings.

Medium-term employability after a two-year apprenticeship seems to be established for the majority of young professionals with Federal VET Certificate, with approximately 80% of the young people being in employment two and a half years after completion of their training, not differing from young people with a three-year apprenticeship (dimension of the earning sphere). These results can be seen as a positive outcome and they seem to highlight the success of the new two-year apprenticeship programme. They seem to contradict the significant relation between low formal qualification and enhanced risk of unemployment stated by Dostal in Germany (2001; see also Reinberg and Hummel 2007; Rothe and Tinter
and by Bertschy, Cattaneo, and Wolter in Switzerland (2009). Medium-term salary levels are similar for all apprentices regardless of school background and apprenticeship type. These results confirm the assumption that two-year apprenticeships are a good way to integrate academically disadvantaged youths in the labour market (see Gruber and Weber 2007). From a short-term perspective, however, low-achieving young people coming from special needs schools are more often at an increased risk to find themselves in a precarious work situation: they are more often unemployed and have work contracts with limited duration one year after apprenticeship training. These results thus confirm partly the difficulties faced by young people with a low educational level when entering the labour market (see Maier and Dörau 2010; Bertschy, Cattaneo, and Wolter 2009; Descy 2002). The assumption of upward mobility for apprentices with a Federal VET Certificate was clearly met. However, transition to a three-year apprenticeship was mainly limited to apprentices who had attended regular classes.

Although overall results underline the success of the new two-year apprenticeship according to the goals of VET reform, as set by the Swiss government (OPET 2005; Barmettler 2008) and at least partly by the learners themselves, a more critical interpretation of the results has to be considered:

*First*, success might by related to the fact that the two-year apprenticeship is in its first implementation, which is characterised by especially committed apprenticeship trainers, thus creating a positive effect on the quality of performance (see Scherrer 2008).

*Second*, the present data are restricted to transitions from the end of the apprenticeship to first years in employment, and do not allow investigations prior to the end of training. The spectrum of conclusions is limited on those youth who successfully entered and completed their apprenticeship and cannot be generalised for less successful young people. Also, the data do not allow explanation of why some youth from regular schools directly enrolled in
three-year apprenticeships, whereas others first entered the two-year apprenticeship programme before moving on to the more demanding three-year VET programme. Further research should analyse the transition of school leavers from compulsory schools to the VET system in order to better understand whether it’s the young people who freely choose to enrol in a two-year apprenticeship or whether they are obliged by the employers to do so.

Third, findings of similar and successful labour market outcomes of two- and three-year apprenticeships might not only be a consequence of the reform itself, but rather of the favourable general preconditions of the Swiss labour market (Schellenbauer et al. 2010). Overall, youth employment rates in Switzerland are on a high level in comparison to other OECD-countries (Dubach, Guggisberg, and Stutz 2009; Ryan 2008), thus also allowing enhanced integration of lower qualified people. Rates of unqualified employees in both the retail sales and the hospitality sector are rather high and the overall wage level is rather low. Employment rates do not differ a lot, especially during the first years following labour market entry, between young workers with or without an upper secondary degree (OECD 2008, 40). Similarly, one year after leaving initial education, average salary level difference between qualified and unqualified people in retail sales and hospitality sector in Switzerland is not more than 200 SFR/month (FSO 2010). It might, however, be expected that employment perspectives get worse in the longer run (after five or ten years) (see OECD 2008). Future research has to focus on additional investigations five to ten years after the end of the two-year apprenticeship in order to evaluate the stability and precariousness of the long-term occupational pathways of young people with Federal VET Certificate. Also, additional research with other occupational groups and different labour market conditions might be used to further elaborate our findings.

Nevertheless, in spite of these more critical remarks, and using an earning-oriented approach to employability, it can generally be concluded that the two-year apprenticeship
seems to be a promising model of training. It successfully links the interests of learners and
the labour market and is accepted by both school leavers and training companies. The strong
tripartite VET tradition in Switzerland, which emphasises the role of employers, vocational
schools and state authorities in all reform ambitions, might be an important factor that
explains the success of the new form of apprenticeship.
On a general level, it seems that the political objectives of the reform – creating favourable
learning opportunities, fostering employability and potential upward mobility – are key
elements which are crucial for all VET programmes in modern working societies, and thus
independent of VET cultures and traditions. Strongly formal structures on a national level –
including standardisation of training – seem to be a good means to support individuals to
acquire the prerequisites to successfully enter the labour market and to follow positive and
upward occupational pathways. This finding can be of interest in general and specifically for
countries with a strong apprenticeship system such as Germany (Deissinger and Hellwig
2005, Gruber and Weber 2007; Musekamp and Becker 2008), but also for countries with
fewer apprenticeship programmes such as e.g. Australia (see Bowman, Stanwick, and Blythe
2005).

Finally, there is a more general question linked to reforms such as the two-year
apprenticeship programme: should an education and training system adapt to the specific
needs of the learners or should the learners adapt to the specificities of the system? Our
results suggest that both are needed. Reforms have implications both for the overall
architecture of Swiss VET and for the individual learners. The VET system has become more
flexible and more permeable – both important assets of modern education systems – with the
disadvantage of possibly increased educational costs due to the prolongation of education.
Low-achieving learners are given the opportunity to “demonstrate” their employability by a
certificate of a nationally standardised training – with the potential risk of special needs
students being excluded. Educational reforms have to pay special attention to possibilities of lower-level vocational training: e.g. work-related training for disabled young people which is offered by special institutions for handicapped people (Sempert and Kammermann 2010).
Acknowledgements

The Swiss youth panel study TREE (Transitions from Education to Employment; www.unibas.ch) has been running since 2000 and has been funded by the Swiss National Science Foundation, the University of Basel, the Swiss Federal Office of Statistics, the Federal Office for Professional Education and Technology (OPET), and the cantons of Berne, Geneva and Ticino.

The VET Certificate-Career Study (VET-CCS) has been financed by the OPET and by the University of Applied Sciences of Special Needs Education, Zürich.

We would like to thank Lars Balzer, Laurent Fillietaz, Thomas Meyer and an anonymous reviewer for their helpful comments on an earlier version of the paper.
Table 1. Portrayal of Swiss VET programmes

<table>
<thead>
<tr>
<th></th>
<th>Former elementary training programme</th>
<th>Two-year apprenticeship</th>
<th>Three-year apprenticeship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>individualised programme</td>
<td>standardised programme</td>
<td>standardised programme</td>
</tr>
<tr>
<td></td>
<td></td>
<td>upward mobility to</td>
<td>upward mobility to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>three-year apprenticeship</td>
<td>tertiary-level (type B)</td>
</tr>
<tr>
<td>Curriculum</td>
<td>practical training</td>
<td>focus on practical</td>
<td>focus on practical</td>
</tr>
<tr>
<td></td>
<td>1 day per week at vocational school</td>
<td>training</td>
<td>training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 day per week at</td>
<td>1 day per week at</td>
</tr>
<tr>
<td></td>
<td></td>
<td>vocational school</td>
<td>vocational school</td>
</tr>
<tr>
<td>Duration</td>
<td>1-2 years</td>
<td>2 years</td>
<td>3 years</td>
</tr>
<tr>
<td>Certificate</td>
<td>individualised attestation</td>
<td>Federal VET Certificate</td>
<td>Federal VET Diploma</td>
</tr>
<tr>
<td>Lower secondary education of</td>
<td>a) special needs education</td>
<td>a) regular school</td>
<td>regular school (basic</td>
</tr>
<tr>
<td>apprentices (target population)</td>
<td>b) regular school (basic demands)</td>
<td>(basic demands)</td>
<td>demands or higher)</td>
</tr>
</tbody>
</table>
Table 2. Sample characteristics

<table>
<thead>
<tr>
<th></th>
<th>2-year apprenticeship special needs education (2-Yr-Spec)</th>
<th>2-year apprenticeship regular school (2-Yr-Reg)</th>
<th>3-year apprenticeship (3-Yr-Reg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample sweep 1</td>
<td>28</td>
<td>261</td>
<td>118</td>
</tr>
<tr>
<td>Sample sweep 2</td>
<td>18</td>
<td>176</td>
<td>95</td>
</tr>
<tr>
<td>Sample sweep 3</td>
<td>18</td>
<td>136</td>
<td>82</td>
</tr>
<tr>
<td>Response rate: sweep 2 / sweep 1</td>
<td>64.3%</td>
<td>67.4%</td>
<td>80.5%</td>
</tr>
<tr>
<td>Response rate: sweep 3 / sweep 1</td>
<td>64.3%</td>
<td>52.1%</td>
<td>69.5%</td>
</tr>
<tr>
<td>Male sweep 1 (% of group)</td>
<td>12 (42.9%)</td>
<td>79 (30.2%)</td>
<td>38 (32.2%)</td>
</tr>
<tr>
<td>Hotel and restaurant sweep 1 (% of group)</td>
<td>12 (42.9%)</td>
<td>163 (62.5%)</td>
<td>57 (48.3%)</td>
</tr>
<tr>
<td>Retail sales sweep 1 (% of group)</td>
<td>16 (57.1%)</td>
<td>98 (37.5%)</td>
<td>61 (51.7%)</td>
</tr>
<tr>
<td>Migration background* sweep 1 (% of group)</td>
<td>10 (35.7%)</td>
<td>169 (64.8%)</td>
<td>47 (39.8%)</td>
</tr>
</tbody>
</table>

Note: *apprentices who themselves or whose mother or father were born abroad
Table 3. Learning situation and satisfaction with the apprenticeship (sweep 1)

<table>
<thead>
<tr>
<th></th>
<th>2-year apprenticeship special needs education (N=27)</th>
<th>2-year apprenticeship regular school (N=251)</th>
<th>3-year apprenticeship (N=75)</th>
<th>F(df=2)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean(SD)</td>
<td>mean(SD)</td>
<td>mean(SD)</td>
<td>F(df=2)</td>
<td>p</td>
<td></td>
</tr>
<tr>
<td>Learning opportunities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workload at company</td>
<td>2.77 (0.80)</td>
<td>2.69 (0.70)</td>
<td>2.55 (0.61)</td>
<td>1.028</td>
<td>.359</td>
</tr>
<tr>
<td>Workload at vocational school</td>
<td>2.51 (0.95)</td>
<td>2.29 (0.75)</td>
<td>2.23 (0.69)</td>
<td>1.422</td>
<td>.243</td>
</tr>
<tr>
<td>Variability of learning</td>
<td>4.05 (0.60)</td>
<td>3.84 (0.75)</td>
<td>3.92 (0.74)</td>
<td>1.854</td>
<td>.158</td>
</tr>
<tr>
<td>Pedagogical competences of apprenticeship trainer</td>
<td>3.38 (0.58)</td>
<td>3.15 (0.76)</td>
<td>3.17 (0.69)</td>
<td>1.361</td>
<td>.258</td>
</tr>
</tbody>
</table>

Note: ANCOVAs; controlled for gender, occupational group (sales retail vs. hospitality sector) and migration background (Swiss apprentices vs. apprentices who themselves or whose mother or father were born abroad)
Table 4. Educational and work situation after graduation (sweep 2 and 3)

<table>
<thead>
<tr>
<th></th>
<th>2-year apprenticeship</th>
<th>2-year apprenticeship</th>
<th>3-year apprenticeship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>special needs education</td>
<td>regular school</td>
<td>apprenticeship</td>
</tr>
<tr>
<td><strong>Sweep 2 (1.5 years after graduation)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td>50%</td>
<td>61%</td>
<td>76%&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Three-year apprenticeship&lt;sup&gt;a&lt;/sup&gt;</td>
<td>11%</td>
<td>27%</td>
<td>15%</td>
</tr>
<tr>
<td>Other situation</td>
<td>39%</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>Total N (=100%)</td>
<td>(18)</td>
<td>(176)</td>
<td>(95)</td>
</tr>
<tr>
<td>Chi&lt;sup&gt;2&lt;/sup&gt;(4)=19.036; p=.001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sweep 3 (2.5 years after graduation)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td>78%</td>
<td>79%</td>
<td>80%</td>
</tr>
<tr>
<td>Three-year apprenticeship&lt;sup&gt;a&lt;/sup&gt;</td>
<td>11%</td>
<td>06%</td>
<td>11%</td>
</tr>
<tr>
<td>Other situation</td>
<td>11%</td>
<td>15%</td>
<td>09%</td>
</tr>
<tr>
<td>Total N (=100%)</td>
<td>(18)</td>
<td>(136)</td>
<td>(82)</td>
</tr>
<tr>
<td>Chi&lt;sup&gt;2&lt;/sup&gt;(4)= 3.85; p=.425</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

<sup>a</sup> Or other educational programme leading to an upper secondary diploma with higher demands.

<sup>b</sup> Numbers in *italic bold*: standardised adjusted residuals >2.0
### Table 5. Satisfaction with apprenticeship

<table>
<thead>
<tr>
<th></th>
<th>2-year apprenticeship</th>
<th>2-year apprenticeship</th>
<th>3-year apprenticeship</th>
<th>F(df=2)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>special needs education</td>
<td>regular school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Satisfaction (sweep 1)</strong></td>
<td>(N=27)</td>
<td>(N=251)</td>
<td>(N=75)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General satisfaction with apprenticeship</td>
<td>5.70 (1.07)</td>
<td>5.26 (1.15)</td>
<td>5.58 (0.99)</td>
<td>4.150</td>
<td>.017</td>
</tr>
<tr>
<td>Satisfaction with occupation</td>
<td>3.44 (0.46)</td>
<td>3.06 (0.71)</td>
<td>3.20 (0.67)</td>
<td>3.491</td>
<td>.032</td>
</tr>
<tr>
<td>Satisfaction with company</td>
<td>3.14 (0.82)</td>
<td>2.88 (0.83)</td>
<td>3.36 (0.58)</td>
<td>11.184</td>
<td>.000</td>
</tr>
<tr>
<td><strong>Retrospective evaluation (sweep 2)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skills acquired at vocational school are useful for current job</td>
<td>3.30 (0.82)</td>
<td>3.06 (0.90)</td>
<td>2.96 (0.88)</td>
<td>.626</td>
<td>.536</td>
</tr>
<tr>
<td>Skills acquired in the company are useful for current job</td>
<td>2.90 (1.20)</td>
<td>3.24 (0.93)</td>
<td>3.23 (0.94)</td>
<td>.449</td>
<td>.640</td>
</tr>
<tr>
<td>I would choose this occupation again</td>
<td>3.20 (1.03)</td>
<td>2.72 (1.06)</td>
<td>2.77 (1.11)</td>
<td>.566</td>
<td>.569</td>
</tr>
</tbody>
</table>

Note: ANCOVAs; controlled for gender, occupational group (sales retail vs. hospitality sector) and migration background (Swiss apprentices vs. apprentices who themselves or whose mother or father were born abroad)
Figure 1. The Swiss VET system

Source: OPET 2010b, 5
Figure 2. Structure of the earning schema with its three dimensions (see Kraus, 2006, 209; adapted)

- **Earning sphere**
  - needs adequate workers
  - includes expectations and requirements of employers and work places, embedded in labour market structures and conditions, policy

- **Earning-oriented pedagogy**
  - has to respond to societal expectations with respect to its intermediate function between individual and earning sphere

- **Individual**
  - has to ensure a living by acquiring expertise, general competencies and earning orientation

**Earning schema**
conceptual framework concerning preconditions for employability (expertise, general competences, earning orientation, labour market needs)
References


