

The course of training and the transition to employment

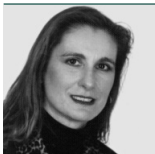
A comparison of participants in in-company and school-based vocational training

► The recent bottlenecks which have occurred on the apprenticeship market have forced many young people to make compromises, sometimes having to forgo the occupation they have set their hearts and even having to fall back on school-based vocational training in some cases. What were the implications of this for the course of their training? Did they complete their training or did they drop out? And what are the chances of making the transition to employment for those who have completed school-based vocational training rather than an in-company apprenticeship? The aim of the present paper is to use the BIBB transitional study as basis for identifying the answers to these questions.

The negative development in employment brought a strong decrease in the provision of training places within the dual system in its wake, a fall which continued to the middle of the present decade. Compared with 1992, when 721,800 training places were available, the figure for 2005 was only 562,800. The number of general school leavers moved in the opposite direction, rising from 759,700 to 939,300 in the same period. Considerable bottlenecks were the result of all this as young people continued to display the same high degree of interest in dual training.

The problems faced by unsuccessful training place applicants at the so-called "first threshold" (transition from school to vocational training) are a topic which has frequently been addressed over the course of recent years (cf. BEICHT/FRIEDRICH/ULRICH 2007), whereas relatively little attention has been accorded to young people who managed to secure a route into vocational training. The presumption would be that the hurdles at the "first transition" also leave their mark on successful training place applicants. It is likely that many have made compromises, whether this be in the form of having to fall back on their "second choice" occupation within the dual system or of needing to pursue an alternative route into the school-based vocational training system. Such compromises affect training motivation, however, and the fear would be of a greater tendency to drop out.

For this reason, we are seeking to address the issue of how many of those who have commenced training over the course of recent years have actually completed the full normal term of their vocational education and training and of how such trainees succeeded in making the transition from vocational training to employment ("second threshold"). The basis of the present paper is the "BIBB transitional study 2006", a representative survey which involved collecting retrospective information on the education and occupational experiences of young people born between 1982 and 1988 (for information on the methodological approach adopted cf. BEICHT/FRIEDRICH/ULRICH). The analyses include approximately 3,000 participants who had begun their first fully qualifying course of vocational edu-



URSULA BEICHT

Staff member of the "Vocational Training Supply and Demand/Training Participation" Section at BIBB



JOACHIM GERD ULRICH

Dr., staff member of the "Vocational Training Supply and Demand/Training Participation" Section at BIBB

Table 1 **Persons commencing initial vocational education and training in the form of in-company training or a school-based occupation according to personal characteristics**

Characteristics of young people commencing training ¹⁾	In-company training Column percentages (weighted)	Training in a school-based occupation Column percentages (weighted)
School leaving qualification *** (on leaving general education)		
• Maximum of lower secondary school leaving certificate	45.9	28.2
• Intermediate secondary school leaving certificate	47.5	59.4
• Upper secondary school leaving certificate, University of Applied Sciences entrance qualification	6.6	12.4
Average certificate mark on leaving school (German system from 1 to 6)		
• Up to 1.9	7.1	8.3
• 2.0 to 2.9	50.3	52.1
• 3.0 to 3.9	37.9	35.9
• 4.0 and worse	4.6	3.6
Gender ***		
• Male	61.7	24.2
• Female	38.3	75.8
Migrant background		
• No migrant background	80.3	79.0
• From a migrant background	19.7	21.0
Type of occupation ***		
• Commercial/technical occupation ²⁾	56.2	7.0
• Service occupation	43.8	93.0
Training and preferred		
• occupation *** "is my preferred occupation"	47.6	53.8
• "at least resembles my preferred occupation"	26.3	29.9
• "is not my preferred occupation"	18.4	11.8
• "do not have a preferred occupation"	7.7	4.5

1) Significance test (χ^2 -, t-tests) of the bivariate correlations with the selected form of training on the basis of unweighted data: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

2) Including occupations in the primary sector

Source: BIBB transitional study 2006. Basis: persons born between 1982 and 1988 whose initial vocational education and training took place in in-company or school-based form (unweighted case figures: in-company training: $n = 2.484$; training in a school-based occupation: $n = 670$)

cation and training either as trainees in a company (which includes commercial firms, local authorities or professional practices) or else as a pupil in a vocational school-based training occupation.¹

New in-company trainees compromise more frequently their occupational choice

We also know from vocational education and training statistics that young people who enter in-company training are predominantly male and include a relatively high number of lower secondary school leavers (cf. Table 1). The

main focus of school-based occupations is in the service sector, and these mainly attract females or persons who have attained at least an intermediate secondary school leaving certificate. Our random sampling did not reveal any significant differences in certificate marks. The proportion of young people from a migrant background was also approximately equal in both training systems.

Notwithstanding this, in-company trainees needed to make compromises more frequently in terms of choice of occupation. Only about 48 percent were able to fulfil their wishes entirely in this respect, whereas 18 percent explicitly emphasised that they were not undergoing training in their preferred occupation. A further 26 percent were at least able to discern similarities with their preferred occupation. Those commencing school-based training were significantly more likely to be able to realise their preferred occupation, although the proportion of 54 percent was much lower than we had expected on the basis of the fact that access to the school-based occupational training system is largely unaffected by the market.

More drop-outs within school-based occupations

Although young people in school-based occupations were able to fulfil their occupational preference on a more frequent basis, they were more likely to drop out of vocational education and training before completion² (cf. Figure 1). The probability of drop-out in the case of an in-company apprenticeship was, by way of contrast, only particularly high during the first three months with relatively moderate development thereafter. One year after commencing training, a total of seven percent had dropped out of in-company vocational training before completion. The corresponding figures after two and three years were ten and eleven percent respectively. In the school-based occupations system, on the other hand, accumulated drop-out rates had already reached a level of ten percent after one year and were 15 percent and 19 percent after two and three years respectively. As far as apprenticeships were concerned, it was clear that the highest danger of drop-out was during the probationary period. Subsequent to this, no further phase of training was characterised by a particularly high degree of risk. The situation in the case of the school-based occupations was quite different. Considerable increases in the drop-out rate occurred at the end of each school year.

What were the reasons for dropping out of training? The most frequent reasons stated in the case of in-company

1 The survey did not include trainee civil servants or extra-company or school-based new trainees in occupations regulated by the Vocational Training Act (BBiG) or the Crafts and Trades Regulation Code (HwO).

2 Not including those who failed the final examination. The period of observation of 36 months corresponds to the stipulated duration of training in most occupations. Persons undergoing a shorter duration of training were treated as cut-off cases.

apprenticeships (56%) were problems with training and teaching staff, colleagues, fellow pupils or other trainees.³ These difficulties played a significantly lower part in school-based occupations. Those dropping out of school-based vocational training were more frequently likely to indicate that the training was too difficult (26% as opposed to 12% in the case of those dropping out of in-company training). At the same time, the former were more likely (31% as opposed to 20%) to state prospects of another (better) training opportunity as the reason for dropping out of vocational training early. Young people acting in this way often waited for the end of the school year before dropping out so as to be able to commence a new training course without having to wait for a lengthy period.

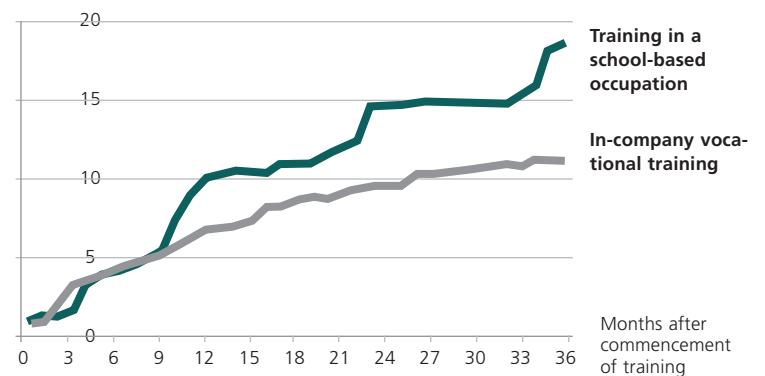
A significant factor in both forms of training was the fact that the occupation was not suitable. This aspect was stated somewhat more frequently by those dropping out of in-company training (51%) than it was by school-based drop-outs (44%). The difference between the groups was not, however, significant in statistical terms.

The results of a Cox Regression indicated that explicit failure to obtain a training place in a trainee's preferred occupation led to a particularly high degree of probability that drop-out would occur (cf. Table 2). No increased level of risk was discernable in the event that the chosen occupation at least displayed similarities with the preferred occupation, the same applying in instances where young people had not had any clear occupational preferences. Another factor which diminished the risk of drop-out was a better level of performance in general schooling, whether exhibited in the form of higher school leaving qualifications or better certificate marks. Young people from a migrant background were fundamentally at greater risk of dropping out. Gender, on the other hand, did not play a significant role. The Cox Regression also confirmed findings on the influence exerted by the form of training. In the case of school-based vocational training, the probability of drop-out rises disproportionately over the course of time⁴ and significantly exceeds the risk of drop-out from an in-company apprenticeship in overall terms.

In-company trainees move more rapidly to employment

What was the nature of the development undergone by those participants in the survey able to conclude their vocational education and training successfully? As Figure 2 shows, there were considerable deviations during the course of the first year depending on the form of training. 47 percent of those who had undergone in-company training were in permanent employment and working more than 20 hours per week after three months. Together with

Figure 1 **Development of the accumulated probability of drop-out during the course of in-company and school-based vocational training estimated according to Kaplan/Meier** Accumulated probability of drop-out in percent (weighted)



Source: BIBB transitional study 2006. Basis: persons born between 1982 and 1988 whose initial vocational education and training took place in in-company or school-based form (unweighted case figures: in-company training: n = 2,484; training in a school-based occupation: n = 670)

those who were employed in other ways, this made a total of 72 percent in employment. By way of contrast, only 15 percent of those who had completed training in a school-based occupation had entered the same type of permanent employment and the total proportion of the latter group in employment was a mere 40 percent.

Twelve months after the end of training, the proportion of those who had undergone in-company training and found permanent employment had risen to 50 percent, although there had been a decrease in the number of fixed-term employment contracts. The reasons for this are likely to include the fact that fixed-term contracts of employment offered to trainees in the company where they had completed their training had now come to an end. For this reason, there had been a slight fall in the overall proportion of all those in employment to 69 percent. In the case of those who had completed school-based training, the proportion of those in permanent employment had risen to just under 20 percent, meaning the total of those employed was now 56 percent in overall terms. Around 30 percent of those who had completed school-based training

³ Interviewees were permitted to state more than one reason.

⁴ In the case of a Cox Regression, assumption of proportionality should be fulfilled for the covariates included. The model is imperfect if, as is the case here, – expressed in simplified terms – probabilities of drop-out in the case of in-company and school-based training do not develop in the same proportion to each other over the course of time. In this case, an interaction variable needs to be integrated into the regression model along with the time (for more information on the procedures of the Cox Regression cf. DIEKMANN/ MITTER 1984 inter alia).

ning found themselves back in the educational system after one year. 17 percent had entered new, fully qualifying training including higher education study and 13 percent were attending a specialised upper secondary school or a specialised grammar school or else were participating in a full-time continuing training measure. Eight percent were either unemployed or engaged in other activities. Of those who had completed in-company training, ten percent were back in the educational system and only five percent were pursuing a second course of training. The proportion of those without employment or engaged in other activities was twelve percent.

Debate

Particular emphasis needs to be accorded to two results. Firstly, the total proportion of in-company trainees drop-

ping out early, which was eleven percent, was lower than we had expected given the transitional problems at the “first threshold” and the associated compromises in terms of selection of occupation. Secondly, it is noticeable that young people in school-based occupations dropped out of their vocational education and training significantly more frequently although they were more likely to be able to realise their preferred occupation as well as having a higher level of prior learning at school.

STABLE TRAINING COURSES IF COMPANIES TAKE “THE PICK OF THE CROP”

Paradoxically, we cannot exclude the possibility that the surprisingly low drop-out proportion in the case of in-company training is (also) a consequence of the transitional problems which occur at the “first threshold”. In light of the very high numbers of applicants, companies were largely able to operate by selecting the “the pick of the crop”. This approach caused higher ability trainees to enter apprenticeships, and feelings of being out of their depth played a relatively minor role as a reason for dropping out of training, as seen here. The risk reducing effect produced by this higher level of qualification (cf. BESSEY/BACKES-GELLNER 2007 p. 17) was possibly stronger in overall terms than the negative motivational impacts occasioned by failing to secure entry to preferred occupations.

The fact that the officially measured rates of apprenticeship contracts terminated early in times of high numbers of applicants did not fall in any way is conspicuous (even falling from 24.1% to 19.8% between 2002 and 2006). The reason for this phenomenon is to some extent considered to lie in the lack of opportunity for potential training drop-outs to change training given the bottlenecks on the training market (cf. BROSI/WERNER 2003). This may, however, also support our thesis that companies were increasingly able to adopt a “pick of the crop” policy. The fact that the drop-out rate of eleven percent measured by us was significantly lower does not constitute a contradiction of the official statistics. These statistics count all terminated contracts rather than merely genuine drop-outs. We also know that around half of those whose contracts are terminated continue their training directly afterwards, mostly within the same occupation (cf. SCHÖNGEN 2003). In addition to this, our study does not take into account terminated training contracts where cancellation of the contract took place before the commencement of training or a few days after.

SCHOOL-BASED TRAINING: MORE LIKELY A WRONG INDIVIDUAL DECISION?

The residual problems at the “first threshold” are likely to be part of the reason for the higher drop-out rate in the school-based occupations, and the anticipated hurdles at

Table 2 Cause variables for the development of the drop-out rate – results of a Cox Regression

Cause variables investigated ¹⁾	e ^β
School leaving qualification Reference: maximum of lower secondary school leaving certificate	1
• Intermediate secondary school leaving certificate	.653**
• Upper secondary school leaving certificate, University of Applied Sciences entrance qualification	.636**
Average certificate mark (on leaving school)	1.415***
Gender Reference: male	1
• Female	1.296
Migrant background Reference: no migrant background	1
• From a migrant background	1.430*
Type of occupation Reference: commercial/technical occupation	1
• Service occupation	.979
Training and preferred occupation Reference: “is my preferred occupation”	1
• “at least resembles my preferred occupation”	.898
• “is not my preferred occupation”	3.622***
• “do not have a preferred occupation”	1.179
Form of training Reference: in-company training	1
• School-based training	2.883***
Time change in the effect of the form of training on the drop-out rate Reference: in-company training	1
• School-based training	1.685**
Overall model: $\chi^2 = 159,656$ df = 11 p = .000	

1) The effect coefficients e listed in the right-hand column indicate the influence of the various variables and group alignments on the drop-out rate. Values greater than 1 indicate a higher probability of drop-out (compared to the respective reference group) whereas values smaller than one indicate a lesser such probability. The effect coefficient of the average certificate mark numeralises the effect of a school performance worse by one mark. Significance levels: * p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001.

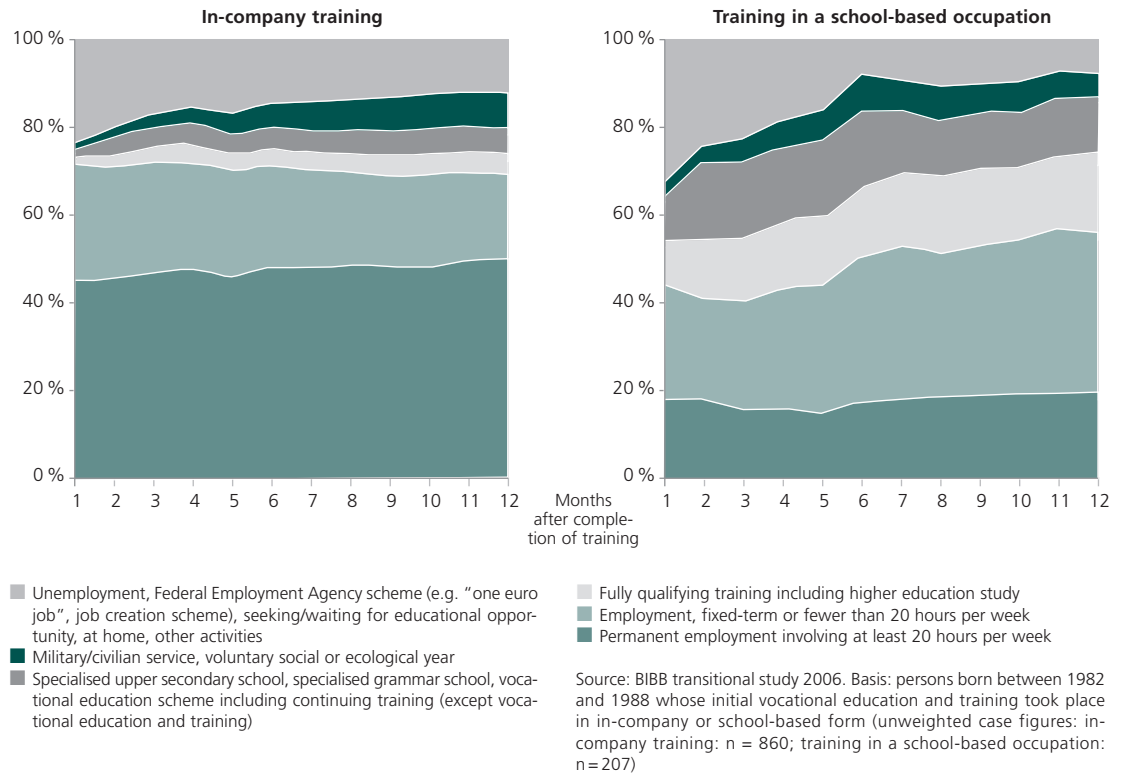
Source: BIBB transitional study 2006. Basis: persons born between 1982 and 1988 whose initial vocational education and training took place in in-company or school-based form (unweighted case figure: n = 3,071).

Figure 2

Status distribution in the first twelve months after completion of initial vocational education and training

The figure depicts the numbers of young people finding themselves in a particular situation (such as employment or training) at different points in time after conclusion of training. The graphs provide a precise month-by-month picture of overall distribution in percentage terms (weighted).

The graphs include only young people who completed training in the summer of 2005 or earlier, i.e. those who had already concluded a period of twelve months following training at the time the survey was undertaken.



the "second threshold" are probably a second partial aspect. The "first threshold" also plays a part in the process to the extent that a conspicuously large number of young people made career choice compromises at the transition to the school-based occupation system. Within this context just under half of those commencing training in school-based occupations had also sought a training opportunity within the dual system.

It is apparent that the school-based occupation system is being accorded a safety net function, especially given the fact that its access regulations are less dependent on the market. Notwithstanding this, requirements within the school-based occupation vocational education and training system often seem to have been underestimated. The fact that trainees who dropped out relatively often stated a feeling of being out of their depth for doing so indicate that some of these trainees were not in possession of the necessary prior learning to embark upon school-based training.

As the results have shown, young people in school-based training occupations need to expect that they will encounter significantly greater hurdles at the "second threshold". Pupils are obviously aware of this, and the fear of such problems causes some to seek alternative educational courses. A significant number decide to drop out of training in order to be able to embark on such alternatives, although many wait until the conclusion of their initial vocational

education and training before doing so. The long-term implications of this double or higher training should certainly not be viewed negatively from an individual point of view. After all, extensive education fundamentally reduces the risk of future unemployment. Having said this, however, the fact remains that the extremely high proportion of those completing training who then immediately re-enter the educational system without having had longer term experience of employment raises issues with regard to the education economy (cf. FELLER 2004). ■

Literature

- BEICHT, U.; FRIEDRICH, M.; ULRICH, J. G.: Deutlich längere Dauer bis zum Ausbildungseinstieg. BIBB Report 2/2007
- BEICHT, U.; FRIEDRICH, M.; ULRICH, J. G. (Eds.): *Ausbildungschancen und Verbleib von Schulabsolventen in Zeiten eines angespannten Lehrstellenmarktes*
- BESSEY, D.; BACKES-GELLNER, U.: *Premature Apprenticeship Terminations: An Economic Analysis*. University of Zurich, Institute for Strategy and Company Economics 2007
- BROSI, W.; WERNER, R.: Lösung von Ausbildungsverträgen – ein bildungspolitisch wichtiges Thema, methodisch statistisch schwierig zu fassen. In: ALTHOFF, H. Et al. (Ed.): *Vorzeitige Lösung von Lehrverträgen und Ausbildungsabbruch*. Bielefeld 2003
- DIEKMANN, A.; MITTER, P.: *Methoden zur Analyse von Zeitverläufen*. Stuttgart 1984
- FELLER, G.: *Ausbildungen an Berufsfachschulen – Entwicklungen, Defizite und Chancen*. In: BWP Vol. 33 (2004) Issue 4, pp. 48–52
- SCHÖNGEN, K.: *Ausbildungsvertrag gelöst = Ausbildung abgebrochen?* In: BWP Vol. 32 (2003) Issue 5, pp. 35–39