

Prevention of dropout in vocational training

Andreas Frey and Jean-Jacques Ruppert

For many years now, the dropout rate in vocational training in Europe has remained consistently high. This affects not only those countries with a dual training system where trainees alternate working in the work-place and learning at school (see Figure 1), but also those with a predominantly school-based vocational education system.

Figure 1: The education system in Germany¹

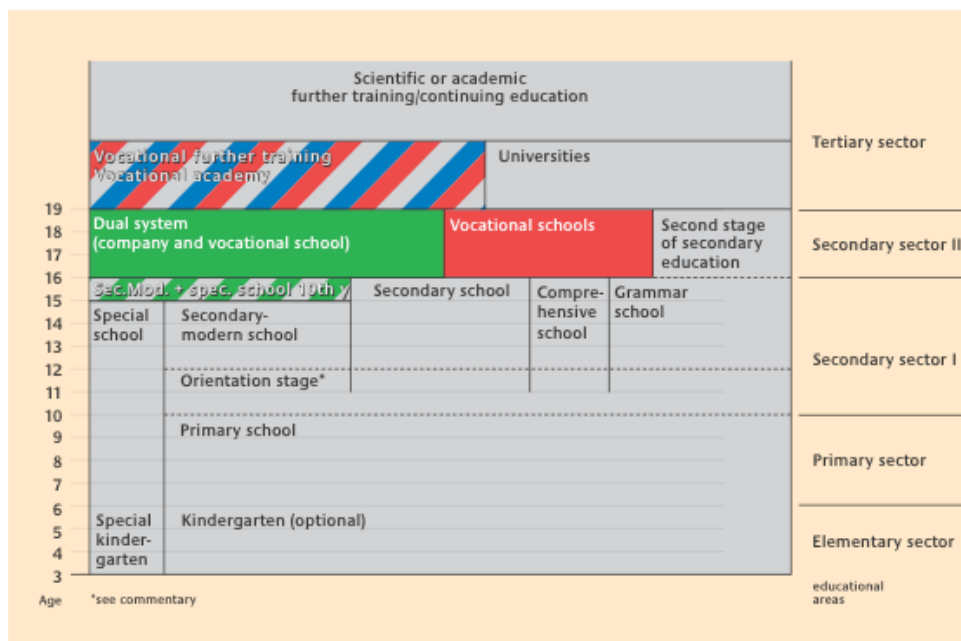


Figure 1 shows the basic structure of the education system in Germany, with the different educational and training streams or types of schools. After a common four-year primary-school period which is compulsory, educational pathways diverge within Germany's «divided education system» into secondary-modern schools (Hauptschulen), secondary-technical schools (Realschulen), grammar schools (Gymnasien) and, comprehensive schools (Gesamtschulen). The different streams often meet up again within the dual system, which accepts young people from special schools, secondary-modern schools, secondary technical schools, comprehensive schools, vocational schools and grammar schools.

The dual system is the largest educational stream within secondary sector II: two thirds of each age group aim at reaching a recognised professional occupation based

¹ Federal Ministry of Education and Research (2003). Germany's Vocational Education at a glance. Bonn: FMER.

upon formal training. The vast majority of apprentices within the dual training system move on to work as skilled employees - and quite a few make use of various opportunities for further vocational training later on in life. If they meet certain conditions, young people enrolled into such vocational training schemes can, in a year of full-time education, also acquire a university entrance certificate, and then enter higher education.

Within the secondary II sector of the German education system, the full-time vocational schools have the largest numbers of pupils. These schools prepare young people, through vocational training and usually within the dual system, for professional occupations. Under certain circumstances, attendance at a full-time vocational school can be credited as a first year of vocational training within the dual system. Some programmes of full-time vocational schools lead to a limited university entrance certificate. The duration of such programmes varies from one to three years, depending on the occupational field. On the whole, one out of every six pupils in full-time vocational education acquires an officially recognised professional occupation - requiring formal training within the dual system. Finally, federal legislation now allows final school examinations to be harmonised with the relevant qualifications in the dual system.

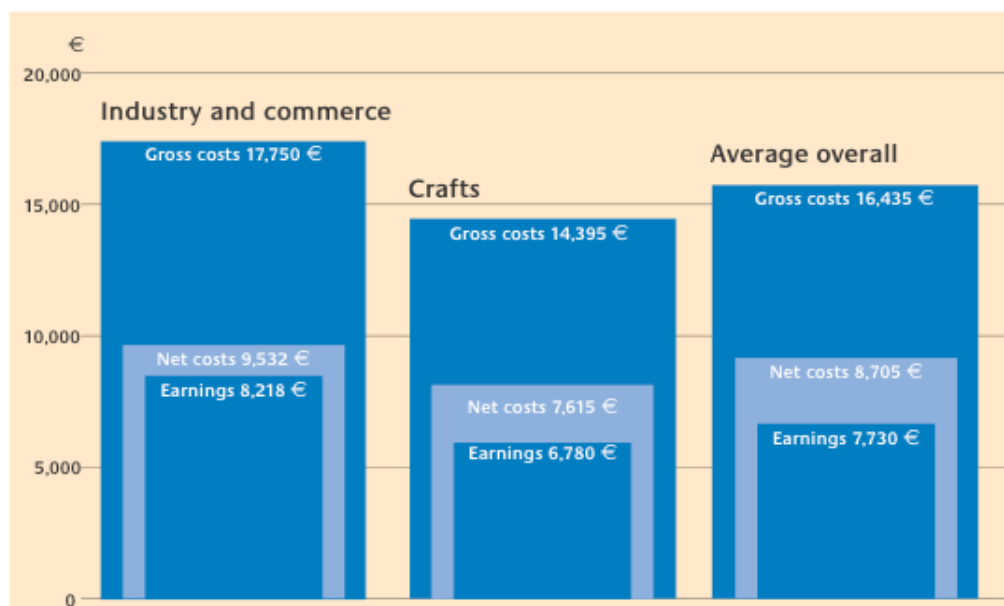
Upper technical schools (Fachoberschulen) and upper vocational schools (Berufsbildungshochschulen) normally build upon vocational training within the dual system. They teach specialised occupational skills and theory, and confer university entrance certifications.

Costs and benefits of vocational training in the dual system

On the whole, there are many possibilities within the dual system for the transition between school-based vocational education and vocational training, as well as for the transition from vocational training into higher education. Some 20% of all first-year students enter higher education after having acquired a vocational qualification within the dual system.

A dropout from education or training usually leaves all those involved with a deep sense of failure and carries huge risks at both personal and social levels as well as having a more difficult eventual later integration into the labour market. Among businesses participating in the training of young people, especially SMEs, a dropout often creates not only economic damage (see Figure 2), but also dramatically decreases their willingness to train apprentices in the future.

Figure 2: Costs and benefits of in-company vocational training²



Determining the overall cost of in-company vocational training is a relatively complicated matter since certain costs have to be taken into account along with expenditures that are caused directly by the training itself, such as training allowances and employers' contributions to social security. Only full-time training personnel can unambiguously be assigned to the cost side whereas the costs for part-time training staff, and many general expenses, simply have to be estimated. In the year 2000, businesses incurred an average of annual gross costs for vocational training of some 16.500€. The return that can be directly offset against these costs – each trainee works for his or her company - was considerably above 7.700€. The net costs to business for training one single young person per year thus averaged some 8.700€. Businesses however fully understand that vocational training is also an investment as it constitutes one of their prime reasons for offering training in the first place. Therefore, investments must be assessed on the basis of their long-term rather than their short-term returns.

Furthermore, workers trained within a given business also have a better understanding of their company's operations and its production processes and services. Companies that do not invest in training hence have to bear extra costs when recruiting specialists from outside who then will often need some time to settle in.

² Federal Ministry of Education and Research (2003). Germany's Vocational Education at a glance. Bonn: FMER.

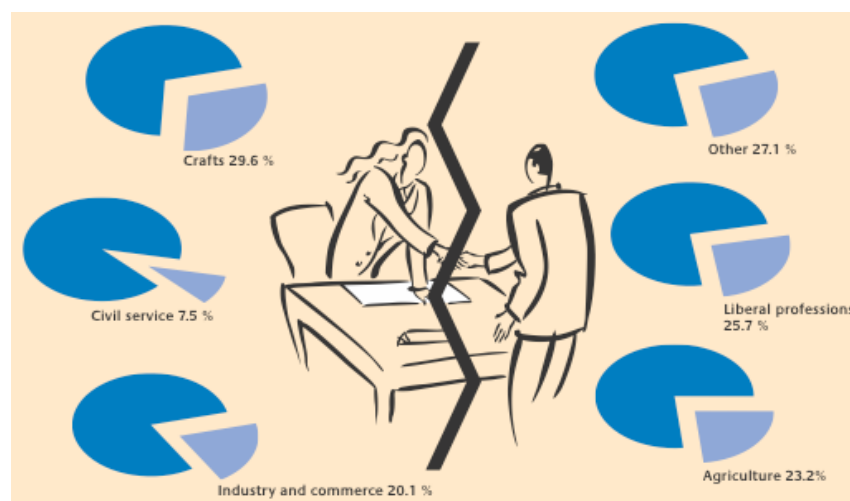
Dropout: high on the political agenda

A significant number of innovative measures and strategies in different European countries illustrate that the issue of dropout is, for economic and demographic considerations, high on the political agenda. But most of these measures and strategies focus on what is to be done after the dropout has happened. Case Management, support services and other offers that aim to help drop-outs, as well as measures to motivate young people to resume their training, are to be found in almost all countries. Preventive steps however, that prepare young people, whilst they are still in compulsory education, for the challenges of further education and training, or measures to catch potential dropouts in their first year of training, are extremely rare. Only in Denmark and Ireland are there policies in place which aim to identify those young people at risk of dropping out. The Norwegians have come up with a specific subject called "Educational Choices" that is an integral part of the curriculum and that aims to make young people aware of the various training courses and the competencies required to complete them successfully. Dropout rates of below 10% in Denmark and Finland in particular, are proof of the efficiency of such preventive measures³.

Dropout rates

In Germany, the dropout rate is on average about 20% (see Figure 3), the percentages, however, varying greatly between the different sectors: on average 7.5% in the public sector, around 20% in industry and trade, and about 30% in crafts.

Figure 3: Dropout rates in Germany⁴



Almost one in every four training contracts (total: 23.7 %) is terminated prematurely - i.e. before the planned end of the training. Dropout rates are especially high in the

³ Jäger, D.A. (2009). Dropouts – Massnahmen im internationalen Kontext. Panorama, 9/2009, S. 1-6.

⁴ Federal Ministry of Education and Research (2003). Germany's Vocational Education at a glance. Bonn: FMER.

crafts sector and particularly low in civil service. The differences between the various training sectors are also due to differences in company size: in smaller companies, tensions between training personnel and any given trainee cannot easily be resolved by moving that trainee to a different post within the company.

Dropout reasons

Frequently, trainees find that the professional occupation for which they are training, does not live up to their expectations. In some cases, trainees' performance during the trial period is not up to company standards while in other cases, trainees encounter unforeseen health problems - such as allergies.

Almost a quarter of all apprenticeships are terminated during the trial period, i.e. during the first three months of training, with a further 25% occurring during the remainder of the first year of training.

Occasionally, apprenticeships are terminated due to changes in ownership or in the legal form of the business providing the training: in such cases, a new training contract has to be signed, even though the training itself will not have changed.

Therefore contract termination cannot be equated with discontinuation of training. Many trainees terminate their contract because they decide to switch to another company or another professional occupation. About half of all those trainees whose contracts are terminated, continue training in the dual system, though on different terms and conditions. Such changes can be equated with a change of university or of subject whilst in higher education.

The proportion of contracts that are terminated also decreases as training places become more scarce, and rises as more training places become available: in the latter situation, trainees move more readily in order to "correct" their choice of company or professional occupation.

The dropout rate does not specify who, the business or the trainee, ultimately has terminated the training contract. Furthermore, the dropout rate does not provide any information about the direction taken thereafter by the dropout.

Differences in dropouts

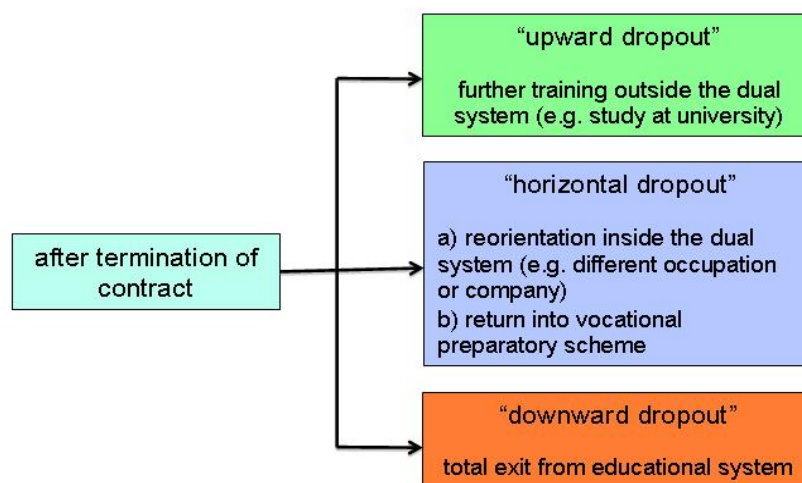
Depending on the situation of the apprentices at termination of their training contracts, dropouts can be divided into three distinct groups (see Figure 4).

An "upward dropout" means that the young person stays in the education system and aims for a higher qualification, e.g. in full-time studies.

A "horizontal dropout" means that although the young person remains in the educational system, he or she undertakes a career reorientation, e.g. by choosing a different professional career or by returning into a preparatory scheme.

By contrast, a "downward dropout" signifies a total exit from any qualifying vocational or general educational set-up.

Figure 4: Differences in dropouts⁵



"Real" dropouts are hence only those

- who drop out from the formal vocational training they had started before their final qualifying examination,
- who abandon any kind of further professional training, or
- who - and be it only temporarily - are officially classified as having only basic initial skills, no skills at all or are unemployed.

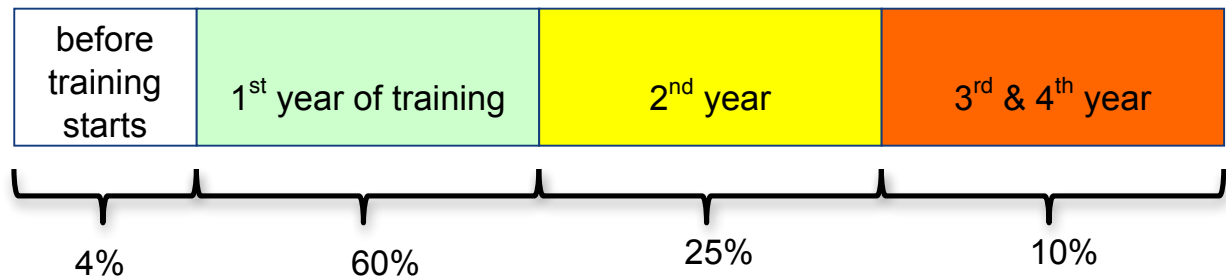
When does dropout occur ?

Upon examination, 60% of training contracts are terminated in the first year and approximately 25% in the second year of training (see Figure 5). Although a 4% dropout rate prior to the actual commencement training might be considered as low, it is in fact very high if viewed from the businesses' perspective since many such young people have good educational qualifications such as A-levels that grant them access to higher education. Furthermore, it is usually quite difficult to replace these apprentices with equally well or adequately qualified candidates.

Dropout during the first year of an apprenticeship is often due to a misguided career choice, with the chosen profession failing to live up to the expectations of the young person. Dropout rates decrease significantly the further an apprentice advances in his or her training, but when it occurs, neither the business nor the trainee can compensate for either the resulting economic and personal damage or the waste of time invested.

⁵ Faßmann, H. (1998). Das Abbrecherproblem – die Probleme der Abbrecher. Zum Abbruch der Erstausbildung in Berufsbildungswerken. Nürnberg: Institut für empirische Soziologie.

Figure 5: When does dropout occur?



The process that ultimately leads to a dropout depends on all the people involved in the training set-up. In most cases, the decision to dropout is not an ad hoc one. There is usually a period of between two weeks and eight months before a contract is terminated for good. This implies that dropouts do not happen “out of the blue”; young people do not abandon their training in a casual manner. It should therefore be possible, and indeed is vital, to pick up on any warning signs during the training period so that preventive measures can be initiated during this stage.

Several studies⁴ show that any educational deficits of the learners, have only a minor influence on dropout rates. By contrast, a major cause of dropout is the lack of „transferable skills“ of young people which is in turn, linked with a lack of career maturity. These transferable skills specifically refer to social and personal skills as well as methodological competencies. These cross-disciplinary competencies do not only prevent dropout during training but enhance the effectiveness of careers guidance before entering training, the 1st transition, as well as facilitating the transition from training into employment, the 2nd transition.

What is to be done ?

In addition to a number of preventive measures that take place before and during vocational training (such as integrative career guidance at school, individual counselling, interventions by social workers and job scouts, internships, information sessions and counselling for parents, help from professional associations, and/or case management), the identification and feedback of transferable skills is of prime importance in order to detect potential dropout risks among adolescents in the dual education system.

For this reason, the offering of vocational counselling by professional chambers, trade unions and other institutions must be optimized. Furthermore the structural problems of the training system must be dealt with urgently. This particularly concerns the following three priorities:

- 1) to improve the systematic cooperation between all the instructors, teachers, guidance counsellors and case managers involved in vocational training,

- 2) to provide proven and valid instruments to identify those young people with problematic transferable skills and who may be at risk of dropping out, and
- 3) to implement innovative methods for holistic counselling and for supporting young people as regards the remediation of competency deficiencies.

The Project „Measurement and Evaluation of Transferrable Competencies and Dropout Risk“

For the past two years, the research project ‚Measurement and Evaluation of Transferrable Competencies and Dropout Risk‘ has been carried out at the Federal University Institute for Vocational Education and Training in Zollikofen (Switzerland) and at the University of the Federal Employment Agency HdBA in Mannheim (Germany).

The developed diagnostic methodological tool for the measurement and feedback of transferable skills and dropout risks is called "smK + p"; the "s" stands for social, the "m" for methodology, the "p" for personal and "K" stands for competence.

The "smK + p" is a screening procedure that relies on the assessment and evaluation of various competencies and provides a broad overview of their key facets. The diagnostic method measures the breadth of transferable skills and reports back the results, in real time, to both trainees and trainers. The dropout risk is measured on a scale with nine indicators. The transferable competencies listed in Table 1 are currently being examined.

Table 1: Dimensions of the diagnostic procedure regarding transferable competencies

methodological competencies	social competencies	personal competencies
- analytical skills	- independence	- motivation
- reflexivity	- communication skills	- curiosity
- flexibility	- ability to cooperate	- sense of duty
- goal-oriented action	- leadership	- serenity, calm
- work techniques	- conflict resolution skills	- willingness to help
	- situation appropriate behaviours	
	- social responsibility	

For each dimension listed above (e.g. communication skills) at least six statements reflect the appropriate skills, knowledge or attitudes associated with that competence. The responses to these statements give a measure of the respondee’s ability within that dimension (e.g. to communicate). All statements are rated on a six-

point scale. The focus of the assessment lies in the application of a particular ability, knowledge or attitude in various professional situations.

In its paper-and-pencil version, the diagnostic process consists of a book with self-evaluation sheets for the young individual as well as evaluation forms for the diagnostician. The more user-friendly internet version consists of a self-assessment questionnaire for young people to complete online as well as an online evaluation tool. The evaluation takes between 30 and 45 minutes to complete, whether on paper or online. In each case, the result is an assessment of the transferable skills of each individual young person including a number of informative graphs and tables.

The self-assessment tool "smK + p"

The diagnostic process "smK + p" should give diagnosticians an easily manageable tool for measuring and assessing transferable skills as well as method for detecting the dropout risk of trainees. With its help, the current, the target and the potential developmental profiles of young people can be computed and used as a basis for determining the need for further development of competencies and for the better targeting of aid to counteract specific deficient competencies.

The "smK + p" tool should be used at the beginning of each academic year and its results evaluated at that time. Specific targets should be agreed upon with the trainees and an adequate offer of counselling then made. By the same token, the instrument should not be used shortly before or during the final examinations as results can no longer be processed in time for constructive counselling.

Due to the complexity of the tool, diagnosticians are required to participate in a training course, which also covers the corresponding analysis & interpretation of results, preparation of discussions and target agreements, support measures, etc. .

Conclusions

In order to prevent dropout, experts must develop measures that are specifically targeted at professions with high dropout rates.

In addition, they need the comprehensive diagnostic and counselling tools which will allow them to measure transferable skills and to assess the dropout risk amongst trainees. These tools will be particularly useful given the difficulties that many young people will have in actively seeking help when at risk of dropping out.

Finally, in order to detect the first signs of a dropout risk, whenever they may occur, efforts must be intensified to strengthen cooperation between professionals in all the different training environments.

With their ongoing work, the researchers from Austria, Germany, Italy, Luxembourg, Poland and Switzerland involved in the EU-funded 'transfer of innovation' project 'praelab' are committed to reaching these objectives.

the authors:

Andreas Frey, University of Applied Labour Studies, Mannheim (Germany).

E-Mail: Andreas.Frey@hdba.de

Jean-Jacques Ruppert, Applied Vocational Psychology and Policy Research Unit, (Luxembourg).

E-Mail: jean-jacques.ruppert@education.lu