

Upper secondary certificate, and then what?

Factors which induce upper secondary school leavers to enter vocational education and training



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In light of the rising numbers of students, this article investigates the question of which pupils are planning to commence a programme of VET despite being in possession of a higher education entrance qualification. Data from the German National Educational Panel Study (NEPS) is used to identify factors which encourage pupils in their twelfth school year to adopt such a plan. The findings show that influences from within the social environment, the vocational orientation process and evaluations of costs, benefits and opportunities undertaken by the young people are all of relevance. These results finally serve as a basis for the derivation of proposals for vocational orientation.

Factors influencing the decision to enter training

The proportion of an age cohort acquiring a higher education entrance qualification has risen significantly over recent years (cf. BIBB 2018). For many of these young people, this means that they are predestined to move on to an institute of higher education. Nevertheless, some upper secondary school leavers with a higher education entrance qualification opt for VET, so that the proportion of such persons within the VET system has now (as of 2016) increased to almost 29 per cent (cf. *ibid.*).

This article forms part of the BIBB research project "Vocational orientations and decisions of young people in the context of competing educational opportunities".¹ Against this background, it looks at contributing factors which lead upper secondary school leavers to consider a programme of VET in the first place. Expectancy-value models provide a theoretical framework for educational decisions within this context (cf. e.g. ECCLES 2011). The underlying idea is that an educational option is preferred if it has a high subjective value and thus a high degree of perceived utility for the person and if the person also expects that he or she will be able to implement this option successfully. The following influencing factors are relevant to the assessment of the subjective value and expectancy of success.

- *Personal* factors such as interests, values, expectations and a person's notions regarding themselves and their own abilities (cf. HIRSCHI 2013).

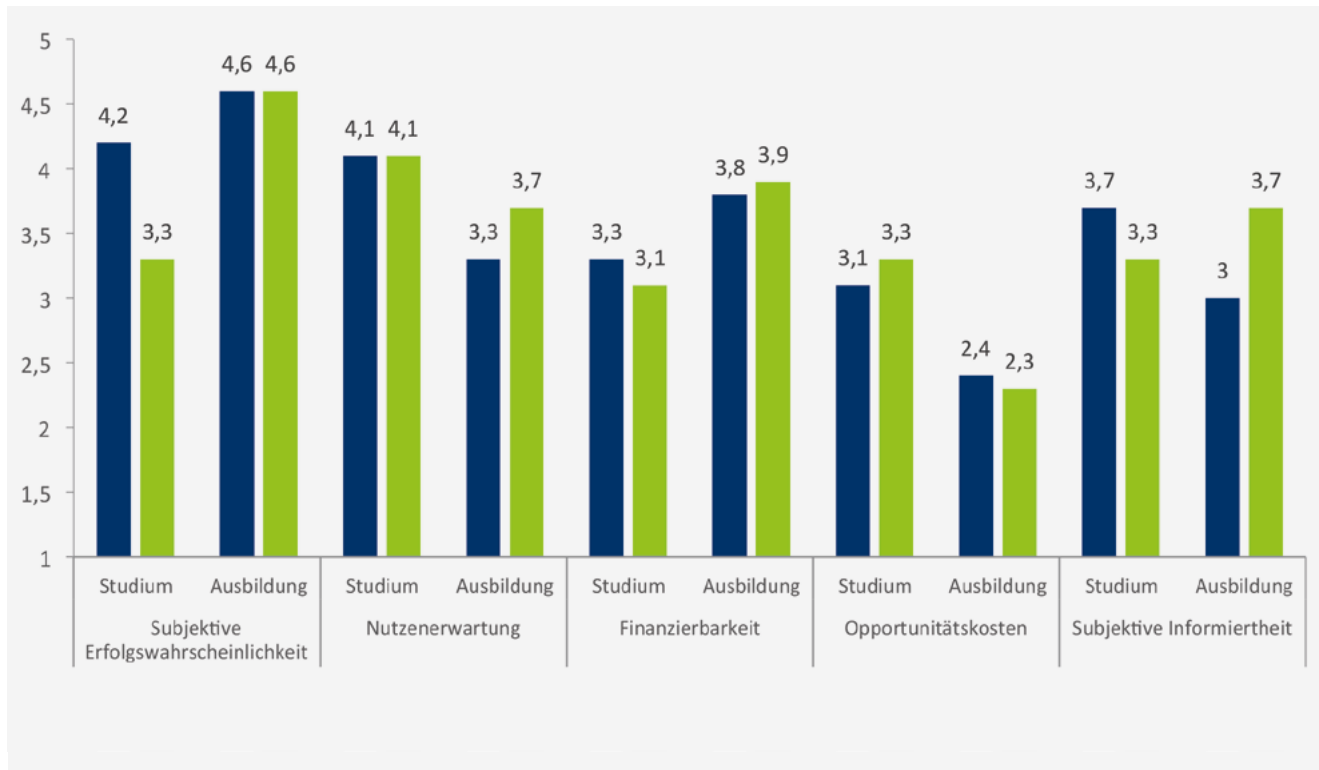
- *Social* factors including milieu-specific modes of behaviour in the environment a person is socialised in (in the form of family and friends) (cf. BOURDIEU 1998) and the striving for intergenerational status retention (cf. BOUDON 1974) – MISCHLER/ULRICH (2018) could show that the likelihood of young people considering training in the craft trades is inversely proportional to the expectation of their parents that they will enter higher education.
- *Institutional* factors, firstly in the form of the training market situation or access restrictions to programmes of study, and secondly in the shape of the vocational orientation process in which ideas are developed regarding the contents and achievability of the educational options aspired to and in respect of cost and benefit expectations associated with these options (cf. BRÄNDLE/GRUNDMANN 2013).

Database

The empirical analyses used NEPS data (cf. Information Box). The underlying sample consists of 2,500 upper secondary school pupils in their twelfth school year who provided unambiguous information on their educational plans in the first half of the academic year. At the time of the survey, it was the rule in most federal states for the upper secondary school-leaving certificate to be sat at the end of the twelfth school year. In order to prevent possible distortions caused by differing degrees of progress towards identity formation and decision-making maturity, the sample was limited to pupils who would take their upper

¹ cf. www.bibb.de/de/8475.php (retrieved: 07.12.2018)

Figure
Cost, benefit and success expectations by educational plan



Source: LIfBi, NEPS, Starting Cohort 4, doi:10.5157/NEPS:SC4:9.1.0, independent calculations from the BIBB research project "Vocational orientations"

secondary school-leaving certificate after twelve years of schooling. 55 per cent of participants are female, and 20 per cent have a migrant background. The majority of the pupils is aged between 17 and 18. Of the 2,500 young people surveyed, 16 per cent state commencement of training in the VET system to be a realistic plan for their post-school educational pathway and 84 per

cent believe that they will embark upon a programme of higher education study (irrespective of any gap phases that may be intended such as a voluntary year or period spent abroad). With regard to the socio-demographic characteristics of both groups, it is revealed that women are slightly underrepresented in the group planning to go into VET, but slightly overrepresented amongst those aspiring to higher education study. It is, however, a difference of just under three percentage points. A greater difference is shown in respect of migrant background. Whereas slightly more than 21 per cent of those seeking to enter higher education study have a migrant background, the corresponding figure for persons planning to commence training is 16 per cent.

National Educational Panel Study (NEPS)

This work uses data from the National Educational Panel Study (NEPS): Starting Cohort Grade 9, doi:10.5157/NEPS:SC4:9.1.0. From 2008 to 2013, NEPS data was collected as part of the Framework Program for the Promotion of Empirical Educational Research funded by the German Bundesministerium für Bildung und Forschung (BMBF) [Federal Ministry of Education and Research]. As of 2014, NEPS is carried out by the Leibniz Institute for Educational Trajectories (LifBi) at the University of Bamberg in cooperation with a nationwide network. It maps longitudinal data on educational and training achievements, educational processes, and competence development in formal, non-formal and informal contexts over the entire life course (cf. www.lifbi.de and BLOSSFELD/ROßBACH/VON MAURICE 2011).

This article focuses on the seventh survey wave of starting cohort 4 (winter 2013/14), although a few variables from previous survey waves are also used in some analyses. In wave 7, participants still in the general schooling system were in their twelfth school year.

Differing evaluations of costs and benefits of the educational pathways

The investigation began by determining potential factors influencing appraisal of the two education options. T-tests enable differences to be identified between the group planning to enter training and the group wishing to proceed to higher education study. Extracts from the results of these bivariate comparisons are presented below. The Figure shows the respective assessment of each group with regard

to the options of higher education study and training on a five-point scale. Higher values denote a stronger degree of agreement with the particular statement.

In general terms, it is noticeable that respondents mostly evaluate the educational option to which they themselves aspire more positively than the respective comparison group. Those seeking to enter higher education feel that they are better *informed* about access chances and possible restrictions to programmes of study than persons wishing to enter training, whereas the latter believe that they are more knowledgeable than the former in respect of training opportunities. Anyhow, the educational option aspired to is not always necessarily assessed more positively than the alternative. Those wishing to progress to higher education and persons seeking to commence training both think that training is more *financially feasible*. The same applies to assumed *opportunity costs* (i.e. losses in income that can be expected during training/higher education study). Both groups reckon that these are significantly higher in the case of higher education, even though an “evaluation advantage” still shows for the respondents’ own educational plan. However, when asked to consider their subjective *success probability*, those interested in pursuing higher education study and training only draw a distinction with regard to the higher education option. Young people planning to commence training rate their prospects of success in a course of study (e.g. a degree) as being significantly lower, yet both groups are highly confident that they would be able to complete training successfully. The reverse picture emerged with regard to *benefit expectation*. In this case, a mean value was formed for various benefit aspects with regard to job prospects following completion of a programme of higher education study or of training (income, prestige, interesting occupation, risk of unemployment). Both groups perceive the same expected benefit in respect of higher education study. In contrast, while those interested in entering training ascribe a slightly lower level of expected benefit to their chosen pathway, persons wishing to enter higher education perceive that the benefit of the training pathway is significantly lower.

Further differences between the groups emerged with regard to

- *the vocational orientation process* (significantly more specific notions of occupational objectives and implementation opportunities and earlier entry into the vocational orientation process on the part of persons aspiring to commence training),
- *occupational interests* (higher degree of affinity with practical and technical tasks shown by young people planning to go down the training route, more interest in intellectual research and in art and language displayed by potential higher education candidates) and

- *the social environment* (in each case a higher proportion within the respective circle of friends of persons with educational aspirations identical to those of the respondent). Although sources of information on the two educational options were available to both groups, those seeking to enter higher education study were significantly more likely to seek the advice of their parents regarding higher education. This group also contains a larger proportion of persons with at least one graduate parent and also has a bigger share of respondents whose parents – according to the pupils – perceive a course of higher education study as being the educational pathway of choice for their child. Conversely, very few young people expecting to enter higher education believe that their parents aspire for them to commence training.

Who is planning dual VET?

The subsequent stage of the study involved carrying out a hierarchical logistic regression of 1,287 complete cases² in order to investigate the interplay between personal, social and institutional factors and potential mediating processes in the decision of whether to opt for training or higher education. Only variables which exhibit significant differences in the bivariate comparison are entered into the analysis. The logistic regression shows the influences of predictors on the likelihood of planning training rather than higher education study (cf. Table).

The socio-demographic variables do not exercise any significant effect on the likelihood of planning training. In contrast, the variables from the field of personality included in the second block all show an effect. Likelihood of entering training is lower if conscientiousness and openness are higher, but rises if there is a strong degree of interest in practical and technical tasks. These effects, however, disappear (Block 3 ff.) when further characteristics are entered, supposedly, because their influence is mediated by these characteristics such as school performance. Both good marks and higher self-assessed success probability with regard to higher education study reduce the likelihood of entering training. Perceived prospects of success for a programme of higher education study thus do not appear to be exclusively derived from current school performance.

Potential influences of the social environment were then included in the analysis. Despite the differences with re-

² The reduced sample size compared to the initial sample is the result of missing values on individual variables. One of the reasons for this is the use of several survey waves for the analysis. The ratio stated above of persons wishing to enter training and persons aspiring to proceed to higher education study is, however, retained in the test sample. Sporadic differences between complete and incomplete cases in the variables used in the regression, such as with regard to the existence of a migrant background, are not statistically meaningful.

Table
Likelihood of planning commencement of training

Predictors	1 Exp(B)	2 Exp(B)	3 Exp(B)	4 Exp(B)	5 Exp(B)	6 Exp(B)
Female	.79	1.03	1.08	1.00	.94	.72
Migrant background exists	.76	.77	.68	.73	.90	1.03
Age	1.13	1.15	.95	.95	.90	.98
Conscientiousness		.81*	.99	.98	.98	.95
Openness to new experiences		.84*	.87	.90	.88	.96
Self-esteem		.97**	1.04*	1.03'	1.01	.99
Practical and technical interests		1.33**	1.35**	1.35**	1.25'	1.13
Self-concept of school performance			.93	.94	.95	.72
Average mark			.73***	.76***	.76***	.81**
Subjective success probability: completion of higher education study			.24***	.30***	.26***	.25***
Proportion of friends aiming to enter training				1.14'	1.13'	1.10
At least 1 graduate parent				.98	.90	.88
Occupational status attainable via training -> mother				1.48**	1.29*	1.31*
Occupational status attainable via training -> father				1.24*	1.10	1.11
Parents: child should enter training				7.84***	7.15***	4.39***
Benefit expectation of training					4.41***	3.65***
Financial feasibility of higher education study					.95	1.03
Opportunity costs of training					.83	.84
Subjective knowledgeability course of study						.41***
Subjective knowledgeability training						2.32***
Information seeking on specific occupations						1.74**
Specific application goals						1.43**
Time of beginning of orientation process						1.38'
Growth in Nagelkerke's R ²	.007	.034***	.297***	.105***	.051***	.085***

***p < .001, **p < .01, *p < .05, 'p < .10; n = 1,287; Source: Leibniz Institute for Educational Trajectories (LifBi), National Educational Panel Study (NEPS), Starting Cohort 4, doi:/10.5157/NEPS:SC4:9.1.0, independent calculations from the BIBB research project "Vocational orientations"

Guide: In this hierarchical logistic regression, values greater than 1 signify that this predictor increases the likelihood of planning training, whilst values lower than 1 signify that the predictor reduces such a likelihood or in this case also increases the probability of an intention to pursue higher education study, e.g. likelihood of training decreases if the young person achieves good school marks.

gard to the educational qualification of parents that occur in the bivariate comparison, this variable does not, in conjunction with those already entered, exert any additional influence on the likelihood of planning to commence training. Training likelihood only increases if young people perceive that their parents wish them to enter training. Probability of commencing training is also raised by the assessment that training will enable a young person to enter an occupation which, in terms of status level, is similar to or better than the occupations exercised by the parents.

Because both groups assess the benefit of higher education study and the costs of training similarly in the bivariate comparison and merely differ with regard to the respective other educational option, the regression only includes cost evaluation with regard to higher education study and evaluation of benefit in respect of training. Assessment regarding the financial feasibility of a programme of higher education study is shown to exert no influence on training likelihood. However, a strong conviction that training will create a high degree of benefit with regard to attractive

occupational opportunities has a significant effect on the probability of entering training. Likelihood of planning to commence training also rises if a person's notions regarding their own career prospects are more specific.

Could more specific vocational orientation increase interest in training?

One thing shown by the results of the analyses is that parental educational aspirations exert a considerable influence also in the case of young adults shortly prior to the transition to training or a course of study. As far as vocational orientation measures are concerned, this could act as an impetus to work with pupils of all age groups across all phases of education to reflect upon social influencing processes as well as on their own interests and objectives in order to make those seeking advice aware of such processes and to allow them to be considered in the decision-making procedure.

With regard to the issue as to which characteristics prove relevant in connection with a decision to opt for training, the results enable the following indications to be derived for vocational orientation at upper secondary level. Firstly, both groups ascribe a high degree of benefit expectation to a course of study (e.g. a degree). A similar view on training is, however, only embraced by those interested in pursuing this pathway. Better information on the broad range of training allowances and of labour market and income prospects after completion of training could help to enhance

the attractiveness of training as an educational option. The possible labour market and career prospects offered by upgrading training should also be indicated.

Consideration should further be accorded to expanding the occupational spectrum covered by vocational orientation measures, especially by adding occupations which include task aspects relating to intellectual research and art and language. In this regard in particular, young people have so far believed that it is only possible to fulfil such interests in the higher education sector. The group differences identified in respect of degree of specificity of vocational orientation give rise to the supposition that at least some of those aspiring to higher education are seeking to use such a programme of study to develop more concrete occupational ideas. If this group were to succeed in pursuing orientation at an earlier stage, some might also consider entering training occupations.

Imparting information relevant for the pursuit of an intention to commence training does not need to be solely left to the institutionalised vocational orientation system. Such information can also be used by companies providing training to address young people in possession of an upper secondary school-leaving certificate, in order to create awareness amongst this target group of the existing opportunities available at these companies. ◀

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