

Prevocational Literacy: Towards a Maturity for Vocational Learning in Germany – Causes and Diagnosis –

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Summary: Every year a great share in German school graduates does not succeed in obtaining a place in the so called 'dual system' of vocational education. Recent and future demographic data indicate a huge decline in labour force potential within the next decades. Adolescents with a weak school performance will need to be integrated into the labour market more successfully than today. Thus, prevocational literacy becomes an indicator for the quality of an education system. In 2006 the Federal Agency of Employment presented a catalogue of criteria that allows an assessment of prevocational literacy of the individual. The diagnosis, however, is to be challenged for its measurement methodology. The diagnostic instrument will need to be refined. However, strategies of ecologically integrated teaching and learning will have to be at the core of the solution.

Keywords: Prevocational literacy, school policy, demography, diagnostic instrument

Entering the system of vocational education in Germany: hurdles and obstacles

Every year about 590,000 (595,000)¹ school graduates² take up employment in the so called 'dual system' of vocational education. At the same time, many do not succeed in obtaining a place within that system, which is at the heart of vocational education in Germany. As 'returning applicants' (Altbewerber) the formerly rejected applicants will try again the following year – or even many years in succession. Another possibility for the adolescent is to take up vocational education in another than the desired vocation.

The number of places provided for vocational education is restricted by the needs of the labour market. This market-driven selection process is the reason why selection criteria are not always transparent to the applicant. The most common reasons for rejection are the economic situation of the company (which may reduce the number of qualified personnel), a surplus of applicants, or the discrepancies between the requirements of the desired vocation and individual qualification. Employers generally choose the most suitable applicant for their company and the vocation in question. Nevertheless, it may happen that they reject all of the applicants for a lack in general skills, like reading, writing, calculus or other.

¹ Calculation on data of BMBF 2009: 9; BMBF 2008: 18; BMBF 2007: 11: The numbers show the average of the last 5 (10) years (2004 (1999) – 2008).

² Of about 937,000 (928,000) school graduates, calculation on data of BMBF 2009: 19: The numbers show the average of the last 5 (10) years.

Two factors apparently have moved the focus onto this problem: The subsequent PISA studies and growing awareness of the forthcoming demographic changes. This has led political and social actors to start examining missing qualifications of young people. Cognitive abilities, psychomotor capacities and personal qualities are studied in both Germany's school graduates and drop-outs. Moreover, a catalogue of criteria has been developed by the Federal Agency of Employment (Bundesagentur für Arbeit). In order to increase prevocational literacy, however, we are not facing an analytical problem: The whole ecological system of the adolescent has to be assessed (Bronfenbrenner 1994: 37). Demographic processes as quantitative indicators are equally important as qualitative criteria, e.g. the influence of school, family, or peer group.

We have to ask critically, to which extent an analytic tool on prevocational literacy (Ausbildungsreife), like the catalogue of criteria, depicts validly the individual's situation and puts it into the context of family backgrounds, labour markets and demographic changes? The necessarily following question would be: Does it help finding adequate forms of intervention to bridge the gap? – This question, however, will have to be postponed to later research.

Factors of influence

The analytical approach shall make use of both quantitative and qualitative factors. The most important quantitative feature is data describing demographic processes. This factor directly affects the educational and the economic sphere at the macro level. Qualitative criteria include different instances of socialisation and education as family, school and the influence of the peer group. These factors can be ascribed to the micro and meso levels of human ecology.

Quantitative factors: demography and the labour market

In Germany, there will be a drop in pupils by almost 20 percent until the year 2020³. This drop will find its continuation in the field of vocational education, and in labour force from 2015 onwards. Even high immigration rates and high employment rates of women will not compensate the demographic effects (Fuchs 2005: 261). Even though the 'demographic gap' has not reached the labour force yet, the prospective gap justifies the employers' concern in finding adequate staff in the years to come: Starting in 2015 the younger cohort is too small in number to meet the demand of skilled workers and the supply of manpower is slowly declining (Bott et al. 2008: 11).

Due to the delicate relations between demand for and supply of places in the 'dual system' in former years, there is a significant number of returning applicants that pour into that system every year: In 2008 more than 320,000 returning applicants were registered at the Federal Agency of Employment (BMBF 2009: 19). Nevertheless, demographic changes and the economic growth in recent years slightly relaxed the situation to this group of applicants (Seibert/Kleinert 2009: 2). The effects of the current economic crisis on the market of vocational education cannot be estimated yet.

Analysing the qualification structure of the last decades, a university degree or a vocational qualification achieved in the 'dual system' has always offered the best chances for a vocational career. This can be equally expected for the forthcoming

years. For persons, however, who have not obtained a vocational qualification, no relief between supply and demand on the labour market can be predicted for the future (Bott et al. 2008: 12). Given this causal structure, the basis for an entry into the labour market is prevocational literacy. Thus, it must be of political and economic interest to provide our children with a school education that prepares them appropriately for vocational learning.

In contrast to this, the share in pupils leaving school on a low level of proficiency varies along with the researcher and focus of the study. While Allmendinger/Wimbauer (2006: 2) count around ten percent of the school leavers who do not obtain a formal degree, others found functional disabilities in maths and the German language with up to 23 percent of the school leavers every year (Eberhardt 2006: 29; Stanat et al. 2002: 9).

Any action concerning demographic processes is based on long-term considerations, e.g. the increase of the share of women in the labour market, the remodelling of immigration laws or the stipulation of an increase of the birth rate. Prevocational literacy as such cannot directly be enhanced by measures carried out at the macro level. Potential short-term changes concerning the improvement of prevocational literacy require an examination of possible qualitative influences. Nevertheless, demographic data allow statements on the necessity of reducing the number of young people lacking in prevocational literacy.

Qualitative factors: family, school, peer group

The micro level of an adolescent generally consists of his familial and school relations as well as the contact to the peer group in "a given face-to-face setting" (Bronfenbrenner 1994: 39). The adolescent possesses certain cognitive abilities, psychomotor capacities and personal qualities. Human development naturally strives for perfection, but there are limits inherent to the individual. The family as a first instance of socialisation provides the basis for all further efforts a child ventures. Hence, not only the ethnic or social background of a family has an impact on a young person's progress but also the parents' support to the development of the need for achievement (McClelland 1965). Teachers are another influencing factor on the micro level. Their communication with the individual may activate or spoil learning processes. Relevant issues are the leadership style of the teacher and his or her personal qualities. Face-to-face interaction with the peer group proves its critical relevance whenever it becomes 'bad company'.

The meso level on the other hand includes the interactions between family and school, and between school and peer group. Schools and families both have the right and the duty of educating children. Consequently, tensions between these institutions arise. The parents pursue the best development for their own child whereas the teacher has to take care of many children from different backgrounds and prior knowledge (Friesecke 1987: 86 f). Only if both institutions fulfil their obligations, a solid basis can be established for the achievement of prevocational literacy. Furthermore, possibilities of teaching and instruction have to be elaborated with regard to actions of vocational orientation. Those actions have to be matched with a particular peer group.

Therefore, analyses of target groups are essential. A diagnosis cannot fully represent the degree of prevocational literacy if an analysis of the qualitative factors is missing.

³ Calculation on data of KMK 2007: 63: The peak in graduates from general schools was predicted for the year 2007 (975,000). In 2020 there will be about 781,000 school leavers.

Diagnosis of prevocational literacy

Measuring prevocational literacy in Germany is supposed to be carried out using the catalogue of criteria as established by a group of experts from economy, science, politics and schools under the auspices of the Federal Agency of Employment. The results were published in 2006. The catalogue of criteria indicates the society's expectations of school graduates, and it depicts who will be able to start and probably finish vocational education in the 'dual system'. It is a compilation of characteristics that decide over official recognition of prevocational (il)literacy.

The objective of the catalogue of criteria is "to provide every youth willing and able to start vocational education with a place within the 'dual system'" (ibid: 6). According to this, 'prevocational literacy' defines that a person should possess certain characteristics that allow him or her to start any vocational education. Requirements regarding specific vocations are not considered. Prevocational literacy is to be understood as a dynamic construct. That means a lack of prevocational literacy may be compensated after compulsory schooling and may be subject to further education (ibid: 13f).

There is only little information on the method of generating the criteria of prevocational literacy. Scientific findings in psychology and education as well as existing standards in companies, and the national educational standards served as a basis (ibid: 17). Five diagnostic categories have been defined: (1) basic school knowledge, (2) psychological characteristics, (3) physical characteristics, (4) psychological traits in working habits and personality, and (5) adolescent vocational maturity. These categories are further subdivided. External factors are not considered.

The catalogue of criteria is basically designed as manual for field research. Each criterion is listed separately including a description, indicators, diagnostic methods, and possible questions for the interviewer. But still they lack functionality: The set of answers of each candidate requires high interpretation skills, in particular as to causal structures. Individual results are incomparable.

Finally, the catalogue has not been evaluated by now. An evaluation should provide further evidence on causal structures reflecting the different micro, meso and macro system interdependencies. All in all, the aim lies in the reduction of both individual failure and labour market requirements. The solution of this problem apparently challenges educational action.

Towards new grounds

The methodology of measuring prevocational literacy is only at its threshold. The catalogue of criteria is a first step, but its functionality apparently needs further improvement. At the moment large numbers of model projects are implemented all over Germany. Some of them start as vocational orientation during general schooling and some occur within the frame of an intermediate system of preparation at vocational school.

Given the complexity of the problem – it touches all system levels of the ecology of a young person on the way to the labour market - this improvement is hardly to be expected solely from an improvement of measurement, e.g. psychometrics.

It apparently is an eminent problem of teaching and learning – a teaching and learning that needs to be designed for the teaching of different systemic domains: The applicant has to learn about his or her capacities and their improvement, the enterprises have to learn about the possibilities of the young and the enhancement of vocational literacy 'on the job', the parents have to become more aware about their

early role in prevocational education, and last but perhaps not least the schools have to take their responsibilities in the preparation of young people for life ... "The request for prevocational literacy is usually addressed to four groups: adolescents, their parents, general schools, and the economy" (Eberhardt 2006: 60).

References

- Allmendinger, J., Wimbauer, Ch. (2006) Deutschland – Eine Klassengesellschaft?, in: ZEIT Wissen 04/2006, [www document] URL: http://www.zeit.de/zeit-wissen/2006/06/Essay_Allmendinger.xml (19.06.2009).
- Bott, P., Helmrich, R., Schade, H.-J. (2008) Arbeitsmarktprognose – Trends, Möglichkeiten und Grenzen, in: BIBB (Hg.) Berufsbildung in Wissenschaft und Praxis 37 (2008) 3, pp.9-13.
- Bronfenbrenner, U. (1994) Ecological Models of Human Development, in: International Encyclopedia of Education, Vol. 3, 2nd Ed. Oxford: Elsevier. Reprinted in Gauvain, M. & Cole, M. (Eds.), Readings on the development of children, 2nd Ed. (1993, pp.37-43). New York: Freeman, [pdf document] URL: <http://www.psy.cmu.edu/~siegler/35bronfenbrenner94.pdf> (19.06.2009).
- BA (Bundesagentur für Arbeit (Ed.); 2006) Kriterienkatalog zur Ausbildungsreife, Nürnberg.
- BMBF (Bundesministerium für Bildung und Forschung; 2009) Berufsbildungsbericht 2008, Bonn, [pdf document] URL: http://www.bmbf.de/pub/Endfassung_fuer_Internet_BBB_2009.pdf (19.06.2009).
- BMBF (Bundesministerium für Bildung und Forschung; 2008) Berufsbildungsbericht 2007, Bonn.
- BMBF (Bundesministerium für Bildung und Forschung; 2007) Berufsbildungsbericht 2006, Bonn.
- Eberhardt, Verena (2006) Das Konzept der Ausbildungsreife – ein ungeklärtes Konstrukt im Spannungsfeld unterschiedlicher Interessen, Ergebnisse aus dem BIBB, Bonn: Bundesinstitut für Berufsbildung.
- Friesecke, G. (1987) Erziehungsverantwortung der Eltern und Bildungsauftrag der Schule – Zum Ziel des sinnvollen Einvernehmens zwischen Eltern und Schule, in: Heck, B. (ed.) Verantwortung für die Jugend: Erziehung im demokratischen Staat, Mainz: v. Hase und Koehler, pp. 81-96.
- Fuchs, J. (2005) Tickt sie, die demografische Zeitbombe? Aktuelle Daten und Fakten zu den Auswirkungen des demografischen Wandels auf Arbeitskräfteangebot und –nachfrage, in: Arbeit, Zeitschrift für Arbeitsforschung, Arbeitszeitgestaltung und Arbeitspolitik (2005) 4, pp. 261-274.
- Grundig, B., Pohl, C. (2004) Die Auswirkungen des demografischen Wandels auf den Arbeitsmarkt in Sachsen – Analysen und Gegenstrategien, in: ifo Dresden berichtet (2004) 3, pp. 5-17.
- KMK (Kultusministerkonferenz; 2007) Vorausberechnung der Schüler- und Absolventenzahlen 2005-2020, Reihe Statistische Veröffentlichungen der Kultusministerkonferenz Nr. 182, Bonn, [pdf document] URL: http://www.kmk.org/fileadmin/veroeffentlichungen_beschluesse/2007/2007_05_01-Vorausberechnung-Schueler-Absolventen-05-2020.pdf (21.06.09).
- David C. McClelland (1965) Achievement Motivation Can Be Developed, Harvard Business Review 43 (1965), pp. 6-24.
- Seibert, H., Kleinert, C. (2009) Duale Berufsausbildung: Ungelöste Probleme trotz Entspannung, in: IAB-Kurzbericht, 10/2009, Bielefeld: W. Bertelsmann.
- Stanat, P., Artelt, C., Baumert, J., Klieme, E., Neubrand, M., Prenzel, M., Schiefele, W., Schneider, P., Schümer, G., Tillmann, K.-J., Weiß, M. (2002) PISA 2000: Die Studie im Überblick – Grundlagen, Methoden und Ergebnisse, Berlin: Max-Planck-Institut für Bildungsforschung, [pdf document] URL: http://www.mpib-berlin.mpg.de/Pisa/PISA_im_Ueberblick.pdf (25.06.09).