

## Chapter 11

### Career Change in the Advanced IT Training System

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The new system of Advanced IT Training is intended to offer new possibilities for the development of a career in IT, both to professional practitioners without appropriate qualifications and to people who have aborted their studies<sup>1</sup>.

The Advanced IT Training System can be accessed at each of the three levels: Specialists, or Operational or Strategic Professionals. There is a need, therefore, for the creation of appropriate access conditions, which cover all aspects of IT training and advanced education.

For the IT Specialist to be admitted to Advanced IT Training, he must have qualifications that adequately reflect the contents of the recognised trade within information and telecommunications technology. These competencies may also be shown by means of appropriate work experience. To a large degree, this also applies to Operational and Strategic Professionals.

In line with the development of the Advanced IT Training System, access conditions for the different levels are defined using the competencies set out in the profiles below.

The challenge consists in also facilitating a comparison with IT competencies acquired outside of the IT training and advanced education systems. While access into the Advanced IT Training System by showing work experience does not present an obstacle for employees who are active in the IT field, the proof of practical experience is an obstacle for the unemployed, for whom special measures are required.

#### Basic Conditions for the Work Process Oriented Structure of the Measures Required by SGB III

The Advanced IT Training System is orientated towards learning integrated in the work process. By learning in the workplace and by considering real tasks, the participant is supported in an integrated manner. He acquires not only professional competence, but also social and methodological skills. Workplace learning also has the advantage that already during advanced training the participant can get used to his future field of work. The concept of work process oriented training is fundamental in the IT branches<sup>2</sup>, and is formulated and tested in the context of reforming Advanced IT Training. This concept, which has been developed according to the latest didactic findings and analyses of work-place requirements for IT employees, is based on a strong link between work and learning. The participants learn by operating projects and continue their training, accompanied and supported by teachers, tutors, professional experts and media, with real tasks within the company. For comparison with completed projects so-called reference projects are developed, which, by an abstract description of the work process of a work profile, guarantee

<sup>1</sup> Markierungspunkte für die Neuordnung der beruflichen Weiterbildung in der IT-Branche:  
<http://www.iid.de/schule/it-fortbildung/markierungspunkte.html>.

<sup>2</sup> Rohs, M. & Mattauch, W. [2001]: Konzeptionelle Grundlagen der arbeitsprozessorientierten Weiterbildung in der IT-Branche, ISST Report 59/01.

the comprehensiveness of the training<sup>3</sup>. Both elements [work experience and orientation on the content to reference projects] form a quality foundation for advanced training and an orientation towards certification.

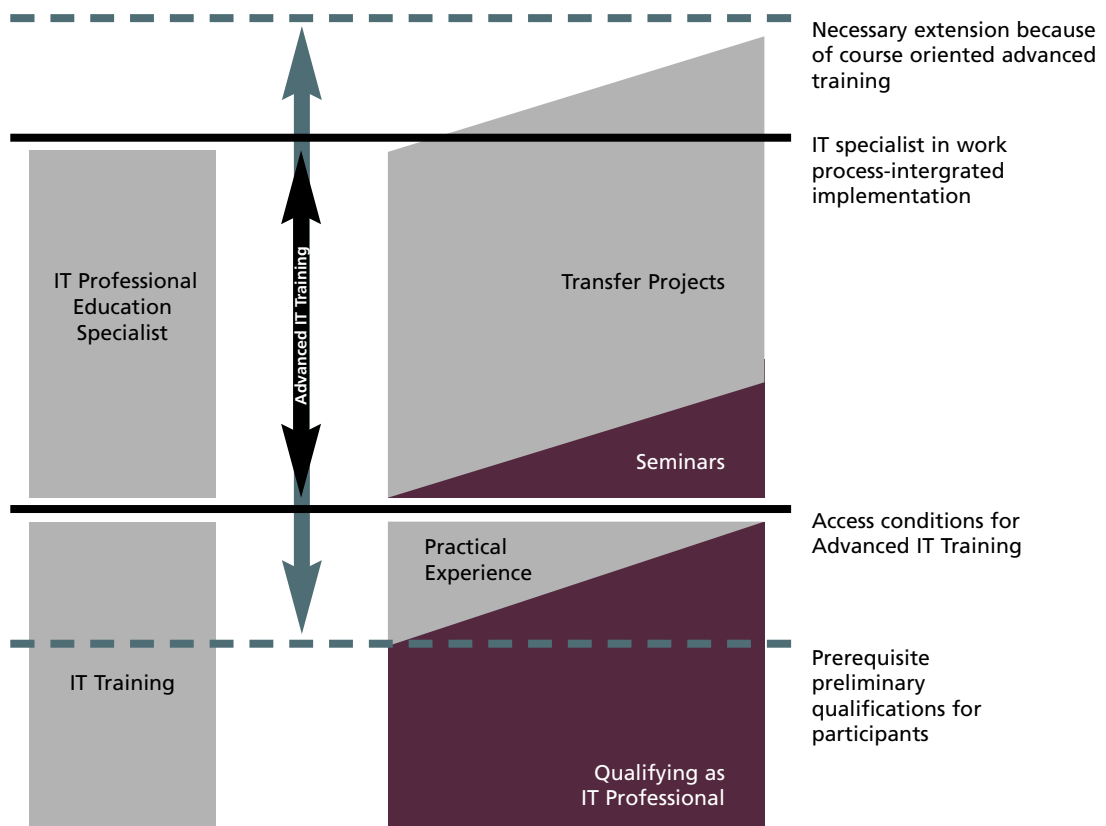


Fig. 1 Model for SGB III Advanced Education as IT Specialist

The Federal Institute for Employment supports these criteria. On one hand, from the methodological and didactic point of view, a strong individualization and a practical implementation of the measures is encouraged and made possible by amendment of the SGB III. On the other hand, the Federal Institute, in categorizing the measures, relates to the new system of advanced training.

A study group consisting of the Federal Employment Institute, education providers, and the Fraunhofer Institute for Software and Systems Engineering [ISST], developed the basis for a concept of career change in the IT system of advanced training. This model corresponds to the quantitative requirements of certification and enables optimal access to IT qualifications. Educators are given help with orientation and conversion to enable them to organize their courses. Fig. 1 gives an overview of the three-tier system, consisting of prerequisite qualifications, advanced training and extension courses, which are explained more detailed below.

<sup>3</sup> A detailed description of the advantages and details of the concepts are found in the article by Matthias Rohs and Ute Büchele.

## **A Model for Lateral Hire / Entry in the Advanced IT Training System**

On the basis of the current situation in the workplace, it must be expected that technical competence of the majority of job seekers is below what is required for IT trades. Candidates are also expected to vary greatly with respect to their social and methodological skills.

As it is assumed, on the basis of the current requirements of the guidelines, that certification as a Specialist is only obtained under very favorable circumstances, it is the aim of the measure to cover the biggest possible part of the advanced training content and to create wide ranging conditions for proceeding to a recognised Advanced IT Training qualification.

In order to ensure the success of advanced training, it is necessary to determine the appropriate qualification for the participant to aim for.

If the skills of the participant are than fewer required by the trade , a bridging qualification is then required, which may be completed with an IT trade examination. Only then is it possible to commence advanced training as Specialists. Should the participant already have a Specialist profile and a range of qualifications, he can demonstrate this in a short time by relevant projects.

In this connection it must be noted that specific outcome certificates are significant due to company demands. Ideally, an integration of certificates in the work process-oriented advanced training can be realised here, e.g. the contents of a Certified Network Associate as a component of the Network Administrator profile.

The work and learning processes to be documented for advanced training may be completed in other contexts [business practice, training measures], according to the reference processes of the profile.

## **The Training Period**

During the course of advanced training, it is crucial to work as far as possible together with a company, in which the participant can carry out the entire training programme, or at least a greater part of it. A number of reports of experiments have been published on the successful testing of form of partnership between the public and private sectors.

If a suitable company cannot be found to enable the training of the participant in the workplace, other forms of workplace oriented training may be resorted to, for example project oriented work, tutoring etc. These methods, however, merely improve the preparation of the participant for implementing reference processes.

The participant is integrated into those company work processes that correspond to the contents of the desired qualification. In the process, he is prepared as a Professional by the training provider, coached continually in the qualification process itself, and supervised throughout. Since a reference project is broken up into individual processes, it is possible to deal with the assignments in a way that is flexible in terms of content.

The advantages for the company lie in the fact that even during training the skills of the potential employee can be evaluated. The advantages for the participant arise from demonstrating his ability and motivation, and being able to work towards a position at a later date. It is also important that through their activity in the company, they can accumulate essential experience and acquire skills beyond the technical context.

If the company is prepared to employ the participant at a later stage, continuation of the training can be arranged. In this case the participant receives, during the period of sponsorship, support with processing projects within the company, which match the content of the training. The training provider can then continue in its supportive role.