



Education and Culture

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**INCLUSIVE MODULES
MOVING YOUNG PEOPLE ON**



MODULE

**MODULARISATION IN
GERMANY, BELGIUM, DENMARK,
PORTUGAL, ROMANIA AND UNITED
KINGDOM**

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1 Introduction

The fifth country reports in the Inclusive Modules project focus on the issue of modularisation in vocational education and training in Belgium, Denmark, England, Germany, Portugal and Romania. The individual country reports discuss a number of problems related to aspects of introduction and further development of modularisation across these countries. Modularisation in vocational education and training (VET) has become a significant trend in many European countries. It has often been related to opportunities to simplify qualification systems and to make vocational education and training more flexible and responsive to the needs of both the learners and employers. Although the partners' countries share some common characteristics of modularisation, the extent of the implementation and development of modularisation in VET systems varies from country to country. In countries, such as Denmark and England, modularisation has long-established traditions in vocational education and training, whereas for Portugal and Romania, modularisation is a relatively new development in VET. In some countries, and specifically, in Germany, the implementation of modularisation has been characterised by a great debate related to concerns that modularisation may destroy a coherent VET system. The reports explore this debate and consider specific objectives and unique features of the development of modularisation in every particular country.

Modularised types of programmes provide the learners with the opportunities to study in 'bite-sized chunks' (small steps of learning) and to gain qualifications at their own pace along flexible routes. Research undertaken within this project indicates that such small steps of learning may be potentially beneficial for disadvantaged young people, especially if they are combined with support structures such as guidance and mentoring, workshop training and increased inter-organisational cooperation. The country reports show that there is a tendency to introduce modular features into various courses for disadvantaged young people in selected countries. The reports discuss the extent to which the individual countries have introduced a variety of modularised courses for the target groups and consider country-specific approaches towards modularisation of vocational education in all partners' countries.

2 Germany

Modularisation is a relatively new trend in educational reforms and policies in Europe, which has been characterised by a great debate, especially in Germany. A number of benefits associated with this trend, have been emphasised by the advocates of modularisation, such as those of flexibility adaptability to changes, continuous learning, responsiveness to environmental changes and collaboration between vocational education institutions and businesses. The need for pedagogical change has also been stressed and highlighted. Opponents argue that modularisation may destroy a coherent system of VET. They fear that modularisation makes progression difficult and neglects important aspects of VET such as

building a professional identity, ensuring progression in learning, and not least undermining the relations between VET and occupational structures. However, in a pre-vocational education and training context the danger of destroying coherency is small as these programmes are not highly formalised in either form or contents. In general, they serve a bridging or orientation function. Therefore, there is a strong tendency to introduce modularisation into pre-vocational training as well as certain support and preparation courses for disadvantaged groups. Examples are qualification bricks and the more recent initiative that introduced training bricks. Euler and Severing, (2006) reflecting on the German experience, and the centrality of the concept of vocation in VET and society, suggest models that allow a modular structure that would be compatible with the national vocational concept. However, there is an emerging tendency to introduce modular features in VET for disadvantaged young people.

2.1 Qualification bricks

Qualification bricks aim at creating nationwide standards for the use of modules within the support system for disadvantaged youths to better intertwine vocational preparation and training contents. So far, they represent the first official modules in Germany, that have been developed by the Zentralverband des Deutschen Handwerks – ZDH (German Confederation of Skilled Crafts) and the Zentralstelle für die Weiterbildung im Handwerk – ZWH (Central Institute for further education in handicrafts) for the small trade as well as by the Bundesinstitut für Berufsbildung – BIBB (Federal Institute for Vocational Education and Training) for the Industrie- und Handelskammer – IHK sector (Chamber of Trade and Commerce). This happens in a standardised mode involving the respective trade associations.

Beside the concept's reference with regard to the contents of the respective apprenticeship, the standards of the concept include the consolidation of not only professional, but also social, personal and methodological skills as well as the reproducibility of the qualification bricks. In the framework of an action- based training, young people should not only learn particular skills and knowledge but also be enabled to consciously apply them in a relevant context. Furthermore, socio-pedagogical assistance is an important aspect for a successful implementation of this concept.

Qualification bricks are complete modules with regard to content and time and with reference to the official framework curricula. They are geared to the local apprenticeship and labour market situation and in line with a certification of the attainments. This accounts for a qualification that is relevant for an apprenticeship. Through the manageable duration of the module the concept is meant to support and motivate the participants to apply for further trainings.

Through the inclusion of the vocational preparation into the Vocational Training Act (BBiG) and the validity of the respective legislative regulation (Berufsausbildungsvorbereitungsbescheinigungsverordnung – BAVBVO) conditions were established to create a better content-based relation between vocational preparation and vocational training. In addition, binding guidelines for the development of qualification bricks

have been adopted in 2004, which allows more transparency and sets minimal standards. The duration of the qualification bricks is between 140 and 240 hours (1-3 months), as set by the BAVBVO regulations. Basically, qualification bricks are outcome-oriented, which means that specific qualifications and results are in the centre of attention. Qualification bricks:

- focus on activities, which are part of an accredited apprenticeship,
- have a clear and binding reference to the training regulations,
- are complete modules with regard to content and time and are self-contained,
- consider the local apprenticeship and labour market situation,
- purport qualification results but leave space for the methodological realisation,
- provide indications for useful cooperation between stakeholders,
- relate to a performance appraisal and a certificate of acquired skills (ZDH/ZWH 2004:3f.).

Qualification bricks are applied in two contexts: (1) since 2004 they are obligatory parts of pre-vocational training and education measures (BVB) according to the new concept of the Employment Agency. (2) They come into operation on a level of qualification which is to facilitate young people's entry into an apprenticeship (EQJ). While the first concept addresses academically and socially disadvantaged young people, the target group of the second one embraces teenagers who are disadvantaged "by the market", i.e. structural reasons, and on that account have not obtained an apprenticeship yet.

2.1.1 Qualification bricks as entry qualification

The entry qualification (Einstiegsqualifizierungsjahr – EQJ) consists of an internship lasting from 6 to 12 months which is connected with operational qualification bricks. In 2004, it was first introduced with a limited duration of three years as a sub-item of the National Pact for Vocational Education and Training (VET). It has been a legal standard since October 1st 2007 and it is supported by the employment agencies and by social service providers (Seyfried/Schmitt/Keck 2008:3).

According to the directive for the implementation of the special programme of entry qualification for young people (Einstiegsqualifizierungsjahr Richtlinie – EQJR) the target group consists of (1) „applicants with limited placement perspectives who have not obtained an apprenticeship yet despite nationwide supporting measures” and (2) „young people who do not yet show the required abilities for an apprenticeship to a full extent“(Bundesanzeiger No. 13, 19. January 2007:637f.). Another passage of the directive says that „all young people who are willing and able to get into an apprenticeship” can be considered as a target group, so that there seems to be a contradiction in the first instance. Factually, the offering addresses young people who are basically able to start an apprenticeship immediately, but who are hindered to do so due to structural conditions in their region. This is corroborated by the results of an explorative study of the BIBB: only 12.8% of the EQJ attendees have not finished school or have graduated from special schools, while 56.5% possess a Certificate of Secondary Education (CSE), that is the Hauptschul-diploma and lowest level within the German tripartite schooling system, 14.3% graduated secondary modern school with a Realschul-

diploma, 13.3% have obtained the higher education entrance qualification, the advanced technical college entrance qualification or a degree of a commercial college or vocational school. The majority is male teenagers (75.4%), of full age (64.1%) who do not have a migration background (67.3%) (Seyfried/Schmitt/Keck 2008:5).

The standards of the entry qualification for vocational training and education incorporate a contract with the participants, an operational certification that includes a performance considering six criteria¹, as well as a chamber certificate. The compulsory vocational school training and education is state- regulated. The qualification bricks can be counted towards an apprenticeship in principle and by mutual agreement between the company and the trainee. This concept is special insofar as firms which do not train can offer an entry qualification programme as well.

Another important result of the explorative study is that 59.3% of those firms involved in the EQJ-programme did not know anything about qualification bricks. Only two-thirds of the remaining 40.7% who knew about the concept made use of the bricks. The reason, named by the majority of the firms, was that using qualification bricks was too complex; hence the implementation of the concept was impossible. Among those companies who did make use of qualification bricks, only 22.7% expressed problems with the implementation, which the majority traced back to certain personal premises of the young people. Another interesting result is that 64.9% of the firms who already knew about qualification bricks considered a certification and an accreditation of them as reasonable, while only 16% disagreed with that. 19.1% did not have an opinion on that. Altogether, qualification bricks rather play a subordinated role within the implementation of the EQJ. This instance is primarily due to its low degree of popularity and the image that implementation at the operational level is said to be difficult (Seyfried/Schmitt/Keck 2008:11f.).

A study by order of the Hans Böckler (2005) foundation comes to the conclusion that firms get overloaded with consistently new concepts, such as the EQJ, and involving new and additional tasks, such as support for disadvantaged young people. The role of the chambers changes through the EQJ-concept as well, since for the first time ever they confirm performances they themselves have not inspected beforehand. Thus, they have to rely on the companies' reports. Nevertheless, the chambers regard the concept as positive. In contrast, it is not easy for vocational schools to integrate EQJ participants because there are too few of them to create a new class. Another aggravating factor is that the programme participants take up the EQJ at different times. Only a consequent modularisation could resolve this situation (Kühnlein/Klein 2005:35f.).

According to a BIBB-study the EQJ made 46.8% of all participating firms create additional apprenticeship training positions. The majority of those firms involved were generally willing to provide young people with an apprenticeship position following the measure. However,

¹ These six criteria comply with the corresponding industrial sector. For example, the criteria for performance appraisal within metal- and component manufacturing include: professional qualification, goal-oriented performance and work technique, compliance with the safety regulations, economical and ecological use of material and additives, adequate preparation of the workplace and tidiness, orientation on quality.

this would be dependent on the business situation as well as the cooperation between the firm and the potential trainee (Seyfried/Schmitt/Keck 2008:9f.).

Although the EQJ concept could be called a success considering its high takeover rate of 50%, it must not be ignored that the transition to an apprenticeship does not work for the other half of the participants. Moreover many trainees who are taken over face the problem that their previous performances are not accredited although the majority of the firms value this as reasonable. As a result, the entire duration of the training of an EQJ graduate extends by one year. Since most of the young people are adequately prepared for an apprenticeship this is not maintainable. As it is not legally anchored yet how to credit qualification bricks against an apprenticeship the integration of the concept into the training system remains open. In consequence schooling is extended and work experience is shortened.

„Given the fact that the EQJ internships are hardly credited against the vocational training, which can be characterised as a genuine fault in construction, the EQJ neither help to shorten the waiting loops. The contrary is the case; the measures themselves take up the character of a waiting loop and accordingly not only extend the probation time but the duration of the training itself for 6-12 months“ (Kühnlein/Klein 2005:39).

2.1.2 Qualification bricks in the employment agency's training schemes

More often than in firms qualification bricks are employed within vocational preparation measures according to the SGB III (social code III). Within vocational preparation qualification bricks address young people who have not been enabled to take up apprenticeship yet and need more intensive support. The work with academically and socially disadvantaged young people involves not only a better connection of vocational preparation measures and vocational training, but also the strengthening of basic skills as well as those competences that are part of the concepts' objectives. With this help the addressees' qualification is meant to be raised on a level which enables the young people to pass a full apprenticeship. The ZDH and ZWH have initiated a nationwide, quantitative and qualitative survey among the stakeholders to evaluate the concept of qualification bricks. In the following passages the results are analysed.

Educational institutions of vocational preparation most frequently applied qualification bricks of trade professions (93%), followed by Chamber of Industry and Commerce related professions (66%) and horticultural and agricultural professions (31%). Occupational fields such as health or social service constitute the smallest percentage (17%). Qualification bricks for professions such as metalworker, painter, carpenter, bricklayer and hairdresser are mostly provided by the educational institutions. These also make up to the ten most chosen professions within EQJ, even though in another order (Kramer/Pless 2006a:9).

ZDH and ZWH design three to ten bricks for the respective professions, which represent typical activities of a three year apprenticeship. Furthermore, the supporting organisations (in the text referred to as institutions from now on) can decide whether they adopt these bricks or create their own ones. There are regular technical conferences on legal guidelines and procedural methods which provide support. However, most institutions chose the ZWH/ZDH

bricks (72%), 24% adopt those bricks exclusively, 48% additionally apply bricks they have developed on their own and 23% work exclusively with self-developed bricks. An institution usually offers one to three bricks for one profession. Unlike firms and companies the qualification brick's degree of popularity is much higher among the institutions. Moreover the new concept stipulates that qualification bricks are first tested for their conformity with the BAVBVO before being certified. However, at the present time, this is just a recommendation and not a compulsory directive. (Kramer/Pless 2006a:10f.).

The concept envisions the implementation of the qualification bricks in the institutions as well as during the internship. The latter has not been realised so far for different reasons: the companies execute orders and usually cannot predict to what extent they will be stressed in close or distant future. As a consequence the trainees have to adapt to the internal workflows, not vice versa. Most firms do not know the concept well and do not attach much value to the qualification bricks, since they are neither checked by the chamber, nor are they creditable. The supporting organisations are happy about each appropriate internship provider they can eventually acquire, and do not want to lose them due to complicated concepts (Kramer/Pless 2006b:61f.). This situation has not changed in the following years either.

As a further result of the evaluation, a lack of cooperation between education institutions and vocational schools was observed. That is partly due to the fact that the coordination of contents with teachers of mixed classes is almost impossible. However, in case of special courses for participants of vocational preparation measures the cooperation works more frequently, only in every second case though. Furthermore, it is noticeable that social pedagogues working in the institutions are generally not involved in the implementation process of the qualification bricks (Kramer/Pless 2006a:20f.).

The vast majority of the institutions evaluate the concept of qualification bricks positively (94%). From their point of view, young people get to know job requirements in good time (92%), key competences can be adequately acquired (85%), successfully passing a qualification brick and the documentation motivate the participants (80%) and finally activities of the qualification were of help for the occupational orientation (82%). 75% of the interviewed trainers of the institutions stated that the qualification bricks can easily be realised with the help of existing staff and factual premises, 58% judged them as suitable for the achievement potential of the target group. There has been frequent criticism concerning the latter criteria, in which the youngster's relatively poor performance and too extensive course volume of the qualification bricks came up. Thus, while two thirds of the interviewees considered the period of time of the qualification bricks as adequate, the other third assessed it either as too short (to cover the ambitious contents) or too long (to motivate rather weak participants). Almost half of the interviewees showed interest in getting more support for the methodical realisation of the bricks (Kramer/Pless 2006a:26f.).

The qualitative interviews showed that the bricks were assessed as too challenging and too long for weaker attendants. This was taken into account by modifying some of the bricks in terms of duration and aspiration level. Moreover, most trainers judge qualification bricks that go beyond the level of the first year of apprenticeship as not practicable. (Kramer/Pless

2006b: 58ff). In this respect, one conclusion of the evaluation is that the institutions in most cases separate the qualification bricks organisationally from the internships. They are not aware of the fact that the experiences during the internship are an important part of the brick which is to be applied to the total time of the qualification brick. In this regard, further need for information exists. (Kramer/Pless 2006b:67f.).

Since it is usually not possible to attribute the qualification bricks of the vocational preparation to the duration of an apprenticeship, the latter is extended here as well. However, given the performance and low learning tempo of the target group, this seems appropriate in contrast to the participants of EQJ. In addition, the affected young people would miss vocational subject matters if the duration of their apprenticeship was shortened. According to the results of the ZDH/ZWH evaluation, the majority of the institutions approve an attribution which is in contrast rejected by both the majority of the young people and the firms. While the representatives of the institutions argue that this would increase the young people's motivation and credibility in the firms, the affected youths fear not to be able to perform well in school; being unemployed is another concern.

2.2 Training bricks

The concept of training bricks is a recent one. Here, the bricks are not only similar to the guidelines of apprenticeship but they are parts (modules) of an apprenticeship, thus they can be accredited to it, which is different to the system of qualification bricks. BIBB developed training bricks for 14 professions, which have been tested since January 2009 in the framework of a programme called "Jobstarter Connect". Thereby, four scopes of application are set aside for the testing in praxis:

- Qualification of long term applicants,
- Interface between the support system for disadvantaged young people and dual apprenticeship,
- Interface between vocational education in schools (one year limited or full time) and dual apprenticeship,
- Re-qualification of young adults (BWP 2008b:3).

The development of the training bricks was carried out on behalf of BMBF (Federal Ministry for Education and Research) and in close cooperation with the social partners. They are developed on the basis of the latest guidelines for apprenticeships and the apprenticeship framework curriculum. Thus, they fully represent its compulsory contents and include the respective framework curricula of the vocational schools. As to the content structure of the bricks, a capacity orientation was established, which means that the advised learning results are agreed upon beforehand, including dimensions of competence, such as professional competences, social skills and personal competences.

The training bricks cover typical working and business processes of a profession, so that the reality of the profession and its didactical logic are preserved. It is planned to document the learning results after the graduation of one or more training bricks. Contents that are

important for the intermediate or the final examination are indicated in order to facilitate a transition to the regular apprenticeship (BIBB 2008a:1f.). However, an examination and a certification of particular bricks is not planned, in fact existing examination rules should not be touched. Therewith, it is assured that training bricks cannot exist side by side but, in their entirety, represent a unit of a profession. In this way, the principles of a profession are sustained and the indivisibility of an apprenticeship as a constitutive principle remains. The duration of the training bricks is from four up to twelve months (BWP 2008a:15).

The following aims are part of the concept:

- a better integration of long term candidates in the dual system,
- a better linkage of existing parts of the vocational education system to one another,
- a stronger similarity of external qualification measures with the dual system,
- a better accreditation of already gained competences or a consecutive preparation for the final examination,
- the development of approaches allowing a shorter training period (BMBF 2008:2).

A possible displacement of qualification bricks by training bricks cannot be excluded, in fact it is desirable (BIBB 2008b:3).

Apart from this concept an orientation towards modular, flexible and differentiated training structures can be observed in the recreation of professions. So, the print industry established a modular vocational and further training concept in which a variety of job specialisation is made possible through compulsory and optional modules. The creation of IT-professions, for instance, features overlapping competences across common professions: while core modules frame a common foundation for several professions, specific modules constitute ways of specialisation (Rützel 1999:68).

2.3 Need for reform in Vocational Education and Training

The concept illustrated above is based on an expertise by Euler and Severing (2006), who, on behalf of the Bundesministerium für Bildung und Forschung – BMBF (Federal Ministry of Education and Research), developed proposals of reform to improve structure and flexibility of the dual apprenticeship. Special attention was given to more transparency of apprenticeships and transmissibility between the systems (BWP 2008a:13).

The background to this is a reform backlog of the German vocational training system. Although this model was and still remains quite successful, some inadequacies have become explicit:

- Despite a relative improvement on the labour market, fewer young people of a cohort enter the dual system so that one can speak of its creeping erosion.
- At the same time more and more young people take part in measures of the transition system or start a school-based vocational education. In addition, 51% of the applicants are candidates who have tried several times before (Frank/Hensge 2007:40).

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- The change from industrial to service society affects the training culture: apprenticeship training positions in the industry are reduced while the service sector and its new areas of growth demand other forms of qualifications.
 - There is an increasing tendency for enterprises to hire bachelor graduates for occupations at the top of the qualification level, which have been carried out by graduates of a dual apprenticeship so far.
 - The fast technological change makes an appropriate continuous adaptation of apprenticeship necessary, whereas changing guidelines and the framework curricula of apprenticeship is very time-consuming.
 - In the process of modernisation existing professions were “extended”. As a result, the guidelines of apprenticeship were often overloaded, while specific qualifications that are typical for the particular profession were missed out.
 - In addition, many firms cannot accomplish the plenitude of requirements by themselves. As a consequence, apprenticeship capacities remain unused. .
 - While on the one hand, diverse specialisations in different professions are possible and necessary, at the same time, the number of students decreases due to demographic changes. This makes it difficult for vocational schools to keep the respective conceptual classes.
 - Up to now, the segments of the educational system (vocational education, higher education, further education, as well as pre-vocational education) stand side by side like columns, whereas changes within these systems, schools and trainings usually need intense efforts as previous attainments are often not accredited:
 - Especially for those being structurally disadvantaged it is not reasonable that attainments from the pre-vocational education are degraded to keep them in a waiting loop, whereas any follow-up action cannot even be assured. At best, it gets down to a repeat of class contents, at worst a smooth transition is made impossible and learning achievements become useless as qualifications for the vocational training and labour market as well as for further education courses.
 - Due to the difficult situation of the vocational training market, especially in East Germany, school education plays an increasing role. Still, it is not easy for graduates of school-based vocational training to gain a chamber certificate. Furthermore, a change between full time school based and firm-in training, for instance after one year of school or contrary in the case of a training dropout, is generally possible, but usually without the accreditation of gained attainments. There is a lack of internal differentiation and defined connection points between parallel educational backgrounds regulating ways of transition including the accreditation attainments within the training system.
 - Last but not least a transition from the dual system to a university or a university of applied sciences is still determined by long if not hopeless admission procedures.

2.4 A controversial discussion

The controversial discussion about modularisation already has a certain tradition in Germany. Whenever an essay favouring modular concepts for vocational education and training is published, it does not need long till a refutation follows. Some are looking for answers to an overdue structural reform, others worry about the professional concept and the tariff structures involved in it. The latter are above all issues of the trade unions, which also worry about their own possibilities of influence.

The partly heated debate is often underlain by the imagination that modules can be put on a level with the NVQs in Great Britain and the modularisation with the concept of fragmentation. Here, single modules are marketable and work independently. The concept of professionalism would lose its constitutive relevance and vocational education would no longer be bound to a process of growing into the professional world, the work team and an emerging professional identity (Rauner 2004:10).

„Through its modular structure the British concept offers the possibility to acquire constituent competencies, which anyway can be aggregated but do not have to. In contrast, within the holistically constructed German training professions skills are aggregated as a homogeneous overall qualification, which is not to exclusively qualify someone for a specific work function.“ (Deißinger 2001:201).

That is an idea of modularisation that does not result in a restructuring but in a deconstruction of existing training courses. This would equal an annulment of the professions themselves.

„Technically, the possibility to create transparency between different training systems increases alongside the level of modularisation. [...] Whatever aggregation level the skills are settled on, those being defined by the alphabet of „qualifications and skills“ are always independent of the context of competences defined by occupational images and therewith constituted professionalism. However, the insight that a sum of defined single skills fundamentally differs from professional competence remains unconsidered“ (Rauner 2004:8).

According to Kloas it has to be guaranteed that adequate training qualifications are not replaced by narrow-gauged professions. A modular design also has to require that all modules necessary for a profession will be offered and passed through. Moreover, a modularisation of vocational education must not address a certain target group only. In addition, there have to be nationwide standards beyond those of the firms and agencies (Kloas 2000:361).

*Modularisation is one of the most popular and at the same time one of the most „circumnavigated“ keywords within vocational education – at least in Germany. Hope remains that in future a consensus can be achieved that comprehends modules as single certifiable qualifications on the level of outcome or rather competence, which still remain part of an ensemble. This means that they refer to a training qualification but do not replace the final examination conducted by the responsible chamber. This approach can be characterised as a **modularisation within the framework of the profession concept** (Kloas 2000:361).*

On the occasion of a conference of the labour union for education and science (GEW) in 1999 Ursula Herdt already claimed a systematisation and conceptual advancement of the factual coexistence of traditional dual training, school-based vocational training and so-called „compensating measures“. These were to be reformed according to certain quality standards, made mutually adoptable and included into the framework of a plural vocational education system. As an instrument for the differentiation of job descriptions, Herdt calls for a modular constitution of the training structure, which is embedded into the occupational concept and always aimed at a completed apprenticeship (Herdt 1999:39).

Ehrke favours modularisation as a didactic concept, which sequences and structures learning processes; options within a course of study can be supported and common contents for occupational groups can be defined. In his opinion, the debate aims at the fragmentation of degree-based, formalised courses of education or in other words the break-up of training courses into partial qualifications which has to be read as a challenge to the system of jobs that require training (Ehrke 2003:2f.).

„... According to this understanding, modules only make sense if the training units can freely tramp, i.e. they can be stirred up in factual and the temporal order. The overall objective of the training qualification is no longer compellable and would – in all likelihood – not be reached in a passable space of time. Three and a half years of training could easily become six? The „eternal student“, who everybody laughs at, would then be replaced by the „eternal trainee“ (Ehrke 2003:3).

„For the preservation and the further development of the vocational concept it is crucial that the officially recognised and compulsory final examination conducted by the chamber or another governmental examination remains decisive for a profession. Yet the training path, training forms and training structures which enable someone to reach this licensed final examination, is less important (Pütz 1997:68).

Advocates of the modular concepts name the following advantages:

- a greater flexibility of the system through optional modules concerning professions that require further education as well as a „multiple applicability“ of single modules for different professions;
- a simplification of conceptual work in case of a modernisation of vocational framework curricula: it is not necessary any longer to completely renew job descriptions, but only single modules;
- more transparency in the European context;
- available partial training capacities of firms can be gained easier in favour of full apprenticeship training positions, joint training systems and the network of different learning locations can be promoted;
- to tie in with present starting qualifications, for instance with an interrupted apprenticeship, can be done in a differentiated and economical way;
- better possibilities to catch up the apprenticeship graduation for people who change their apprenticeship training position, for drop outs and unsuccessful assessment attendants;

- it is easier to organise support chains; for instance in case of an apprenticeship interruption by reason of childcare;
- better targeted orientation and focusing on the training preparation (Kloas 2000:362f.).

Critics of a modular system fear:

- a „taylorisation“ of holistic training courses and the introduction of partial qualifications;
- an erosion of the professional concept and the herewith connected professional identity as well as the social protection through collective labour agreements;
- curricular splitting and loss of general-education and theoretical contents;
- loss of the overall context caused by incompleteness and a lack of systematisation;
- exclusive qualification according to current internal requirements, so that a long-term qualification perspective is not given.

Thus, while the critics act on the assumption that the introduction of modular concepts can be equated with an erosion of the occupational principle, the advocates aim at modular structures keeping the occupational principle intact.

„The one who points out – within the inner-union discussion – the reform potentials of modularisation or discusses modularisation as an independent or in other concepts embedded strategy of modernisation is considered as a traitor, who talks in favour of the erosion of the well-proven German vocational concept and the dual system of vocational training, moreover the deregulation and destruction of established corporate structures as well as the expulsion of education from vocational education“ (Rützel 1999:68).

2.5 Proposals for reform

Euler and Severing have been ordered by the BMBF to work out proposals of reform for structural changes to solve the problems named above. They developed two models training courses which both emanate from an arrangement in content of six to eight training bricks. While the qualification bricks are derived from the contents of acknowledged training professions and are applied in connection with vocational preparation, training bricks are to be understood as self-contained and nationwide standardised units within the overall curricular structure of a training profession. Only the entity of all bricks forms a qualified, holistic apprenticeship. Thereby, the occupational principle is not touched.

„Through the indispensable connection of training bricks with the regulatory framework of the job profile, on the one hand the basis and reference point for its development are determined, on the other hand the protection of the professional principle is guaranteed. It is not the separation of fragments in the sense of an atomisation of holistic job profiles, but the reasonable structuring of the whole affects the development of training bricks“ (Euler/Severing 2006:43).

Thus, Euler and Severing are geared to the concept of differentiation. Neither a „Patch-working“ within the learning process nor a „de-professionalisation“ of apprenticeship can be

said to take place. The principle of training bricks is to allow a better connection of the vertically upstream vocational preparation and horizontal school-based vocational education and training. The successful completion of a training brick legitimises the attribution of that partial qualification. Different learning location combinations are always subordinated to the general aim of a successful completion of all bricks; not till then the apprenticeship is considered to be completed. The same applies to possible interruptions (Euler/Severing 2006:46).

Model 1 hardly includes any changes of the apprenticeship. The training is carried out as supplied before whereas it is separated into bricks which are not tested individually though. In fact, the usual structure of examination consisting of an intermediate and final exam remains unaffected. Euler and Severing suggest crediting the intermediate test results against the final examination in terms of an extended examination. In case of an apprenticeship break-up attained achievements should be checked and certified. Those training bricks that were passed in the course of vocational preparation or full time academic VET are acknowledged as partial training qualifications and can be attributed to the apprenticeship. Qualification bricks can be replaced by training bricks as the target group permits. Clear junctures in form and content and accreditation foundations for higher education and further education are given.

In model 2, training bricks are tested and certificated individually. The results are incorporated into the abbreviated final examination. The bricks are locally tested in those learning locations where the apprenticeship takes place. An examination conducted by the chamber is arranged at the end of an apprenticeship to preserve the overall context. As a basic principle it should be possible to take the exam within the common structure of intermediate and final examination, so that it is at the discretion of the firms to decide in favour of one form of examination or another (Euler/Severing 2006:46f.).

To guarantee transparency and to minimise time and effort on examination and administration, a manageable amount of training bricks is suggested. Here it should be distinguished between basic and special bricks, whereas the latter, if the case may be, can be set aside for compulsory electives. The basic bricks last 12 months, the special bricks six months. The selectable compulsory bricks last three and six months. To facilitate the accreditation of vocational preparation bricks it might be useful to split the basic brick into two units of six months. This makes up five to eight bricks for three-year training. The order of the bricks could be arranged flexibly except for the basic bricks. The didactical design is supposed to follow the principle of the dual system and the training bricks are to be competence focused.

Euler and Severing differentiate three groups of disadvantaged young people: (1) the „market-disadvantaged“, (2) those who can be led to an apprenticeship but need support within training preparation and (3) young people who are not able to attend training and need sustainable socio-pedagogical help. While the latter should still be provided extensive support measures, the other two groups should get the possibility to pass creditable training bricks during training preparation. Here, the measures should stick to contents that correlate with the

contents of the first year of VET; the results should be certified and credited against the apprenticeship.

A development of vocational education must not take place in divided areas such as dual training and transition system. Eventually, the aim is to help young people out of transition into dual training, hence both areas should be associated to avoid disruptions (within the system) (Euler/Severing 2007:37).

2.6 Reactions to the models proposed

In response to the expertise by Euler and Severing, several organisations composed comments or own proposals of reform, outlined, as follows:

- The DIHK (German Chambers of Industry and Commerce) also perceive the demand for more flexibility within VET and suggest a bisection of apprenticeship. While in the first training section (covering one to two years) basic skills and core competences (e.g. metal or trading professions) are acquired, the second section consists of an introduction to a particular profession. Here, the company can chose from a profession-specific “package” of elective and compulsory elective modules. One module can be designed as company-specific. A changeover within one sector is possible without any difficulties. Nationwide standardised final examinations are kept as they are. (DIHK 2007:3f.).
- For Peter-Werner Kloas from the ZDH (German Confederation of Skilled Crafts) a competence-focused description of the training professions in terms of basic, core and special modules is preferable: basic modules delineated skills which cover the whole field of profession, core modules dealt with typical skills of a certain profession and special modules focused on skills typical for a company. The modules replaced or extended the previous forms of differentiation of focus, branch of study and elective fields of activity. This schedule line created a transparent structure and at the same time the identity of the training professions was maintained. The suggestion by Kloas is very similar to the suggestion by the DIHK, whereas the ZDH approach comprises basic skills and competences in a modular form, while the DIHK model only sets this aside for skills elaborating a vocational profile. According to Kloas, modularisation requires three conceptual guidelines within the vocational principle: (1) training contracts are only concluded provided that *all* modules are offered and organisationally guaranteed; (2) a graduation requires an (extended) final examination; an additive attribution of module results to the final examination is not possible (but modules can be credited against the apprenticeship and shorten it); and (3) there have to be a significant attraction gap between full qualification (graduation) and part qualification (graduation of a module), for instance through the status of the examination (chamber examination versus internal examination) or the certification (chamber certificate versus firm or institution certificate) (Kloas 2007:47f.).
- In addition, The BDA asks for more flexibility, transparency and social permeability within vocational education. It also advocates the establishment of training bricks within the legal training regulations, but limited to a few professions. Skills obtained within the

training bricks should be documented, evaluated and certificated separately. Furthermore, it suggests a summation of related professions under profession groups, whose bricks are partly the same and can be combined. Additionally, a „structure model 2 plus x” could be introduced, which covers basic core and professional qualifications within an initial training of two years. A following period of specialisation can be added as a third year of training, as graduation-oriented further training or as further education integrated into professional life. Training contracts can be signed for two or three years and at the end of the apprenticeship, a public law examination through the chamber should take place (BDA 2007:1f.).

- Manfred Kremer from BIBB responds to the blocking position of some stakeholders and claims more courage for innovations. He refers to the successful results of some pilot projects about extra-occupational ex post-qualification of young, low-skilled adults. These showed that a graduation related modular design is compatible with the vocational principle, especially when it is clearly geared to contents of acknowledged training professions. There are no obvious reasons that this should be fundamentally different in dual training with training bricks. For Kremer, training bricks have the potential to extend the capacities of acknowledged training, through a remodelling of “unproductive waiting loops” to creditable and graduation-oriented “vocational education chains”. A greater involvement of vocational schools and other educational institutions in dual training of acknowledged training professions could be an enormous help and contribution to this.
- Michael Ehrke of Industriegewerkschaft Metall – IG Metall (Industrial Union for Metal Work) and Hermann Nehls of Deutscher Gewerkschaftsbund – DGB (German Confederation of Unions) consider the training system as being flexible enough; accreditation possibilities for disadvantaged young people would already exist and a difference between qualification bricks and training bricks would not be noticeable. As they interpret the proposals of reform „a certain group ... vehemently fights for an erosion of the dual system“. In that, they observe an attempt of a systematic change of labour and wage policies, “which across the board promotes a return to extreme Taylorism and thus considers the vocational principle as an obstacle “. Ehrke and Nehls outline the proposals of reform by Euler and Severing as follows: „a transfer of 350 training professions to several thousand modules“, „Modules are compact, clearly distinguished qualification programmes of four to six months, that can be implemented under different whole variety of circumstances, at various locations, in different times“, „one cannot speak of a standardised duration of a training any longer“ as well as „a new system of certification true to the motto: ‚turn one (final) examination into six to ten individual examinations’ (Ehrke/Nehls 2007:39f.).

2.7 Assumptions

Euler and Severing pursue the differentiation concept with the aim to keep established professions as a general concept. These professions are rather re-structured through curricular and didactic units. These units are to be understood only as a part of the whole and as an alternating interlocking of theory and practice, which in turn carry respective functions for the

whole. Legal regulations remain unaffected; the articles of apprenticeship are based on the whole duration of training and the final examinations under public law are kept as administered before.

Thus, a way has been found to accomplish the difficult balance connection between flexibility and job specification. Especially in the first model, the training principle, as we know it today, is not touched. At the same time, the identification of training bricks allows a number of flexible measures.

- Necessary modifications no longer imply changing the whole training framework, but only the respective training brick.
- Vocational schools have the possibility to pool classes of different fields together in groups of common basic bricks, at the same time allowing a specialisation through special bricks.
- The transitions between the systems become easier; an attribution of work performed principally is possible.
- In principle, the concept allows training in different locations and thus meets the training requirements of the service sector.
- The vocational principle is maintained; only the graduation of all bricks leads to success.

While Model I should be supported for these reasons, caution is demanded in Model II. There is nothing to be said against an examination and certification of single modules in general. However, this could entice young people to quit their training earlier in order to earn “real” money sooner. Moreover, a shift of single partial exams into the company training centres might make some trainees misleadingly conclude that they are already fully skilled.

The proposals of reform by DIHK and ZDH turn out to be a variation of Euler’s and Severing’s first model and are to be proven and evaluated in a transition period. In my opinion, a preceding agreement on a differentiated design of a model is not necessary. However, those three conceptual principles suggested by Kloas should be compulsory: first, all modules have to be organisationally guaranteed by the conclusion of the training contract, second, modules can be credited against the training duration (*not* including results of examinations) and thus save time, third, there have to be noticeable differences between part qualification and overall qualification to keep trainees from a premature completion of their apprenticeship.

From my point of view the BDA model is to be rejected since it reduces training bricks to a few sectors which would lead to higher in-transparency and thus counteracts the approach. This in-transparency would even be enforced through a parallel introduction of the 2 plus x principle, which leaves the decision in favour of two or three-year contracts to the companies themselves. This carries the potential to lead to “narrow-gauged” professions. As to the certification of single bricks, what has been pointed out above, applies to this issue.

It is striking (1) that none of the stakeholders advocates the fragmentation concept and that the protagonists want to stick to the vocational principle; (2) that the modularisation critics assume an either-or-principle: either the status quo remains untouched or it is replaced by a

radical fragmentation which will lead to a „patchwork-biography“ with all its undesirable effects; and (3) that proposals of reform of an interior differentiation of training courses with clearly defined interlinkages under maintenance of the vocational principle and the final examination is not discussed by the critics at all. In a brochure, published by the IG Metall to enlighten companies and employees, it says:

„The latest debate against dual training is based on the assumption that we should adjust to Anglo-Saxon examples, because the German training system was not capable of winning a majority in Europe anyway. A break-up of training professions into training bricks is suggested. Under the buzzword „flexible apprenticeship paths“, qualification measures of three to six months shall replace an apprenticeship of three or three and a half years. ... Thus, according to the model of the professors [Euler and Severing; ed.] a metal worker would not learn his profession for three and a half years as he used to, but put together maybe eight modules as he think its best“ (IG Metall 2007:1).

In this way, an incorrect and partly defamatory repetition of Euler’s and Severing’s proposals of reform is presented on 16 pages. The reasons why, against the declared goal, misinformation are spread, cannot be answered here. Regretfully the labour unions take up a blocking position instead of constructively participating in that whole discourse. However, the young people are the losers in that game.

„Decisive for the real shape of vocational concepts as well as module concepts are the guidelines and standardised principles. Individualisation, flexibility and cooperation as well as a stronger regionalisation are modernisation strategies, which are undeniably important for the advancement of vocational training and, thus, valid for modularisation just as well“ (Rützel 1999:91).

Modularisation does not mean abandoning of a regulation framework. Neither choice nor order, nor compatibility of the modules is arbitrary. In fact, choice and compatibility need to be embedded into a given framework, so that the influence of the companies as well as the free choice of the trainees is limited to the specific profile of the respective profession with its compulsory and compulsory elective modules. Neither the chosen modules, nor their order is arbitrary.

Modularisation does not mean to dictate an additive list of partial themes that are to be worked off via the modules either. It is not about an analytic segmentation of a profession, but it is rather the qualitative aspect of professional competence that has to be considered. Thus, it is about the integration of a module as a part-unit into a general concept of occupational education which gives trainees the possibility to acquire professional competences.

„Modularisation is more and something else than just cutting the whole into pieces“ (Rützel 1999:93).

„If it works not to weaken the quality standards of the German vocational education system through narrow-gauged professions, modularisation is an effective instrument to exhaust the flexibility potentials of our vocational education and training system and to

enforce qualitative standards where the system is still sparsely regulated“ (Kloas 1997:56).

It is welcome that the BMBF commissioned the development of useful structure concepts, which should be proved, tested and evaluated concerning their suitability before being realised. The testing should be carried out in some selected trade sectors and it should take some alternatives into account such as suggested by DIHK and ZDH. However, from my point of view, it is a mistake to reduce the testing and introduction to the promotion of specific target groups. In this way, neither the structural deficits of the educational system can be resolved, nor the requirements of a cross-sectional evaluation be met. Furthermore, difficulties for a wide acceptance of modular structural reforms are waiting to happen: once it has been stigmatised as a programme for „marginal groups“, an extension to the vocational education and training system could turn out to be problematic.

According to the BMBF, training bricks are planned to be developed in some selected professions within the framework of a testing decree, with the objective of an improvement of the transition structures for target groups such as long-standing applicants, drop outs, newcomers or career changers.

„No union or industry was found, however, that would have been willing to go ahead with their training professions. This negative attitude is somehow comprehensible: Which industry, which professional group yet wants to avow oneself to be the alliance for the “long-standing applicants”, “drop outs” and “partly-qualified”? The benefit of modularisation cannot be advertised towards companies exclusively by goal setting“ (Kloas 2007 46).

Special solutions for a certain industry or a certain target group have been tested and in some cases successfully implemented into practice in the past. However, in the course of advancements, special programmes and extensions the training system has reached a complexity that is hardly transparent to firms and young people. There is no need for more complexity but for a simplification of structures that is valid for the dual and academic training as well as for the transition system; and thus it would contribute to clarity and flexibility.

3 Belgium

3.1 Background and scope of modularisation

Two issues receive particular attention in part-time vocational education and training¹: unqualified school-leaving and young people’s prospects in the labour market. The so-called

¹ At the age of 15 or 16 (or later), pupils can opt for part-time education instead of full-time education. Two systems exist: part-time vocational secondary education and entrepreneurship training. Part-time vocational secondary education is organised in a centre for part-time education where pupils follow courses during 15

‘waterfall system’ is typical for Flemish education. General education is considered to be better than technical education, technical better than vocational and full-time vocational education better than part-time vocational education. This is deeply rooted in the organisational structure, in the labour market and in the minds of all people (teachers, parents, pupils, employers, ...). Because of this, vocational training is not chosen for its particular characteristics but because the level of the pupil is not high enough (regarded from a general perspective) or because all other options have proven not to be suitable for the pupil, and this holds even more for part-time vocational education. The consequence is that the pupils in part-time vocational education are often difficult to work with: they are tired of going to school, have negative school experiences and often a very difficult school career. The prevalence of playing truant is enormous. It may not surprise, considering all the aforementioned problems, that unqualified school-leaving frequently occurs.

Although the system of part-time secondary vocational education was installed especially for those young people who prefer to work or who prefer to learn their job by doing, almost half of them don't have a job. This huge unemployment is mainly caused by the characteristics of the young people. These often make it difficult to find and keep a job. A lot of them lack the necessary attitudes to work and are not enough motivated to start and keep a job.

As these issues are very urgent in vocational education and especially in part-time vocational education, the government decided to introduce the modular system. The process of modularisation is aimed:

- to enhance the well-being of pupils by giving them regularly the experience of success;
- to decrease the number of unqualified school-leavers;
- to adjust vocational education to the labour market in a more flexible way: modularisation should increase the responsiveness of the educational system to the demands of the labour market;
- to make vocational education more transparent;
- to stimulate lifelong learning;
- to introduce educational and didactical innovations (individual treatment of pupils' learning deficits, coaching as a teaching style, self-conducted learning,...).

It was introduced in the school year 2000-2001 by the Flemish government (department of education) as an experiment in part-time vocational education¹. In 2007, it was decided that a modular approach would be compulsory in part-time vocational education. The reason is that modular systems are considered by the government to be particularly suitable for the most disadvantaged young people in education. It was decided by the government to gradually introduce the modular system in all centres for part-time education and in all fields of study. The decree on part-time learning and part-time working (2008) states that all trainings in part-

hours (2 days) a week. The training in the centre should be combined with a job that corresponds with the training. In this text we only deal with the system for part-time vocational education.

¹ It was also introduced in full-time vocational education and in special education, but these two school systems are beyond the scope of this project and will therefore not be described in this text.

time vocational education will be organised in a modular way by 2012. Implementation will come about gradually. Since September 2009 trainings in construction, decoration and woodcraft have a modular structure. Every year, until completion in 2012, new trainings will be converted from linear to modular. From the given moment, the modular system will be compulsory.

In this report we describe modularisation as it was in the experimental phase (§2) and how it is implemented now (§3).

3.2 The modularisation concept in the experimental phase

3.2.1 Composition of a module

The Flemish concept of modularisation in the experimental phase reorganised the existing qualifications in initial vocational education into a modular system. A vocational training is divided into smaller parts, the modules, which are assessed and credited individually. Training centres could decide to break up a module into smaller parts ('learning units') if desirable.

Modules were defined as self-contained units and were designed to integrate competencies and knowledge. Each module contained basic competencies, auxiliary basic education and key competencies. These concepts were by the government defined as follows (Servicebundel Modulair onderwijs¹, DBO):

- *Basic competencies*: aims related with skills, specific knowledge, insights and attitudes the pupil should dispose off, in order to start with further education or to start as a professional. Examples: to pour concrete, to serve at table, to operate a machine, ...
- *Auxiliary basic education* comprises elements of basic education (= general education necessary to perform in our society and to construct one's own life) that support the acquisition of basic competencies. Examples: reading comprehension, rule of three, communication, ...
- *Key competencies* are cognitive, psychomotor or affective skills that are essential to practise a profession successfully, that can also be used also in other professions and that contribute to personal development.

Basic competencies, auxiliary basic education and key competencies were defined by the government, but it was up to the schools and centres to concretise them in objectives and learning contents. The objectives states concretely which observable 'behaviour' the pupil is expected to display. The learning content has to be meaningful as part of a learning process.

3.3 Composition of the study programme

The freedom to combine modules was restricted by the government. Learning trajectories were defined and pupils had to choose modules offered within the chosen learning trajectory;

¹ <http://www.ond.vlaanderen.be/dbo/projecten/modularisering/servicebundel%20versie%202004.pdf>

for some modules entrance was restricted to pupils who have obtained the part-qualification related with other modules. Modules could not be taken up simultaneously. Modules could be used for different qualifications within the same occupational area.

3.3.1 Timing

The duration of modules was variable according to the pupil's progress. The training centre decided. This made a very individual approach possible.

3.3.2 Accreditation and certification

What had to be accomplished by the end of a module was defined by the government, but it was up to the schools and centres for part-time vocational education to make the learning programme, to choose the teaching and evaluation methods, to choose the didactical material, etc. The government could give ideas, provide examples, ... but could not impose.

All necessary components (modules) lead to an overall qualification. Overall qualifications were definitely marketable as the content of the training programme was based on the matching vocational profile, made up by the social partners (Social and Economic Council of Flanders, SERV).

3.4 Modularisation concept after generalisation in part-time vocational education

After generalisation of the modular system some features of the system changed. The most important change concerned the composition of the modules.

3.4.1 Composition of a module

As from September 2009, the components mentioned above (basic competencies, auxiliary basic education and key competencies) won't be used anymore. They are re-organised and are called clusters. Every module contains:

- 1 cluster concerning safety, environment, hygiene;
- 1 cluster concerning necessary attitudes to become a professional (\approx key competencies);
- 1 cluster concerning functional competences to become a professional (\approx auxiliary basic education);
- 1 cluster concerning the specific vocational training.

The aims of each module are defined by the government, in close consultation with sectors, the Flemish social and economical council (SERV) and the Flemish educational council (VLOR), in so-called "frameworks".

It is up to the schools and centres to translate the framework in objectives and learning contents. *The objectives* state concretely which observable 'behaviour' the pupil is expected to display. *The learning content* has to be meaningful as part of a learning process. It is up to

the schools and centres for part-time vocational education to make the learning programme, to choose the teaching and evaluation methods, to choose the didactical material, etc.

3.5 Composition of the study programme

A study programme consists of one or more modules. The same module can be part of different study programmes. It is the Flemish government that defines the structure of the study programme, after having consulted the Flemish educational council (Vlaamse Onderwijsraad). For every training it is defined which modules belong to it and it is also decided whether modules are independent to each other or not. If they are independent, they can be used in every possible order, if not, the order of the modules is fixed. The Flemish government also defines admission criteria for every module, but for individual cases, the centre can decide not to apply the criteria. In that case, the decision has to be motivated. In sum, flexibility is a key feature that makes individualised trajectories possible.

3.5.1 Timing

The duration of a module may vary from some days to some weeks. It is the centre for part-time education that decides how much time is needed for each module, considering the given pupil or group of pupils. A module can be started any time during the school year. It is possible a module is started in the one school year and finished in the next.

3.5.2 Accreditation and certification

Modules are assessed and credited individually. The assessment is made by the teachers in the schools or centres for part-time education. Mixed methods are used: self-evaluation, discussion of cases, practical tests, ... The assessment lies within the responsibility of the school or centre.

A positive assessment of a module leads to a part-qualification, a positive assessment for all the modules belonging to the same learning trajectory leads to an overall qualification. These qualifications can be provided any time. Both part-qualifications and overall qualifications are recognised and ratified by the Flemish government. Important to know is that the part-qualifications and overall qualifications obtained in part-time vocational education and the ones obtained in full-time vocational education are regarded equally. In part-time education it is also possible to give the pupil a certificate of acquired competencies ('attest van verworven competenties') when the pupil does not qualify. The certificate states which competencies the pupil has anyway acquired.

3.6 What about modules in programmes for the most disadvantaged?

3.6.1 Pre-paths: a specific programme

Because of the huge amount of unemployed young people in part-time secondary vocational education, prevocational education and training was developed. The target group are the young people who do not have the necessary attitudes and/or motivation to enter the labour

market¹. Pre-paths are a form of this prevocational training. They are meant to impart basic attitudes and competencies to the youngsters, to help them with getting insight into their own qualities and competencies and to assist them with making career choices.

Pre-paths are exploratory and activating. To reach the aims, a variety of structured activities is available. They can be situated on a continuum between leisure activities and labour. But even participation in activities that are more related with leisure is not free of engagement. Playing a game should at the same time develop for instance a collaborative attitude. All activities should be related in one way or another with integration in the labour market.

Pre-paths are reserved for (smaller) groups, but individual approaches are certainly used. The duration of the pre-path is limited. The content and structure of pre-paths can vary according to the centre that provides the pre-path.

Pre-paths are mainly provided by centres for out-of-school education, which are used to work with disadvantaged youth and adults. These centres have been collaborating with centres for part-time education for many years and know the difficulties of the youngsters in part-time education very well.

3.6.2 Modules in pre-paths

The centres for out-of-school education may organise the specific pre-path training in a modular way. As there is no regulation set by the government concerning modules in pre-paths, centres have full autonomy to choose for a modular system or not and to develop the modules according to what they think is best.

4 Denmark

4.1 Introduction

Modularisation is not a new concept in a Danish context. It has been used in the labour market training programmes (arbejdsmarkedsuddannelser – AMU) since the 1970s where an extensive system of modules has been created which can be combined into a vocational qualification at journeyman level. However, in the initial vocational education and training (VET) system, modularisation is a relatively new phenomenon and has been highly debated. Some critics have feared an “AMU-fication” of the initial VET programmes based on the fact that the AMU courses are fragmented and have not included the more general aim of the initial VET programmes of educating young people for further education and for active citizenship. Politically, the concept has been abandoned in the initial VET programmes in favour of “steps” and modularisation is in general not an issue which receives political or research interest.

¹ This implies that prevocational training is not meant for young people who possess the necessary attitudes and who are motivated enough to work. This group of youngsters should be guided by the counsellors in the centre for part-time education itself.

Nonetheless, modularisation is a fact in the initial VET programmes, although it is a decentralised fact meaning that modularisation is unfolded differently within the different vocational colleges. In the basic programme, modularisation can be found as both an organisational and pedagogical principle. The programme is modularised on the basis of competences to be achieved/learning outcomes, and the students have the possibilities of taking different modules, which start out from broad introductory modules to a sector or range of related sectors to narrow modules aimed at continuation within one of the main programmes. The general subjects are to be integrated into the more sector specific modules and consequently, it requires that the teachers work in teams and plan modules which ensure that the students acquire the competences stipulated in the national regulations.

However, modularisation is also taking the shape of bridge building (organisational principle) i.e. different educational institutions, guidance centres, and enterprises cooperate on providing individual courses for “disadvantaged” young people and/or combination courses for groups of young people. The aim of such modularised courses which may either consist of different elements already on offer within the various institutions or of tailor-made courses is to motivate young people for an ordinary VET programme by drawing on the strengths of the different educational institutions. Since 2003, the production schools have been required by law to enter into cooperation with the vocational colleges on such bridging courses, and recently the Danish folk high schools have also initiated a number of projects which aimed at offering “disadvantaged” young people the opportunity of strengthening their personal and social skills during a three-month (residential) stay at a folk high school. In such “modularised” courses (please note that this concept is not used for these courses), it is a requirement that an educational plan is drawn up for the individual participant. This plan is often drawn up by a guidance counsellor at one of the municipal guidance centres or at the vocational college.

To conclude, in a Danish context, the concept of modularisation is politically no longer legitimate, however modularisation is an integrated practice in the Danish VET system, both within the initial and the continuous VET programmes. The basic course in initial VET is modularised and flexible, allowing the students to take their time (from 20 weeks to 60 weeks in technical training). For the group of young people who have never started in a programme at upper secondary level or who have dropped out, bridge building is another possibility. In bridge building courses, young people have the opportunity to combine elements from different educational institutions. Focus is often on strengthening their “soft skills” i.e. their abilities to cooperate, communicate, learn, adapt to societal and organisational rules, etc.

In the following, I shall provide two examples of modularisation: one from an entrance course to the technical training programmes and one from a bridge building project initiated by the Association of Folk High Schools in Denmark. ¹It should be noted that the courses are – of

¹ I also thought of including an example of modularisation in commercial training where focus is on the subjects and how to re-think teaching in specific subjects (English, economics, graphical design) through a modular approach. However, this project did not deal explicitly with young people who were potential drop-outs

course – specific to the Danish system. In the first example, modularisation is closely tied to the entrances to the basic programmes, which are broad entrances aimed at providing the young people with the opportunity to be able to orient themselves among various educational options. In the second example, bridge building is taking place between folk high schools, which are a unique Danish institution, and vocational colleges. On the one hand, the examples are particular and it may be difficult to see their transferability. However, perceived as “models” for modularisation and bridge-building between different educational institutions there are lessons to be learnt, but it requires that the models are re-thought in a different national and institutional context.

4.2 Example of modularisation within the entrances to the basic courses in technical training

4.2.1 Background

The overall policy objective of a 95 % completion rate among young people in upper secondary education is centre of most development and research projects in Denmark at the moment. As described above, the overall completion rate has declined since 2000 (from 85% in 2000 to 80% in 2008) despite massive focus on drop-out and a strengthening of guidance and bridge-building schemes. Danish research and development project have to a high degree focused on the students and their reasons for dropping out and consequently on the skills or competences that they lacked in order to complete a youth education programme – and often an initial VET programme as VET is perceived as the educational sector where to achieve the 95% completion rate.

The project which I am going to describe as an example of modularisation aimed at “disadvantaged” young people also took its point of departure in a deficiency perspective on the young people who were to start within one of the basic entrances to the technical training programmes (building and construction; crafts and engineering trades; mechanical engineering, transportation and logistics; service industries; technology and communication; food production and catering). The project was carried out by three technical colleges at Zealand and their assumption was that the young people who drop out lack basic skills such as taking responsibility, being able to cooperate and being able to act independently. Furthermore, they do not have the ability to study (*Udvikling af afklarende elementer i grundforløb med henblik på imødegåelse af frafald og opnåelse af praktikplads.*, 2003). The aim of the project was to develop these competences through an extraordinary course which was to be placed at the entry to the basic programmes; consequently participation in the project would lead to a prolongation of the basic course, which is an option within the overall legislation.

An important element in the project was to identify the students who were in danger of dropping out and therefore the project started out at each of the three schools by offering the new students guidance and information on the project and furthermore, all students had to go through an assessment in order to be able to assess the skills, soft and hard, of the students.

The assessment included both practical tests in the workshop, written tests and guidance. An important step at all three colleges was to assess the students upon entry and exit, and offer guidance during the entire project.

The three colleges chose different pedagogical models for the courses to be offered to the students. At EUC North-West Zealand (NWZ), a modular approach was chosen. This approach will be described in the following.

4.2.2 Example of modularisation in a course which is aimed at “disadvantaged” young people

The aim of the course, “Know your Trade”, offered by EUC NWZ is to make young people more aware of the educational offers in order to provide a better basis for choosing a future career. Furthermore, the course aims at strengthening the students’ study competences, and their social and personal competences.

The target groups for the course are divided into three: 1) students who are unresolved concerning which VET programme to enter, 2) students who has entered a basic course but who has not attended the course on a regular basis due to a lack of interest, a lack of skills/competences, or personal problems, and 3) students with another ethnic background than Danish. These students often have problems mastering the Danish language and therefore have problems both concerning proficiency and coping socially in a Danish context.

An important part of the “Know your Trade” course is the integration of guidance. Guidance takes place on an ongoing basis and is carried out by the contact teachers (ordinary teachers with the task to support and guide the students) and the guidance counsellor. Extra resources are awarded to the contact teachers in order to ensure a smooth introduction every time the students experience a change of “learning space”/introduction to a new VET programme (which was every week). The contact teachers are responsible for having a close contact to the individual students and to solve any problems arising. They use text messages to inform the students about the course or if a student has not shown up for class.

The college has an intake of new students every 5 weeks, and this is also the case of the “Know Your Trade” course. Before starting in the course, the students go through an interview with a contact teacher. This interview aims at describing the course and its aim.

The course is modularised and it is possible to attend it for approx. 20 weeks. However, it is also possible to start in an ordinary programme after completion of a single module.

The main principles of the course are

- workshop learning;
- continuous guidance;
- the introduction into a social community and the creation of a protected environment for the students.

The students spend a week on the being introduced to a specific VET programme. Three days are spent in the workshops working practically with a task typical to the trade. Two days are

set aside for optional subjects such as Danish, English, mathematics, natural science, healthy cooking, and sports. Besides the optional subjects, mathematics is also a compulsory subject as this is a part of most of the VET programmes and from experience a subject which causes problems for the students and consequently delays in the completion of the basic course. Furthermore, guidance, individually and collectively, was an important part of the course. Two hours were scheduled every week.

This “one-week” model is particular for EUC NWZ. The Danish Ministry of Education has introduced a 5-week model tied to one specific entrance for all colleges. However the experience at EUC NWZ is that spending 5 weeks on having a “taste” of a VET programme is too long if it turns out that the programme is of no interest to the students. The one-week model has arisen on the basis of feedback from the students who feel that they are able to stay motivated and have positive experience during this period of time.

Weeks	Module I	Contents
2	Introduction/contact teachers	
2	Industrial technician	Simple lathing and milling tasks in order to produce candlesticks
3	Carpenter	Developing an understanding of technical drawing and practical work producing a horse
4	Electrician	Installing sockets with a dimmer. In order to do so, they have to learn how to follow theoretical instructions.
5	Dental assistant	Production of tooth paste and candy in order to understand the caries theory. Theory and practice, e.g. dyeing of teeth.
6	Health week/contact teacher	

Weeks	Module II	Contents
7	Transportation	The students are to learn

		about safety rules when driving a pallet truck and a crane.
8	Painter	Chromatology, cropping and paint brushing, working in a painter's box filling, priming, painting and papering.
9	Metal worker	Designing and producing a fireplace kit
10	Hairdressers	Introduction to materials: production of shampoo and wax. Practical work on the "exercise doll". Practicing hair wash on each other.
11	Media	Instruction of a short film on the basis of a manuscript. Digital photo editing

Weeks	Module III	Contents
12	Plant operator	Working together, simu-work with Lego bricks.
13	Bricklayer	Laying a wall. Setting up tiles. Casting a floor (?)
14	Design	Design and production of a belt.
15	Glazier	Cutting glass, making a frame of wood and glass.
16	Outdoor life/contact teacher	
17	Auto mechanics	Repair work, e.g. adjustment of brakes. Theory is included in the workshop.

Weeks	Module IV	Contents
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18	Roofer	Covering a roof with shingle. Covering skylights.
19	Low voltage	Building a light show through which they learn how to weld (?) components on to a circuit board, install leads and install the entire construction set in a cabinet.
20	Service Assistant	Working in the kitchen. Preparing a menu on the basis of a case study. Working with hygiene and cleaning techniques.
21	Technical designer	Developing a 3D-house under construction with the use of AutoCAD programme.
22	Metal worker (plumbing)	Knowledge of the tools and installing drain pipes.
22	Completion of the course/contact teacher	

Within each trade the subject teacher is responsible for introducing the VET programme and for explaining the career opportunities that it carries and its main entry (and competence) requirements. The students then have the opportunity to try out simple tasks which are central for the specific trade, see above.

The course was evaluated by both teachers, guidance counsellors at the municipal guidance centres and students. The teachers were positive towards the initiative, but expressed that it could be a demanding task to teach this group of students. It takes enthusiasm, energy and commitment to motivate the students for the teaching within each specific programme. The guidance counsellors thought that it was a valuable offer for the group of unresolved young people. In general, the students were positive towards the course, however some of the students actually felt more confused realising how many choices they actually had.

4.2.3 A final comment

As a final comment, I would like to add that the course covers a lot of programmes which are within different six different entrances and consequently the relation between the programmes is not that obvious. This might be a reason why it is difficult to motivate the students: going through this wide range of programmes might not make sense. This is probably the reason why the Ministry of Education has tied these entrance courses to a specific entrance (12 entrances to 200 programmes). However, in terms of our tool and our conceptualisation of modularisation, I think the example works: it includes “situated learning”, the development of “soft skills”, “guidance” as an important ongoing element, the necessity of “team-work” among both vocational and general teachers and different departments at the college, and “cooperation” with the municipal guidance counsellors. The model could also have included work placements and stays in other educational institutions, e.g. a production school.

4.3 Example of modularisation as a bridge building activity between folk high schools and vocational colleges

4.3.1 Background

As stated in the previous sections, the 95% policy objective is the objective around which most Danish research and development initiatives in VET evolve. The next project is no exception. The aim of the project, which is initiated by the Association of Folk High Schools in Denmark, is to develop cooperation between folk high schools and vocational colleges in order to create combination courses for young people below the age of 25, who have not completed a youth education programme. The project furthermore aims at positioning the folk high schools as relevant and qualified educational offers in the youth education system.

The project is financed under the Special Initiative Funds (Sats-puljen) and runs for three years, from 2008 to 2011. The aim is to involve approx. 25 folk high schools in the initiative and to make approx. 800 participants go through a combination course.

One of the main assumptions in the project (and one which is supported by research) is that a stay at a folk high school can contribute to the development of soft skills and life skills. The schools are residential schools and the participants live together – two and two. They are often responsible for daily chores such as helping laying the tables, cleaning the common rooms, planning and preparation of events and parties. In many research reports, the folk high school environment is described as “living in a cheese bell” (understood in a positive sense as a “haven”) i.e. it is an environment characterised by peace and quiet, commitment, enthusiasm, security and mindful presence. Hansen writes

“It is an important challenge to the folk high schools today that they continue to live a life in a “cheese bell”. Without such a free space from political and economic utilitarianism the folk high schools will not be able to help the students to develop and think about who they are and where they are in their lives right now” (Hansen, 2008)

In this sense, the project provides an interesting case of “institutional” modularisation and how educational institutions with quite different logics can cooperate and the problems that arise in such cooperation.

4.3.2 Example of modularisation

The concept of modularisation is not universally developed within the framework of the project. It is up to the individual folk high schools to define their project and apply for funding from the Association of Folk High Schools in Denmark. There are, however, a number of requirements that the folk high schools have to meet in order to gain funding:

- a network of partners has to be set up. The network has to include municipal guidance centres, vocational colleges, and may also include adult learning centres and enterprises. The folk high schools and the vocational colleges are responsible for drawing up the combination courses and the municipal guidance counsellors referring young people to the project.
- individual education plans have to be drawn up for the students stipulating which VET programme the young person is aiming for after completion of the combination course. These are drawn up by the municipal guidance counsellors in cooperation with the guidance counsellor at the folk high school;
- intensive guidance has to be offered throughout the combination course. The guidance has to concern both information of future career pathways (i.e. career guidance) and guidance which is more clarifying and aims at making the individual participant more self confident and self aware (i.e. existential guidance).

At the website of the project, an example of how a combination course may look like is given.

Example:

Lars is 18 years old and has never started in a youth education programme. Socially he had no problems in basic schooling, but he never took any interest in the subjects. After 9th grade he worked as a stock worker in a store. The municipal guidance counsellor approaches the folk high school in order to develop an individual education plan. The plan is developed in cooperation with Lars and his parents in consultation with the vocational college. Lars wants to be a carpenter. The plan is given the following contents: 17 weeks at a folk high school with a special focus on strengthening his basic skills, one week of work placement and upon entry to the basic course an assessment of prior learning.

Combination course	Folk high school	Work placement	Folk high school	Assessment of prior learning	Basic course Construction	Main course apprenticeship
Duration	12 weeks	1 week	4 weeks	1 week	20 weeks	3 ½ years

At the folk high school, Lars is part of the folk high school environment on equal terms with the other participants, but he will be offered intensive guidance in the form of a mentor who will be responsible for making sure that Lars thrives at the school and achieves the objectives which have been set for his stay. Furthermore, there will often be some requirements to the subjects or themes he will be able to choose. In this case, Lars will have to strengthen his basic subject skills (Danish, maths, etc.), but otherwise he can choose among the school's other offers which are often sports, arts, media, music, etc.

4.3.3 Issues of interest to the Inclusive Modules project

The kind of modularisation described above is becoming more common in the Danish education system. In 2003, the production schools were required by law to enter into cooperation with vocational colleges on combination courses which could work as bridges for “disadvantaged” young people. From this cooperation, a number of experiences has already been harvested which points towards the difficulties of creating connections between different educational institutions – and in the case of the production schools – social institutions as this is to a large degree also a social scheme including marginalised young people who have a history of drop-outs and/or social and personal problems. Just to state that this is of interest when studying the connection between educational policy and social policy.

The problems or challenges to cooperation can be divided into three dimensions:

- the organisational dimension of cooperation: establishing cooperation can be a major hurdle in itself: Who is to be approached? What is the interest of entering into cooperation? There may be a lack of knowledge and a lack of recognition between different institutions. This was for example the case of the production schools: teachers at the vocational colleges did not recognise the work of the production schools and held prejudices towards this school form. Secondly, sometimes cooperation stays at the level of good intentions and never crystallises into actual practice. Thirdly, there is the problem of management approval and back-up. In the cooperation between production schools and vocational colleges, the drivers were the so-called fiery souls who were committed on making a difference for this group of young people. Fiery souls are irreplaceable for such schemes, however in order to ensure coherency in the cooperation it needs to be anchored and supported at management level as well.
- The pedagogical dimension of cooperation: The aim of vocational colleges is to qualify people for entering a specific occupation in the labour market. Furthermore, the programmes also aim at qualifying the students for “lifelong learning” and for active citizenship; however the culture at the colleges is a culture of qualifications and of the utility of these qualifications in the labour market. When it comes to both production schools and folk high schools, the pedagogical cultures are different. The folk high schools have a long history of liberal education and “folk education”. It is a culture of lifelong education (“bildung”) and not of learning for working life. However, in the combination courses focus is on making young people complete a VET programme and consequently, there is a risk of “mainstreaming” the institutions and of harmonisation, instead of recognising the value inherent in the different educational cultures and the synergetic effect

which can be created by combining different educational offers. Furthermore, there is the danger of fragmentation for the combination courses: that each institution offer whatever they have on the “shelves” and that there is no pedagogical cooperation on creating a coherent course which takes the needs of the target group into consideration and where the different elements are based on solid didactical considerations.

- The legal and economic dimension of cooperation: Different institutions are regulated by different laws and this may be a barrier to cooperation. A central part of this barrier is the distribution of funds: in Denmark, the vocational colleges receive a taximeter rate for each student, i.e. funding follows the student and this is not an incentive to make the institutions cooperate, but an incentive to make the institutions compete. And basically this is the overall rationality of the Danish education policy: to create a free education market in which the students freely can choose and where the educational institutions compete. However, this quasi-market has shown to be a barrier to cooperation. Furthermore, the division between state funded schemes and municipal funded schemes may cause problems as the municipalities have shown reluctant to finance schemes which they are not obliged to finance. There is a narrow economic rationality underpinning the policy area which may actually be counterproductive to the overall policy objective of inclusion.

As can be seen from the above, the intentions are good when it concerns “disadvantaged” young people in the Danish education system. There are many new initiatives and many development and research projects which deal with the issue of “inclusion” of “disadvantaged” young people into the education system. However, the initiatives are very often ad hoc initiatives, which do not deal with the education system in its entirety and its links to the social system. Furthermore, there is the paradox of having introduced a lot of schemes aimed at making education more attractive and making transition phases easier, and having a drop-out rate which is increasing. It all leads to the central question of: Who are the “disadvantaged” young people and why is it so difficult to make them do what “we” want them to do: complete an education programme?

4.4 “Disadvantaged” young people

Throughout this report, I have used brackets around “disadvantaged”. This has been a deliberate choice as it is quite a vague and negative description of a group of young people who in Denmark make up approx. 15,000 people in a single youth cohort. In a Danish context, there have been many attempts to classify, categorise and explain the behaviour of this group of young people (see e.g. Andreasen *et al.*, 1997; Berth Nielsen *et al.*, 1999; Højmark Jensen & Jensen, 2005; Katznelson, 2009; Kølsten de Wit & Wegener, 2005) . When we read the reports, two strands can be detected.

On the one hand, different researchers have come up with different suggestions for segmentations. In an evaluation of a mentor project at the Danish folk high schools, Højmark Jensen suggests a segmentation based on Bourdieu’s concepts of social and cultural capital:

- the “despairing” who have a low degree of social capital and a low degree of cultural capital;

- the practical young people who have a high degree of social capital and a low degree of cultural capital;
- the persistent young people who have a low degree of social capital and a high degree of cultural capital;
- the wavering who have a high degree of social capital and a high degree of cultural capital.

She forwards a guidance model in which different mentor roles correspond to the different segments of young people. This model defines the strategies that mentors can use in their guidance of young people and as an indicator for how the individual person is to be handled (the entire report can be downloaded at <http://www.ffd.dk/media/31649882/mentorrappport,%20final%20,marts%202009.pdf>).

In a research project dealing with basic courses for “disadvantaged” young people at the vocational college, EUC South, Katznelson from the Centre for Youth Research also comes up with a segmentation based on interviews with the students. She divides the students into four groups:

- young people with a will strategy: the students have weak skills and social problems but a will to complete a VET programme;
- young people with a passive strategy: these are often boys who are unmotivated, defensive and passive.
- Young people with a confronting strategy: these are also mainly boys who disturb class and who are aggressive and loud.
- Young people with a standby strategy: these are mainly girls whose personal situation is complicated and therefore they do not have the energy to motivate themselves for education (Katznelson, 2007).

Another way of capturing this group of young people is through statistics. A major research project initiated in 1996 on young people’s transition from basic schooling to youth education showed that there were a number of common factors for the group of young people who never entered a youth education programme:

- they often come from the same social background, i.e low-income families where there is no tradition (culture) for education;
- their basic skills (3Rs) are poor;
- they have not taken the final examinations in the basic schooling.

Another strand in the research states that this group of young people is in fact a very heterogeneous group of young people who are not easily described through typologies and ideal types. This research also states that the production of categories may be counterproductive and actually contribute to the stigmatisation of the young people as focus is on deficiencies and how the individual is not able to meet the demands of the education system – and the society at large (Kølsen de Wit & Wegener, 2005; Nielsen *et al.*, 1999). According to Laursen and Rasmussen, typologies are problematic as they focus on the young people and position them as “problematic”. Their lack of competences is the problem and this

lack of competences is due to their social and cultural background. This kind of individualisation of the problem is regarded as problematic, as the problem is relational, i.e. the relation between the young people and the education system is problematic and it might be necessary to look not only at the “disadvantaged” young people but at the way the education system at large is organised.

4.4.1 What “disadvantaged” young people want in the education system

Langager (2007) has evaluated the Academy for Untamed Creativity which is a production school and non-residential folk high school for “alternatively thinking, marginalised, socially exposed, school tired or unresolved” young people in Copenhagen. He concludes that there are three dimensions in the pedagogical practice of the Academy which can explain its success in “moving young people on”:

- trust and respect: at the Academy the young people are “suddenly perceived as human beings for good or bad”;
- a creative learning space where there is room for errors: at the Academy the teachers are process-oriented and focus on developing the participants’ creativity and introduce new ways of thinking. The young people are not assessed on criteria for “right and wrong” but encouraged to reflect on their own learning;
- a resource perspective on the young people: the teachers focus on what the young people are able to do and on the resources they actually have, and on this basis try to create a safe environment where it is ok to be wrong, to feel stupid, to look different and talk about these feelings of not “fitting” in.

In the report “What works?”, the conclusions are along the same lines: values such as respect, responsibility, trust and not least safety/security (in Danish: tryghed) are important in teaching as well as guidance (Berth Nielsen et al., 1999). What is troublesome in these conclusions is that the young people apparently feel that these are values that they have not met in the formal education system.

Another factor which is accentuated in most of the research reports is the presence of a teacher or guidance counsellor who takes the young person seriously, listens to them and is non-judgemental. Interviews with young people who went to an independent boarding school for lower secondary students (efterskole) show that they have experienced a more equal relationship to their teachers and greater tolerance among their classmates. This is a key motivating factor for continuing in the formal education system (Andreasen et al., 1997, p. 17). Katznelson also points to the role of the teacher

It concerns a “fusion” between the teacher as a human being AND as a professional communicator. This is the basis for motivating this group of young people and retaining them within a VET programme. The teacher is a professional, but he is also, what can be called a decent adult (Katznelson, 2007)

Meeting a “significant” adult is a factor which is highly important for changing life pathways and this is a research result common for many of the research reports.

Katznelson also points to the pressure which young people today are exposed to. In the Danish education policy, the aim is to make young people's pathways through the formal education system as smooth, quick and effective as possible. The rationality is one of a very linear career pathway where young people choose the right education programme at first try and manage to complete in time (which is why a financial incentive has been introduced to young people who complete in time) and then enter the labour market and become efficient effective workers. Besides this pressure on the education front, there is pressure from friends, from the fashion industry, from the beauty industry, etc. The margin between success and failure has become tighter and hereby the risk of not fitting in. Langager points to the fact that there is a need to create havens for young people in which they do not have to perform, to live up to external expectations, to find themselves perpetually tested and assessed, but be able to develop personally and creatively at their own pace (Langager, 2001). Maybe, there is a correlation between the pressure young people are experiencing to the observation made by many practitioners dealing with young people that more and more of them have severe mental problems and phenomena such as cutting and anorexia are on the increase.

4.5 Conclusions

As can be seen from above, modularisation is not a nationally defined concept. Due to the decentralised Danish system, modularisation takes different forms in different educational institutions. The colleges develop modular approaches within the overall framework of the legislation and not least the economy. Modularisation was in the 2000 Reform of the technical training programmes thought as a means of retaining especially weaker students within the system, however, research showed that the weaker students had problems handling modularisation as it meant that they were given greater responsibilities in choosing the modules and that the regular classes were abolished in favour of a system of continuous intake and differentiated workshop learning. By 2007, new regulation made it possible for the colleges to offer special courses for weaker students which were more fixed, both in regard to contents and in regard to classmates. However, modularisation is a fact in the Danish system, and it is more a matter of "wording" than a matter of practice that modularisation is not a commonly used concept – at least in policy documents.

The Danish case is interesting, as it seems to be a case of good practice with bad results. Since 2000, modularisation has been introduced, guidance has been strengthened, recognition of prior learning has been introduced, the VET programmes have become more individualised and flexible, basically all the recommendations for creating greater parity of esteem, avoiding drop out and meeting the demands of young people forwarded in national and international policy documents have been met, but the results are not showing. Instead, the drop-out rate has increased and a branching of the VET system has occurred that make it even more intransparent. The exact correlations between policy initiatives and outcomes have not yet been researched, but a major research programme will run from 2009 to 2012 with the aim of analyzing how to achieve the policy objective of making 95% of a youth cohort complete a youth education programme.

5 Portugal

5.1 Introduction

Although modularisation is implemented in some European countries, the concept is not widespread in Portugal since there is no long tradition of modular Vocational Education and Training (VET) system.

Firstly, the modules appeared as a didactic solution able to articulate accreditation/training/certification for one hand and execution of a curricula organisation in terms of competences by other hand. Thus, it is possible to understand why the Institute of Employment and Vocational Training (IEFP), the modules' notion, is associated to an organiser principle, and also to autonomous units of education/learning- which can be named by modules- constitute a didactic option, aiming at professional competence socially recognised and certified for the labour market purposes. However the term of modularisation is not commonly used in VET since modules have a character systemic, because they are not transferable to others training profiles as is expected as modular training. For this reason the term unities of short duration was used instead of the module term.

This report will try to summarise some of the main changes in VET system that occurred in the recent years and the consequences that it had in the modularisation concept. The idea that remains it is that there is a convergence of Portuguese VET system towards the European VET systems in order to answer the demands of society and labour market.

5.2 Context of the VET System

In the beginning of the 80s, Portugal did not have a training offer in the vocational area that guaranteed an initial training for young people and which allowed them a scholar and professional certification. A pilot action for initial training of young people was launched at the beginning of 1980, which lead to the approval of the apprenticeship/learning system in 1984. However, in 1983 the technical-professional and professional courses were created which were delivered in the technical schools. Then, it was only in 1989 (after the entrance in CEE) that a structured vocational training was available, that emerged the Professional schools, although the regular education showed a resilience in accepting these courses, considered by some as minor modality. So, in 1993 the secondary education passed to integrate 4 general courses and 11 technologic courses. After a long period of resistance the apprenticeship system launched in an experiment in 1980, grew and updated it. This apprenticeship system had an innovative part which was the alternation between school and working place. At the beginning, this way of teaching/training was seen as inferior education. But the results of this system, its employability, its training quality, the involvement of the social partners and its contributions for reducing school abandonment and allowing the young people to carry on their studies proved the opposite.

Since the launching of the New Opportunities Initiative at the end of 2005 the training system (along with the vocational training reform in 2007) as well as the education system suffered changes and improvements in their structure and principles.

The strategy of the New Opportunities Initiative focuses on giving the young people a more diverse option regarding the vocational education at secondary level and raise the qualifications levels of the adults (active population). The major goal of this initiative is qualified one million active persons until 2010. More specifically concerning the young people, the education and training system makes different training offers available or gives them the possibility to obtain a scholar and professional qualification. Thus, the idea was to reverse the trend concerning the young people that do not accomplish the secondary education. So, the objectives are to diversify the number of education and training offers for the young people through the reinforcement of the vacancies in the vocational education and training and assure improvements of school attainment.

5.3 National System of Qualifications

In the course of this initiative, the National System of Qualifications (Sistema Nacional de Qualificações-SNQ) has been created which legal frames and regulates the training system in Portugal. This SNQ has a fundamental role on the restructuring of the vocational training inserted in the labour market and in the education system. This strategy intends to assure a relevant training and learning to the personal development and to the modernisation of enterprises and economy, and guarantees all national efforts in training that are valued for scholar and professional progression of the citizens either through the training of double certification inserted in National Catalogue of Qualifications (Catálogo nacional de Qualificações-CNQ) or through the New Opportunity Centres (Centros de Novas oportunidades-CNOs) and the recognition, validation and certification of competences (Reconhecimento, Validação e Certificação de Competências - RVCC) processes.

This regulation also refers that the support instruments are the National Qualifications Framework (Quadro Nacional de Qualificações- QNQ); National Qualifications Catalogue; Documents to register/compare qualifications and skills.

The National Agency for Qualification (Agência Nacional para a Qualificação -ANQ) was established, which is under a joint guardianship of Ministry of Labour and Social Solidarity and the Ministry of Education. It aims to coordinate the execution of education and vocational training policies regarding the young people and adults and also to ensure the management and development of system for the RVCC. It is also responsible for the articulation between the areas of VET and education, management of catalogue and the coordination of the training operator and what they offered.

According to the NQS, the vocational training is divided in initial and continuous, the first gives education and training certified through the acquisition of competences and skills that allows a practice of an occupation; the vocational training continuous occurs after the exit of the training and educative system, and when the young person is in the labour market and

needs to deepen his or her knowledge and competences or even a need for reconversion of his or her skills.

The NQS defines the training modalities which by other words mean the different types of courses existing in the training system.

In relation to the QNQ, it defines the structure of qualification levels, which includes the requirements of access and scholar abilities, aiming a convergence to European Qualifications Framework (EQF) which will allow comparing qualification levels among the different member states of the EU.

5.3.1 National Catalogue of Qualifications

The National Qualifications Catalogue is an instrument of strategic management of non higher qualification levels that is integrated in the NQS. The catalogue enlarges the qualification based on competences, and identifies each of the competences referential and the qualification level according to the CNQ.

It also intends to facilitate the access to the qualification of double certification of young people and adults:

- Modularising the training offer through the definition of training routes organised in training unities of short duration (25 to 50 hours)
- Making available the referential of the RVCC processes.

The common principles of ECVET (European Credit System for Vocational Education and training System) EQF, the qualifications are described and defined in relation to the learning outcomes.

In this sense, the qualifications are organised in competence unities/learning outcomes which are certified, transferrable, and capitalisable.

The qualification is structured by certification levels and training area levels as follows:

- Basic education (9th year) and level 2 of vocational training
- Secondary education (12th year) and level 3 of vocational training
- Secondary education (12th year) and level 4 of vocational training

Education and training areas are defined according to the National Classification of education and training areas (Classificação Nacional de Áreas de Educação e Formação)

The CNQ defines for each qualification a:

Professional Profile- which is the core of associated activities for qualification, as well as the knowledge (social, practical) to exercise the activities;

Training referential: these references have a core of contents that orientate the organisation and the development of training towards the training competences associated, i.e., a training itinerary of objectives and contents

RVCC Referential is a core evaluation instrument to use in recognition, validation and certification of professional competence processes.

Professional Profile	Training Referential	RVCC Referential	
Mission	Exit profile	Base (scholar)	Technological (professional)
Activities	Referential Organisation to access to qualification	Competence unities	Competence unities
Competences <ul style="list-style-type: none"> ✓ Knowledge ✓ Knowledge of doing ✓ Knowledge social and relational 	Development of Training Unities of short duration (UFCD)	Evidence Criteria	
	Suggestion of didactical resources		

Source: CNQ

To be more specific the training can be organised according to the following principles:

- Double certification
- Modular reasoning
- Flexibility in the designing of the qualification

As it is possible to observe in the scheme above, the training referentials are constituted by training components (base and professional) which by its turns are organised by training unities of short duration (unidades de formação de curta duração - UFCD), these are capitalisable and certified in an autonomous way inside of the same education and training area and transferable in the case of the UFCD (training unities of short duration) is common to a more than one qualification.

The existent reasoning in this modular organisation allows more flexibility in the design of training routes and mobility in the education and training areas. Nevertheless the UFCD can be specific of a certain referential or common to a two or more referential.

The flexibility in the design of the qualification is related to the possibility of the UFCD could suffer adjustments and vary according certain particularities regarding the context the course

will be delivered and/or in relation to the number of training hours defined by this flexible component.

The scholar referential of RVCC of basic and secondary level is transversal to the set of qualifications that integrates the Catalogue according to the qualification level.

The professional referential of RVCC is specific to each qualification and it is from these referential that it is built the several instruments of evaluation.

5.3.2 Training Modalities

The education and training modalities are presented in this catalogue of double certification:

Basic education (9th grade) and level 2 of vocational training:

- Education and training courses (CEF);
- Education and training courses for adults (EFA);
- RVCC

Secondary education (12th grade) and level 3 of vocational training

- Education and training courses (CEF)
- Apprenticeship/learning courses
- Professional courses
- Education and training courses for adults (EFA)
- RVCC

Secondary education (12th grade) and level 4 of vocational training

- Technological Specialisation Courses.

Nevertheless, the VET courses referred above are addressed to young people:

- Education and Training Courses for young People (Cursos de Educação e Formação para Jovens): it is aimed to young people with age equal or higher than 15 years old have the possibility to finish compulsory school according to a flexible and adjusted route to the need of the young people, with these course it is possible to obtain a scholar and professional certification (these courses already referred in the First Country Report)
- Professional Courses (Cursos Profissionais): are addressed to young people at secondary education with a strong connection with labour market, give the young people the possibility to continue their studies.
- Learning/apprenticeship Courses (Cursos de Aprendizagem): are aimed at young people who over passed the age of attending the regular education and do not have more than 25 years old give to young people a initial professional training and it grants to them a level 3

of vocational training. It allows the young people to continue their studies to an upper level.

The Education and Training Courses for adults and Modular Training are aimed to adults from 18 onwards. The first is addressed to persons who want to achieve a scholar and/or professional qualification. The Modular Training is addressed to adults who want to obtain a scholar qualification. Both trainings are addressed to adults in order to progress their career or re-insert a different one.

Regarding the young people who are considered disadvantaged there are other types of courses, which were referred in the Third Country Report, such as the PIEF (Percurso Integrados de Educação e Formação) courses and the Alternative curricular routes. These specific programmes are addressed mainly to young people who are at risk of drop out regular school or are being excluded of the education and training system for several reasons. These courses are organised and adapted to the characteristics of the disadvantaged young people, for example in the PIEF courses.

5.4 The Modularisation Issue

In recent years, the vocational education and training system in Portugal suffered changes in attempt of accompanying the European reference regarding ECVET and QEQ. As it is possible to SNQ is organised according a modular reasoning, or by other words the training unities of short duration and medium term will be possible to call them modules with the assumption they are understood in other countries where the modularisation is fully implemented since many years.

One of the characteristics of this reformulated VET system is to facilitate and motivate the education and training; this avoids lost, redundancy of learning in case there was an interruption of training.

The successful completion of one or more training units that are inserted in CNQ can be proved by a qualification certificate. The sum of all training certificates which correspond to the whole of UFCDs or of a training route leads to a professional qualification certificate or gives a scholar equivalence.

As it was referred previously, there is no transferability of training routes, because there is not a modular logic in this, however there is transferability between routes of the same qualification area, exist mobility among the qualifications.

5.5 Final Considerations

The latest European instruments (such the ECVET and EQF) have contributed a deep change in the Portuguese VET system.

The recent changes that are occurring in the VET system as well in educative system created new instruments, new organisms, replaced others, reformulated the existent and before this it

is understandable that VET system is trying to adjust and to implement all of the measures and strategies recently developed.

What is important retaining about this is that Portugal is to attempt to diminish the delay of a VET system compared to other European Countries. Anyway, it is required from the social partners, stakeholders, practitioners of education and training area, policy makers and even the population in general a huge effort.

There is no modularised VET system yet; still, some approaches exist. The notion of module was replaced by training unities of short duration. However, the meaning is almost identical. In relation to our vocational system there is a large standardisation, partly due to the National Qualifications Catalogue with its training references in the initial training, either this will be addressed for young people or for adults, either this will be delivered within the regular schools or in the training entities. The module's terminology persists to be used in the continuous training.

6 Romania

The vocational and technical education reform represents a necessity, beside the reconstruction of all the other fields of education. Since 1990, the Romanian Government has been swift to recognise the implication that the transition from a centrally planned economy to a competitive market economy has had and will continue to have on the education sector. Until recently, the VET system in Romania provided education and training through vocational and technical school in very narrow defined occupations determined by (a) central planning of all inputs into the system and (b) mass production in large state owned enterprises by which the VET schools were partly supported. Due to the backwardness of technologies in the enterprises themselves and a low investment rate in general, the range of skills taught at schools was limited and rarely modified. The curriculum, duration of instruction and didactic methodology were prescribed in a top down approach and there was little room for alteration or innovation. The move toward a market economy has highlighted the inappropriateness of such a tightly specified education system to the reality of the evolving labour market in Romania and thus reform of the VET sector has been aimed at preparing a trainable, adaptable and innovative workforce with the flexibility to shift occupations in accordance with the demands of the market. Furthermore, equal rights and the development of personalities have been identified as key objectives in this process of reform in line with the democratic and social principles of EU education structures. The recognition of changing needs of the labour market combined with the will to harmonise the principles of EU schools with Romanian schools has brought about a significant number of legislative decisions in the reform of education and training. This commitment to the reform of the VET system on the part of the Romanian Government has been greatly supported by the international community, in particular by the European Union in the form of a 25 million ECU Phare VET reform programme.

6.1 Elements of the analyse –diagnosis preceding the VET reform

A previous diagnosis analyse, which has been made before the moment of developing the VET reform proved that the pre-university vocational and technical education (sintagma which is used for the system of the vocational training through school) has achieved the narrow and early specialisation for pupils (14-15 years old), which resulted in the following pupils' features:

- vulnerable to the economy's rise and fall;
- without the needed flexibility for the transfer of their skills to other occupations;
- they did not benefit of career orientation and information;
- they had poor possibilities to get new qualifications;

With regard to the high school specialty education- before the beginning of the reform- it has been noticed that:

- it didn't provide the proper training for the trades demanded on the labour market;
- the training was diversified on too many trades, organised for trades that did not justify this educational type; there were consequently maintained two types of school (the high school and the vocational school) for the vocational training of the same qualification level – qualified worker -, in the deficit of the vocational school, which was mostly perceived and organised as a consequence of the failure at the high school entry examination;
- the didactical and material supply didn't correspond to the modern training demands and was described by a severe weary state;
- the teachers weren't prepared to use the modern didactical technologies and to practice a high-technology vocational education;
- it didn't develop the training offer in correlation with the needs of the local community and the regional interests.

Generally, as a consequence of the so far achieved policy, the system was characterised by:

- the improper substructure;
- the absence of modern teaching and learning materials;
- the teacher, whose teaching and learning methods weren't accorded to the modern orientations;
- a national system of training's centralised administration which hindered the individual efficiency and innovation and didn't encourage the local initiative;
- the absence of an active social partnership with the "beneficiaries" of the labour resources trained in schools;
- the weak orientation towards the labour market;
- the absence of a unitary national system of certifying the professional competencies;
- the absence of the finalities descriptions for each type of school.

6.2 The vocational education reform through the Phare VET 94-05 project

That's why is it important to present what the Phare VET RO 9405 Programme meant for the Romanian educational reform.

The programme's financing was provided through the grant from the European Union with an activity and until 31/12/1998 for the completion of the contracted activities and payments.

The main programme's goal was to provide the necessary assistance for the Ministry of National Education to achieve the reform of the pre-university vocational and technical education in Romania.

The specific programme objectives guided the vocational education and training process towards:

- the achievement of vocational education through school at the level of the training standards of the European Union;
- the mutual acknowledgement with regard to the vocational qualifications on the Internal Market of the European Union;
- the accomplishment of the European integration conditions that were assumed through the European Agreement for associating Romania with the European Union and through the National Strategy of Preparing the accession of Romania to the European Union through adopting the "acquis communautaire";
- the achievement of vocational education adapted to the democratic society, based on the market economy with social participative character, in accordance to the occupational structure specific to the dynamic evolution of the labour market in Romania;
- the adjustment of the structure of the vocational education through school (types of school) to the needs of qualifications identified on the basis of the individual and community interests/demands, in the conditions of maintaining and even stressing the educational system objectives;
- the synergetic decentralisation of the vocational education subsystem through making the social partners co-responsible;
- the more diverse financing resources for the vocational education;
- the logical and coherent information flow regarding the vocational education in a permissible informational system through the co-operation with the institutions, programmes and projects which operate in this field.

At the completion of this pilot programme (which covered all the economic sectors and included a sample of 75 schools -10% of all the VET schools at the beginning of the programme and only 2 types of schools that provide vocational education - the vocational school and the post high school) the Ministry of National Education had a subsystem of the vocational education through school which had as main principles: the decentralisation, the school's social efficiency, the flexible vocational education, based on key-skills (communication, initiative, creative problems' solutions, team-work, entrepreneurship ability);

the subsystem has been based on the European educational features in the context of the social partnership and with a modern endowment.

The reform policy of the vocational and technical education was prescribed as critical reference within the entire educational restructuring, as it is one of the three main constituents of the reform together with the quality increase of the basic and secondary education and with the improvement of the system's financial administration. The reform's basis consisted in combining the potential and the local solicitations with the international experience and the Romanian traditions. The strategy was three-folded: restructuring, modernity and giving solutions to the urgent problems.

The national administration of education had to reflect the decentralisation and the democratisation of the system.

The pre-university vocational and technical education proposed the pupils qualities development that is needed within an open society.

- creativity and entrepreneurship abilities;
- critical thinking;
- the consciously assumed responsibilities;
- the civic and community sense;
- the communication abilities;
- the team-work abilities;
- the skills needed when solving the problems/conflicts;
- the ability to develop self and professional capacities which are specific for the trades/specialisations.
- In this regard, the main reform meanings, as defined by the Ministry of National Education were the following:
 - the adjustment of the offers structure of the vocational and technical education;
 - redefining the content of the initial education, through its accordance with the occupational competencies, managerial skills, trade aptitudes and through encouraging the creative and entrepreneurship behaviour;
 - setting up a new evaluation and certification system.

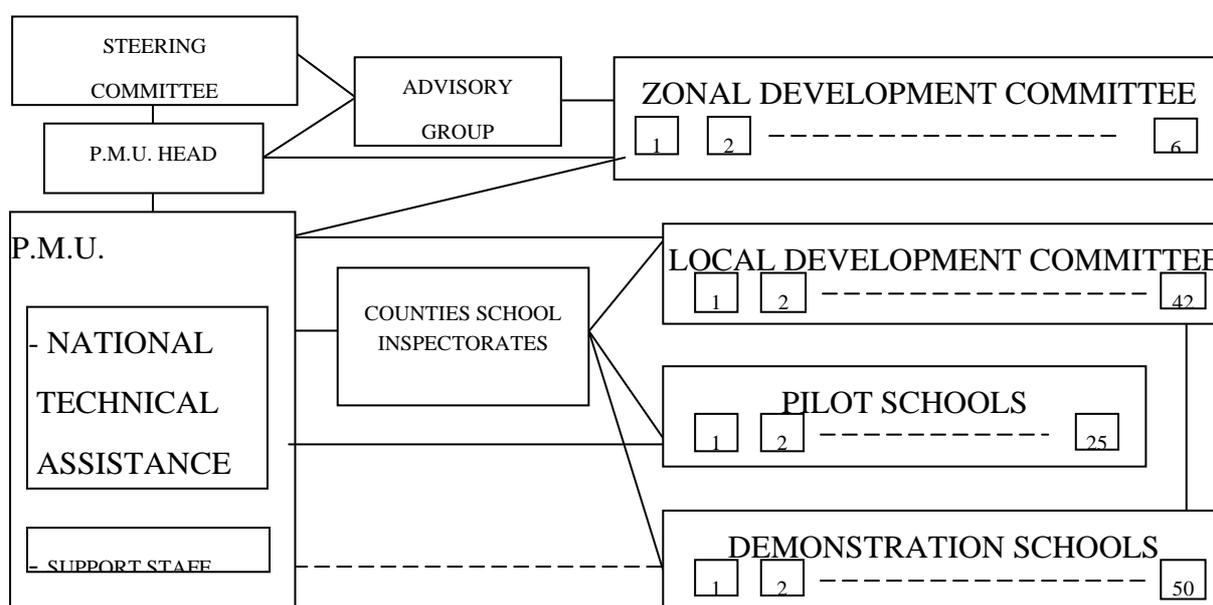
Within the so configured structure of the upper secondary education, the integrated process enhanced on the following 5 main elements of change:

1. the development of the standards of vocational education;
2. the curriculum development;
3. the development of the additional teaching and learning materials for the period of the experimental applications of the new curricula;
4. training and improving the teacher and instructors didactic approach (here included was the improvement of the managerial abilities of the schools directors);
5. the selective improvement of the equipment and of the teaching and learning materials.

The reform programme was developing at national level, on 20 occupational families (a total of 25 pilot schools and 50 demonstration schools), taking into consideration their specific character and their strategies of economic and social development, and also comprehending the orientations given by the restructuration programmes.

The implementation of the project implied the decentralisation of the activities and the application of the subsidiary principle.

Based on the ideas of the Financial Memorandum, the project developed and implemented the new school documents by involving all parts interested: Ministry of National Education, Ministry of Labour and Social Protection, other interested ministries (i.e. Ministry of Agriculture, Ministry of Industry and Commerce), schools, employers, local administration, unions, chambers of industry and commerce, etc.



According to this idea the decisional structure of the project was set up as shown in Fig. 1.

Fig.1 – The Decisional Structure of the Phare-VET RO 9405 Project

Local Development Committees (LDC) -one for each county of the country- were gathering all social partners interested in education and training from the respective county. These committees were carrying out opportunity studies, were discussing the qualification needs in the county, analyzing labour market trends, the possible way of solving problems of the schools (investment planning, practical training of the students within company, equipment upgrading, etc).

Zonal Development Committees (ZDC) were 6, according to the major regions of the country, were having almost the same structure as LDC, and were organised in cities with the biggest universities, in order to have support from university professors in the activities of the project. The activity of ZDC was similar to the one of LDC, but was taking into account the problems of regional development.

Advisory Group (AG) gathered representatives from all social partners (mentioned above) at a national level, their opinion being requested for all major decisions of the project.

The structure of social partnership is shown in Fig. 2.

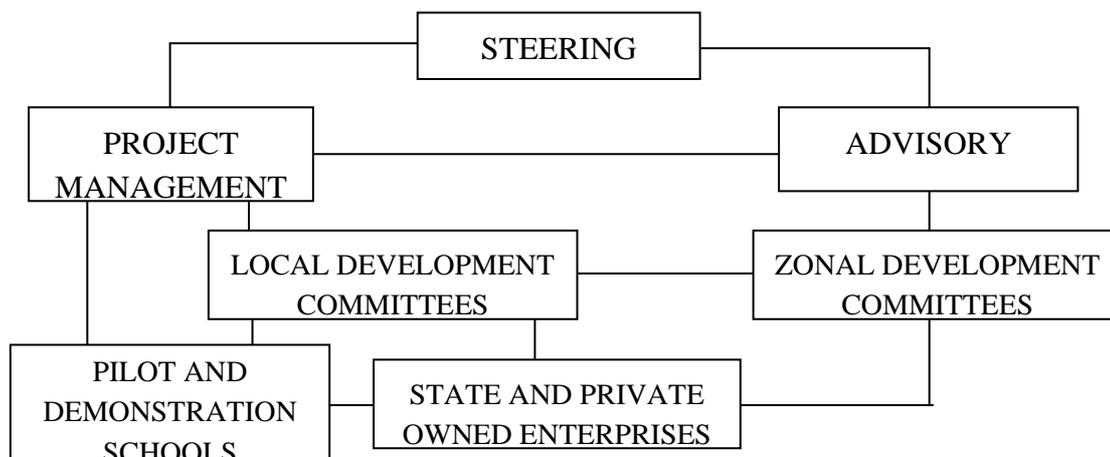


Fig.2 – Social Partnership in Phare-VET RO 9405 Project

Concerning the development of the social partnership, the project acted in several directions:

- setting up the structures, regulations and necessary laws;
- clarification of the roles of each partner, referring to: planning, need analysis, training structure development, elaboration and revision of teaching documents, evaluation;
- social partners training.

These structures were perfectible ones, but the major idea was to create structures for a long time period, ready to act after the end of the project, to develop the social partnership on normal basis and to induce to the idea that a real VET system cannot function without social partners. The reality of an economy in transition towards a market economy, determined us to develop, for the vocational school, a “tree like” training structure (Fig. 3), starting from 15 basic training fields in the first school year, ramifying to 84 types of training in the second year (on groups of related trades) and ending in the third school year with 193 types of training, according to the number of relevant trades identified during the opportunity study.

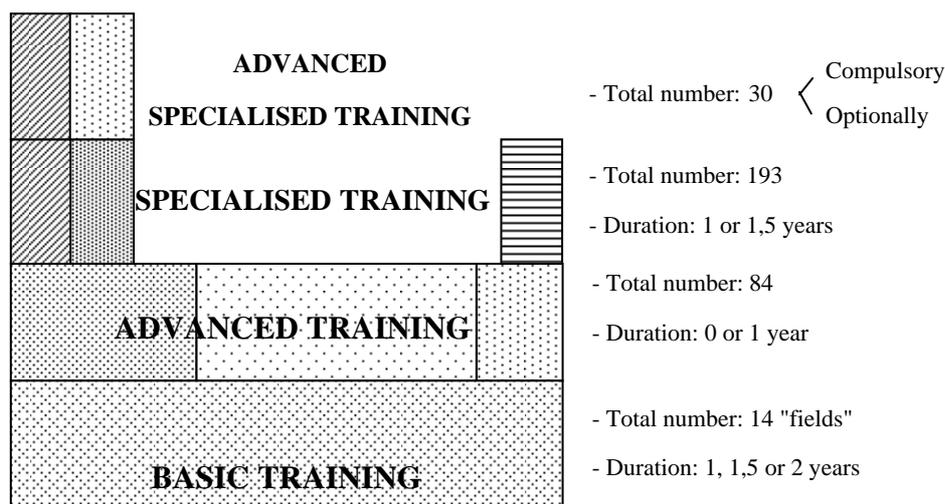


Fig.3 – Vocational Training Structure in Phare - VET RO 9405

A reasonable question was “Why such a structure?” The main propose was to delay the specialised training in order to offer the pupils the chance to choose a certain trade at a time as close as possible to the moment of entering the labour market, a very unstable and very hard predictable labour market, which cannot anticipate the qualification needs for three years (duration of vocational school). Beside this possibility of better correlation of pupil option with real market demand, another advantage of such a structure was the setting up of premises for a later possible quicker further training or retraining to a related (as training) trade, based on the same “advanced training”. Another advantage of this structure was the adaptability. Following a possible opportunity study, the structure can be diversified or modified with a minimum effort, without the necessity of redesigning the whole training content. Such a structure was offering also, the possibility of standardising the qualification levels, according to specific teaching competencies. Evidently, as any imaginable structure, this one also had disadvantages. The major one was the possible prolongation of training period in comparison with the one of the “traditional” vocational school. We assumed this risk, because the above-mentioned advantages we considered being overwhelming in the matter. Another explanation had to be done, about the numbers of “basic training”, “advanced training” and the accordingly curricula development. Based on an opportunity study, carried out by the project, the relevant trades were identified. Next step was to develop, based on the Occupational Standards (OS)¹, the Training Standards (TS).

¹ Occupational Standards are developed by an independent Romanian agency: COSA (Council for Occupational Standards and Assessment) and are referring to the skills and tasks a qualified person is supposed to accomplish and is based on the labour market demands.

TS was a new concept introduced by Phare-VET Project and was supposed to be an intermediate step between OS and curricula, briefly showing the competencies (theoretical, practical and social ones) the school was supposed to transfer to the student in order to fulfil the requirements of the OS (Fig.4).

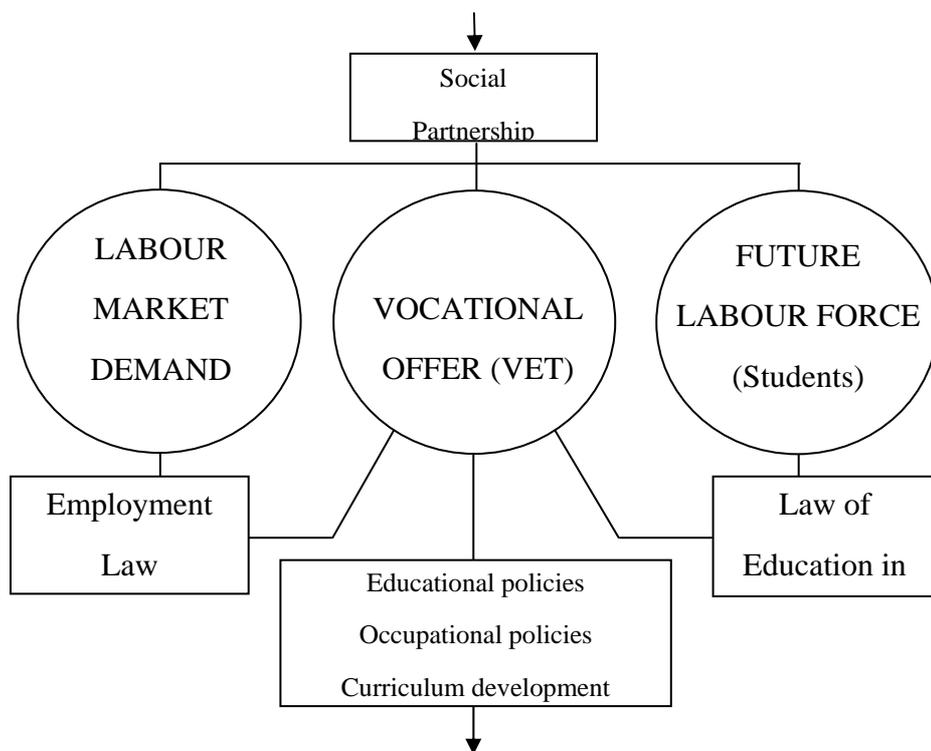


Fig. 4 - Analysis Model: Demand of the Labour Market- Offer of the Educational and training system

In fact this document was the OS (training requirements) enriched with educational requirements (according to the policy of education) and transformed into a school document. In many countries curricula development was based on OS directly. However, in Romania, an intermediate step was necessary because this was the first attempt to develop a modular, school-based curriculum in a decentralised manner. That's why TS were developed: to facilitate curricula development and to prepare the teachers for a more independent further activity. Another reason for TS development was to facilitate the final examination, redesign within the project. In the project vision, the final evaluation is national, evaluating competencies not knowledge and skills. The composition of the evaluating commissions: teachers, externals evaluators and social partners, (not everyone accustomed with competencies evaluation), required, once more, the TS.

Following TS, new curricula were developed (step 5 in Fig. 5).

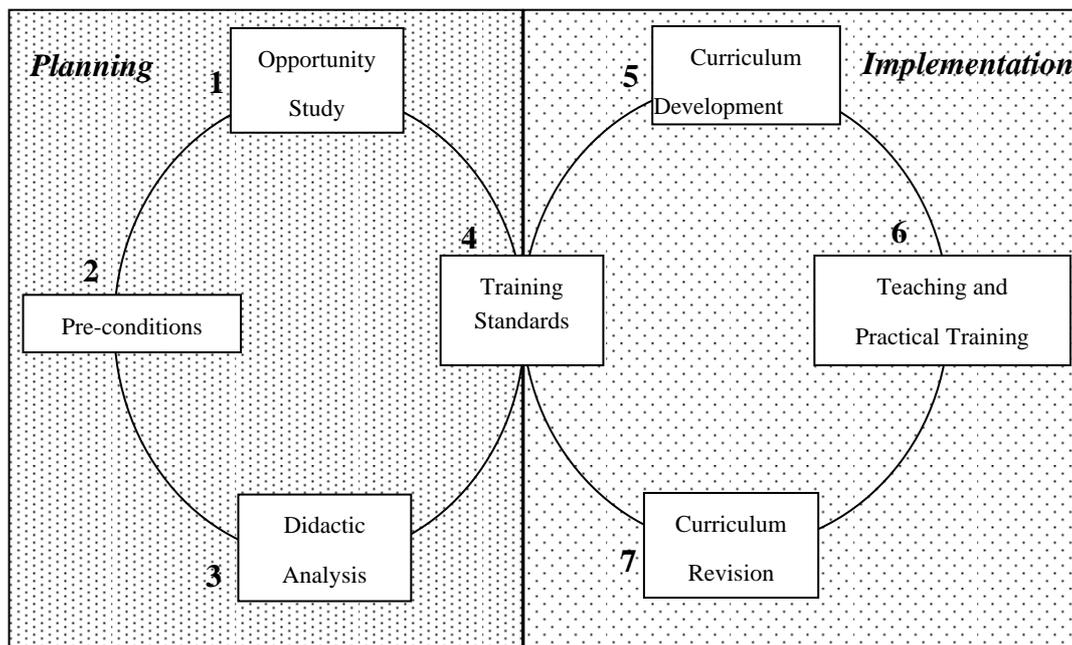


Fig. 5 – Curriculum Development

The new curricula are called so not only for the content but also for the structure. “Written curricula” understood as syllabi and teaching plans, were developed at national level by specialists in technical and general culture fields, together with active teachers of the school system involved in the reform of the vocational education. The curricula were developed

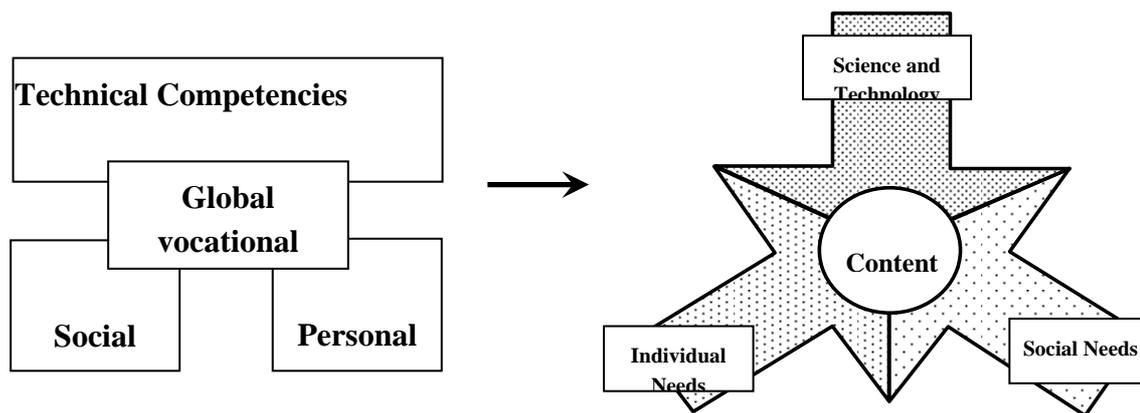


Fig. 6 – Sources for the Selection of Contents

focused on competencies (Fig. 6), based on the idea that a graduate must possess competencies (capability of doing things, solving problems) not only knowledge. Accordingly, new methods of evaluation were elaborated.

Regarding the evaluation and certification, we must say Phare-VET Project acted in following directions:

-
- introduction of an intermediate evaluation after the first two school years, certifying general competencies for a group of related trades;
 - involvement of social partners in evaluation;
 - introduction, beside the usual diploma, of the “Competencies Certificate”, showing the key competencies achieved by the graduate. This certificate is useful both for employers and regional departments of the Ministry of Labour and Social Protection, in case of re-training the unemployed people. It is an intermediate step towards the introduction of a “transferable credit system”.

As structure, the curricula were developed close to the traditional way - syllabi for each subject – for basic and advanced training. For the specialised training, curricula were developed on “modules”. A “module” meant an independent (fully independent desirable) unit of study including theory and practical training, focused on a possible purpose of activity of the future graduate. The modular system (beside the previously mentioned structure of training) increased the adaptability and mobility of the system. The reason for that is because the contents could be easily changed, according to the labour market demands: modifying contents of modules, replacing modules, eliminating modules. Such a structure offers the schools a better chance to become more active in the activity of further training and retraining, by offering short term courses, easily adaptable to the demands of the employers. In order to comply with the strategic relationship of the reform programmes in the secondary educational system, the curricular structure developed a unit of *nucleus curriculum* - basic and compulsory - covering 70% of national educational contents and *curricular units of local application* - covering the rest of 30% of the contents. The *curricular units of local application* consisted of “expansions” (for general culture syllabi) towards related contents on applied natural sciences and social sciences. These “expansions” must be chosen according to the type of basic or advanced training, in order to represent a better support for the technical subjects and/or to the local need for a deeper specialisation in one or more “activities” of a trade. In the case of technical education, the *curricular units of local application* meant different things depending of the school year. In the first two years (basic and advanced training) *curricular units of local application* consisted of partnership projects in the structure of practical training. That meant that the syllabus for practical training was only a “frame syllabus”. The “frame syllabus” for practical training was provided at a national level by supervising the vocational commissions, while the part with the local applications was to be developed on the basis of the methodological recommendations and themes of orientated character, according to the local needs. In the last year/s (specialised and/or advanced specialised training), *curricular units of local application* consisted of two separate module types: “Occupational mobility” and “Deeper specialisation” modules. Each school developed both these types of modules independently, involving representatives of the enterprises, in order to create a “tailor made” curriculum according to the local demands, but without changing the national character of the curriculum. Because, usually, the local needs were many, “Occupational mobility” and “Deeper specialisation” modules were developed in packages, out of which, each student, was going to chose one of each type, according to

his/hers individual aspirations for a specific future working place. This is the reason for the other name of these modules: "Optional modules".

Special mentions about "Trans-curricular themes". This new concept was introduced in order to make "links" between different subjects and create professional behaviours. The themes were mentioned in the curriculum, in a general manner, and were developed on local basis, within the already mentioned 30% of local applications. In order to encourage the individual options, the subject "class activity" adopted the denomination and contents of a trans-disciplinary field, which became unit of the basic curriculum: "vocational orientation and counselling". Further more, in order to offer the students a better personal development and wider possibility of employment, new syllabi were elaborated: technical foreign language, informatics and computerised technology, entrepreneurial education. For the students willing, after the graduation of vocational school, to continue their study in high-school Phare-VET Project facilitates the possibility by developing, for the third school year, a package of "elective" modules. These modules were meant to complete the general culture knowledge, which, in vocational schools, were reduced in comparison with high schools. These are, in a very brief presentation, some of the innovations Phare-VET RO 9405 Project made in the Romanian VET system during the three years of hard work lapsed since starting moment. We did not mean to speak here about other activities: teacher training, school managers training and school management reform, school partnership with ones abroad, teaching guidelines development, procurement of teaching equipment, social partners training and seminars, labour market studies, post-high school related activities (another component of the project), etc. Furthermore, this activity wasn't done once and for all. All the process described above was cyclical one. Each time the OS were revised (on an average of four years), according to the technological changes, the curriculum development work must start again (Fig. 5). In fact, during this three years already made a revision of every elaborated document.

This is what happened in this programme.

In present we decided to make an extent at the level of the entire vocational education system, in order to do the same in all schools, of this sort.

6.3 The system reform

So, the restructuration measures focused, at the level of the education system on the following aspects:

- the need for the finalities and the system exits to be explained, for each of the VET levels; as the national system of the qualifications (level of qualifications) has not been developed on the labour market in Romania so far, the VET system was mainly directed towards the European system of qualifications;
- the curriculum development in VET had to be preceded by the analysis of the labour market (this correction has been imposed by Phare VET);
- the insertion of the "technologies" and "counselling and guidance" curriculum areas in the national system of the compulsory education;

- the apprentice school remained a social alternative for those who do not choose the high school or the vocational school since the organisation was not according to the avowed finalities until 1999;
- the stimulation of the VET offers for training through the VET centres/corporations (associated to schools or other educational institutions);
- the support for the completion of a certification system in full synergy with the attempts achieved within other reform programmes;
- the setting up of some regional trainers cores for the VET schools network (an active teacher training measure in Phare VET).

Starting with 1998 it has been decided to reform the entire educational system, that means the reform of the vocational and technical education subsystem. This contains vocational education (the apprenticeship school and the vocational school), technical high school education and post high school education.

After the Phare-Vet Programme ended Ministry of National Education decided to generalise this in the entire net and in the same time the restructuring of the technological high school. That means this type of school changed in the following way:

- it represents a basic structure of the applied scientific training for the vocational field with high technologies;
- it certifies through specific baccalaureate and testifies the 3-4 years vocational training, with the last year of specialisation in a field with integrated technologies;
- the graduates can attend the university route, the post high school route (in case of thorough specific study) or short-term courses that are specific to the continuing education;
- it qualifies at level 3 admitted in the European market (technician assistants or technicians, depending on the performance of the vocational competencies);
- it can develop on three profiles, with the following specialisation:
 - technical;
 - services;
 - natural resources and environmental protection.

Curriculum has the same structure of training, as for the vocational school, a “tree-like” structure, which has as a goal the late of the narrow qualification on a certain specialisation. Curriculum is formed by a *core curriculum* and the *school based curriculum*. The balance between them changes from a year to another, like this: in the 9-th grade they are studying more from the core curriculum and than starting with the 11-th grade the importance of the school based curriculum grows. The school based curriculum is – in the vocational and technical education, a local development curriculum, which means the participation and the joint efforts of many actors, involved in the educational process: pupils, teachers, parents, social partners (economical agents, local or regional institutions/ organisations). The option for such a curriculum component is integrating to the decentralisation strategy, according to

that the local public authorities has to play an important role in the vocational and technical education, due to the responsibility and commitments for the citizens.

The school based curriculum is elaborated in a partnership frame between school and community and refers to:

- local resources for training (the material base for scholar groups, the frame of collaborating with the economic agents);
- local requirements for training in a various occupations, professions and specialisations, which serve to the economical activities developed in the area.

The content of the local development curriculum for the specialty training is elaborated by mixed teams of teachers and specialists from the field in which the students are preparing.

The goal of the local development curriculum could be represented by the following:

- the extension of the occupational field, but making deeper the key competencies, beside the personal competencies and the social ones: communication, team work, critical thinking, the taking of the responsibilities, the creativity and the entrepreneurial spirit;
- the obtaining of the knowledge and skills of developing their own business, starting from the vocational training in a profession, groups of occupations or specialisation;
- the promoting of the democratic values in the curriculum, which can permit to the future graduates to become responsible citizens of an open society.

The education training plan for the high school has been achieved as a frame training differentiated pathways to the pupils. The differentiated pathways are achieved through the school based curriculum, which is proposed from local level, according to the goals of vocational training, the local requirements of labour market and the human and material resources of school. The option for the subjects from the school based curriculum belongs to the pupils, guided by parents and teachers.

The “tree-like” training structure for technological high school starts from 3 profiles in the 10-th grade and ends in the 12-th grade in 19 specialisations. Each profile from the 10-th grade split into 3-8 specialisations.

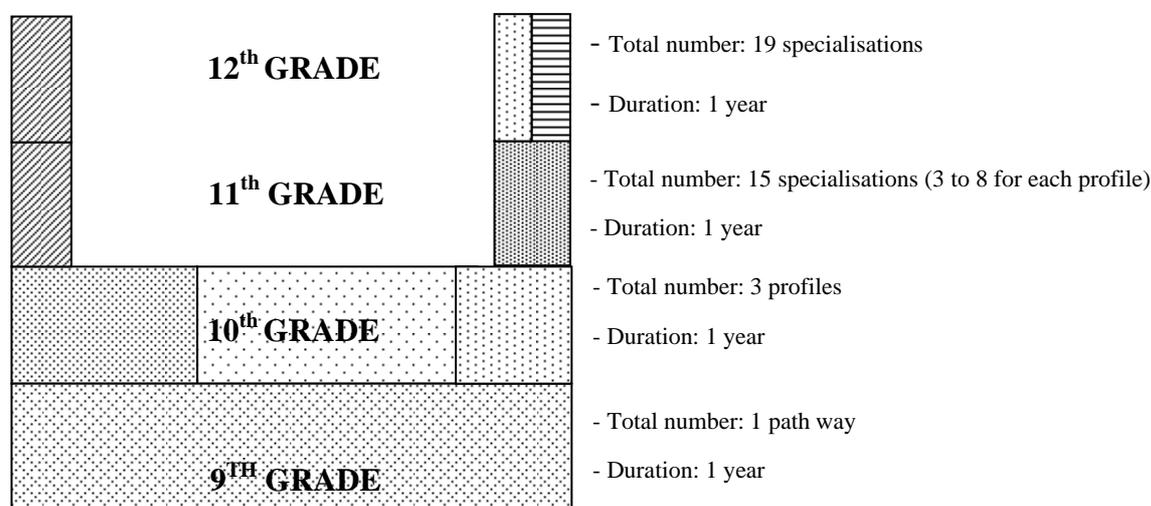


Fig. 7 – Training structure in technological high school

The structure of the vocational training follows a tree-like path.

9-th grade, the technical pathway, represents the final of the orientated cycle, of the awareness of the vocational training path. It is the same, from the core curriculum point of view, for all the paths which derives from the technical pathway.

Pathing from the 9-th grade – an orientation grade, which has as frame-objectives an inferior level of secondary school- to the 10th grade, as the first specialised superior level, is facilitated by the complementary packages of optional subjects. There is also the opportunity to make extensions of the curriculum from the core curriculum in the school based curriculum from the 9-th grade.

In the 10-th grade the training is a general type in one field from the three ones (services, natural resources and environmental protection, technical).

The profiles and specialisations which derive from the curricular path, applied according to the Phare Vet Programme strategy are:

- service field
 - specialisations:
 - economic;
 - administrative;
 - tourism and catering;
 - post.
- natural resources and environmental protection field:
 - specialisations:
 - food industry
 - agricultural
 - mountain and agricultural
 - vet
 - silvicultural
 - wood processing
 - industrial chemistry
 - environmental protection
- technical field:
 - specialisations:
 - textiles and leather;
 - mechanics;

-
- electrotechnics;
 - electronic and automation (including computation technics);
 - telecommunications;
 - civil works- constructions.

School based curriculum for the 10-th grade contains optional packages, extensions or specific in-depth studies of the curricular pathway and the specialisation of a certain profile.

In the 11-th grade and 12-th grade the basic training becomes deeper and it ends in a specialisation (achieving extent training in a specialisation). School based curriculum for the 11-th grade and 12-th grade contains optional packages, extensions or in-depth studies specific to the specialisation taken from a certain profile.

After graduate the 12-th grade the pupils can receive , not only the baccalaureate diploma, but also a specialised training certificate of 3 level, technician, with the specification of the specialisation contended in the training structure for 12-th grade.

As far as the post high school concerns we can affirm that:

- it can develop through advanced study and specialisation in the fields of the technological high school: *technical, services, natural resources and environment protection*, or in the particular fields of the post high school specialisations, which are specific to the non-technological branches (it certified the level 3 of qualification for the qualification areas that require theoretical capacities (e.g. laboratory technicians, assistants for the administrative sectors, banks, media-advertising);
- it represents the secondary level of advanced study and specialisation for the graduates of the technical high school:
- it lasts 1-2 years, with technician certificate, qualification level 3 admitted in the European market;
- it represents an advanced study and specialisation level for the high school graduates coming from the non-technological branches: the duration is 2-3 years (the training is preceded by attending an integrated course of specialisation culture, theoretical and practical).

It may be financially supported of alternative sources, through the social agents and economic enterprises or at the individual request and financing.

There was also a proposal regarding the curricula reform in the VET system and there were alternative structures.

Concerning the vocational school (on trades):

- the system was developed through the EU grant, the programme Phare VET RO 9405 (1995-1998);
- it was on the process of professionalisation of the VET type; it provided the core of qualified workers for the relevant trades on the labour market; the narrow trade

qualification was counteracted through education , due to the tree-like structure of the general training and also to the modular specialised training;

- it certified the second qualification level admitted in the European market.

The foremen school/the continuing vocational education 1-2 years:

- it was organised in compliance with the present legal provisions regarding the field regulation of the conditioned participation to this type of school, correlated to the diploma's seal of approval;
- it may be financially supported out of alternative sources, through the social agents and economic enterprises or on the basis of the individual request and financing.

The apprenticeship forms, in the pre-vocational system and under the responsibility of the local communities 1-2 years:

- it represents a level of pre-qualification for the pupils who have not obtained the certification through the compulsory education or who have dropped the compulsory education.
- The curriculum is locally developed according to the local requirements and resources.

In a coherent policy of the vocational education, these vocational training structures must be understood as belonging to the free market of the training providers, therefore, to a competing system.

Conception over curriculum in VET system

- it is based on the occupational standards (elaborated by COSA) and on the vocational education standards (Phare VET), built up on the integrated competency principle (knowledge, occupation and social development);
- it is pre-determined by the studies on the economic market and on the mobility of the labour resource force;
- it was modular at the level of the vocational school regarding the distribution of the knowledge areas, a tendency to integrate the disciplines in learning areas which should express the specific way of the VET knowledge development-through intuition and experience and competencies based at the level of technological high school;
- it is spirally developed-starting from field observation and practice in order to generalise the experience and to enable the abstract approach;
- it is centred on "technological modules" (from the levels of the vocational standards) or competencies, depending on the type and performances of the related field technology;
- it is influenced by the curricula development in VET in the European context;
- it is a target of specialisation on the levels of qualification and specialisation, as a response and training to the qualification need on both the internal and European market;
- it is developed within the social partnership with the social agents (economic agents, authorities, experts).

7 United Kingdom

7.1 Introduction

Within the UK VET context, the main characteristics of modularisation have been related to the following:

- unitisation of various qualifications;
- the outcomes orientation at the element and unit level;
- the variable order in which units can be accumulated;
- the use of individual units in more than one qualification.

Modules have been defined as self-contained units of learning (Badley and Marshall, 1995; Raffe, 1994) ‘with at least three distinctive characteristics: they are short; they may be combined in different ways to form programmes of study; and [...] they are separately and concurrently assessed’ (Raffe, 1994). The question of whether modules are valuable as basically free-standing or if they would make sense only in the context of the wider structure of qualifications has been raised by Ertl (2000). He draws on research undertaken by Sloane (1997) that emphasises the twofold character of modules regarding them as wholes in themselves but also stressing that the modules need to be embedded into a bigger whole.

There has been the lack of clarity in the use of the terms ‘module’ and ‘unit’, which are often being used interchangeably. The Further Education Unit (FEU) described units as coherent and explicit sets of learning outcomes. Module is defined as a sub-set of learning programmes (FEU, 1987).

The concept of modularisation/unitisation has become an important and popular trend in the developments of VET within the UK. The majority of qualifications have been modularised within the UK educational sector. National Vocational Qualifications’ delivery has been closely associated with the concept of modularisation.

7.2 National Vocational Qualifications (NVQ) as an example of a modularised delivery.

National Vocational Qualifications (NVQs) are characterised by their modular structure: they are formed by a specified number of learning units which correspond closely to the skills and knowledge required for a certain occupation are work-related, competence-based qualifications. They reflect the skills and knowledge needed to do a job effectively, and show that a candidate is competent in the area of work the NVQ represents. A unit comprises a coherent and explicit set of learning outcomes, such as the elements of competence in an NVQ (Richardson et al, 1995). An *element of competence* and its associated *performance criteria* and *range of statements* are referred to as occupational standards (Ertl, 2000). Ertl (2000) further notes that within the NVQ system each element of competence has to be accompanied by knowledge specifications (what knowledge is considered necessary) and evidence requirements (the minimum performance evidence acceptable; the quantity of

particular types of evidence and evidence gathering methods). One or more elements of competence and the associated performance criteria and range of statement form a unit of competence. The units are grouped to form an overall qualification. This structure provides a considerable degree of flexibility to the way in which NVQs can be built up through credit accumulation over time and in different locations (Ertl, 2000).

7.3 Current reform: The Qualification and Credit Framework

The current reform builds strongly on the concept of modularisation. The Qualifications and Credit Framework (QCF) is a new system of recognising and comparing different skills and qualifications in the UK education sector. It is expected to gradually replace the existing National Qualifications Framework in England, Northern Ireland and Wales.

It operates by awarding credits for small units (small steps of learning). It will enable people to gain qualifications at their own pace along flexible routes. Following tests and trials the new QCF has been approved by the Department for Innovation Universities and Skills for implementation. Learners will be more able to study in 'bite-sized chunks', building up a portfolio of accredited training which suits their individual needs under this new system (QCA, 2008a).

Qualifications and Credit Framework will enable people to gain qualifications at their own pace, from a number of sources, in a way that suits them - and to carry the modules with them if, for example, they change jobs. Employers will find it easier to find or develop employees with the skills they need for business success. By 2010 all key vocational qualifications will be approved by Sector Skills Councils and readily available to learners in small, credit-based units of learning (QCAa, 2008).

The new system will ensure that no learning is ever lost, as qualifications will be flexible enough to incorporate relevant modules of training gained at a pace that suits the learner. In this way, we'll enable people with family, work and other responsibilities to gain the qualifications they need to get on life and develop their careers in a way that makes maximum use of their talents." (DIUS, 2008)

This new modular approach to the way vocational qualifications are awarded will make them more relevant to the needs of employers and more flexible and accessible for learners, without compromising quality. Following a two-year pilot, there are now almost 1,000 qualifications on the framework and today's announcement will pave the way for many more.

The new system will also be compatible with qualifications frameworks across Europe, ensuring people who work elsewhere in the EU will be able to build a portfolio of qualifications (DIUS, 2008).

7.4 How will it work?

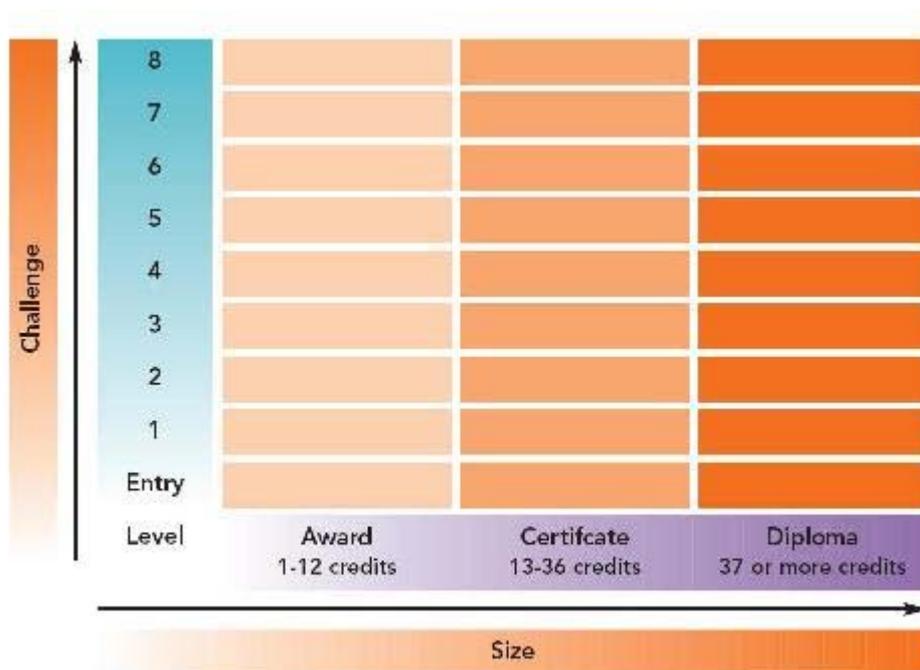


Table 1: QCF (QCAa, 2008)

Credit and level

Every unit and qualification in the framework will have a credit value (one credit represents 10 hours, showing how much time it takes to complete) and a level between Entry level and level 8 (showing how difficult it is).

There are three sizes of qualifications in the QCF:

- Awards (1 to 12 credits)
- Certificates (13 to 36 credits)
- Diplomas (37 credits or more).

So in the new framework one can have an award at level 1 or an award at level 8. This is because the qualification type 'award, certificate, diploma' represents the size of a qualification, not how difficult it is.

Each qualification title contains the following:

- the level of the qualification (from Entry level at the bottom to level 8 at the top)
- the size of qualification (award/certificate/diploma)
- details indicating the content of the qualification (QCAa, 2008).

The deference between the terms module/unit is even more subtle under the new system. The unit has been defined as “a coherent and explicit set of learning outcomes and assessment criteria with a title credit value and level”. Module is perceived as a subset of learning

programmes which includes a set of learning outcomes and assessment criteria with a title credit value and level.

Units form the building blocks of all qualifications in the QCF. All qualifications submitted for accreditation in the QCF must be built solely from units that are defined according to the design specifications set out below.

All units must have a unit title that (QCAb, 2008b):

- is clear, concise and reflects the content (the information in the learning outcomes and assessment criteria) of the unit
- is meaningful in its own right and does not make reference to any information outside the unit, including other units, qualifications or standards
- does not include reference to the levels of the QCF or to any terms that may be taken to refer to a level of achievement.

All units must contain learning outcomes that:

- set out what a learner is expected to know, understand or be able to do as the result of a process of learning
- are clear and coherent, and expressed in language that is understandable by the learners for whom the unit is intended or by a helper or adviser where the learners themselves are not able to understand the learning outcomes
- are expressed in a manner that addresses individual learners in the third person and will make sense to a learner both before a unit is offered and after the learning outcomes have been achieved
- are capable of assessment and, in conjunction with the assessment criteria related to that outcome, set a clear assessment standard for the unit.

All units must contain assessment criteria that:

- specify the standard a learner is expected to meet to demonstrate that the learning outcomes of that unit have been achieved
- relate to an individual learning outcome in language consistent with it
- are sufficiently detailed to support reliable, valid and consistent judgements that a learning outcome has been achieved, without creating an undue assessment burden for learners or assessors
- do not include any explicit references to the methods or instruments of assessment to be used.
- All units must identify a single level for the unit that:
 - represents the complexity, autonomy and/or range of achievement expressed within the unit
 - is determined by comparing the learning outcomes and assessment criteria against the QCF level descriptors (see Annex E of *Regulatory arrangements for the Qualifications and Credit Framework*)

- is a constant property of the unit, irrespective of the qualification in which it is located.

Key features of a unit

- All units must be developed to be capable of assessment independently of any other unit.
- Each unit must be capable of contributing towards at least one qualification. Units will not be 'active' and must not be made available to learners until they are included in the 'Mandatory', 'Optional' or 'Credit from other units' section of a rule of combination in an accredited qualification.
- To be recognised in accredited qualifications in the QCF, units must be placed in the QCF unit databank. Only organisations recognised by the qualifications regulators to do so may place units in the databank.

7.5 Link to Legislation

The Regulatory Arrangements (QCF, 2008c) for the QCF was published in 2008. This document sets out the regulatory arrangements that will apply to organisations operating within the QCF and to qualifications that are accredited into the QCF. These regulatory arrangements have been published in advance of decisions on the roll-out of the QCF to enable awarding organisations to begin development of new qualifications within clear regulatory guidelines. The regulatory arrangements have been designed flexibly so they will be compatible, whatever the details of the roll-out of the QCF.

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