



EQF assigned key education elements: The French "Référentiel" (Standard)

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Last update: March 2011

Version: 1.0

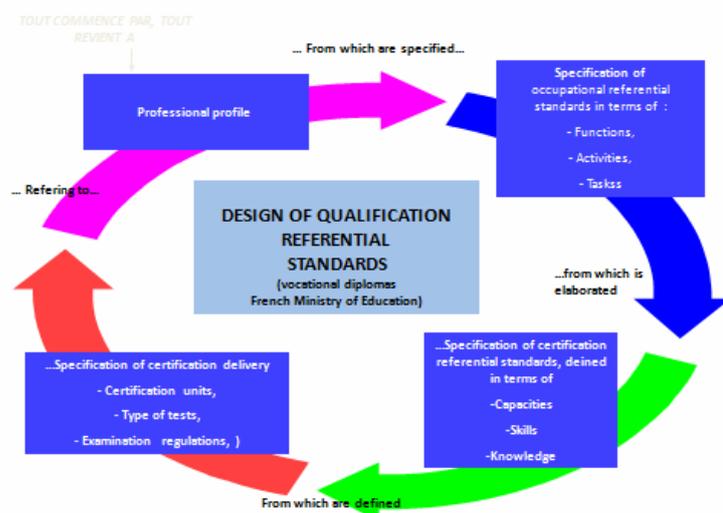
DESIGN OF A FRENCH "REFERENTIEL" (STANDARD)

(from the French Ministry of Education)

The current "référentiel" for the design and provision of certification ("le référentiel de certification") in VET were first developed at the beginning of the 1980's within the Ministry of Education and organized (classified) within a nomenclature of levels and fields, which strongly influences other classification systems, either inside or outside the whole educational and training system in France and in Europe. Thus, the use of the term and this approach have spread throughout most organizations in charge of setting up specific educational and training curricula outside this ministry, particularly curricula for adults organized by the Ministry of Labor (titres) and those from various professional sectors (CQP – Certificat de qualification professionnelle). While there are several bodies which took in charge the development of their own "référentiels", most of them position themselves in relation to those of the Ministry of Education. As they concern basically over 60% of the delivery of certificates in France (if we include those delivered by other the ministries whose certificates are automatically registered within the NQF repertory- RNCP), one can say that they constitute the basic "référentiels" with a great influence on the format of other certificates in other bodies and institutions (public and private) .

Viewed in greater details, the process of designing the "référentiel" of a certificate (such as, for instance, a "professional baccalaureate" for a "building technician" in "organization and production of structural works", FQF4 – EQF4) includes three basic consecutively interrelated forms of "référentiel" (see diagram 1 below):

- Référentiel of activities;
- Référentiel of certification;
- Certification delivery (design of the certification units, establishing the examination regulations, definition of validation tests, fixing-up the required workplace training periods)



1. Occupational référentiel:

The occupational référentiel (RAP-Référentiel des Activités Professionnelles) constitute the first document produced by the consultative professional commission (CPC) in which it is described, in details, the individual's activities in an occupational context in terms of goals, and work conditions and methods. It is composed of four basic headings:

1.1. Title of the certification of the qualification:

Example: "Professional Bacculaureate - Building technician: Organisation and production of structural works".

1.2. Occupational field and its context:

This includes:

- An introductory brief summary defining the basic activities that can be done by the holder of the certification, their end purposes and the professional situations in which these activities can be exercised;
- A brief description of the professional context which concretely situates the exercised activities within the firms and the sectors;
- Declination of boundaries and relative importance of exercised activities: The boundaries indicate the operational functions exercised by the holder of the certification within the firm, including the main performed tasks with autonomy. The relative importance of these activities is determined according the relevant criteria in the concerned field of activity.

1.3. Description of the activities:

The activities are described in terms of "functions" and tasks" as follows:

- **Functions:** they are sets of activities, related to the organization and structures of the enterprises, oriented towards the same goal (such as preparation, organization and implementation of a construction project). Thus, a function has a collective character and directs the individual's activity or activities.
- **Tasks:** They are elements (or actions) prescribed and performed within each function (activity), using available resources according to the requirement of work assignment within the firm.

For each undertaken function (activities) and task, the individual is assigned a level of responsibility and autonomy from 1 to 3 where (in the case of a "building technician" holding a "Bac. Pro." in "organization and production of structural works", FQF4 – EQF4)

- *Level 1* (corresponding to a minimum knowledge and know-how requirement) means that the holder of the qualification reads, observes, interprets and assists without taking any personal responsibility in the activities of a team.
- *Level 2* (corresponding to a partial minimum knowledge and know-how requirement) means that the holder of the qualification takes part, under punctual supervision, in the activities of the team as being partially responsible for the execution of simple tasks.
- *Level 3* (corresponding to in depth knowledge and know-how requirement) means that the holder of the qualification acts alone or in team, with a full autonomy in carrying out simple tasks.

Thus, the “occupational référentiel” as a description of the activities in terms of functions (sets of basic activities) and tasks at this stage can be illustrated through the exemplary case in the construction as described below in table 1:

Table 1: an example of occupational référentiel (case of a “building technician” holding a “Bac. Pro.” in “organisation and production of structural works”, FQF4 – EQF4):

Basic activities/functions	Tasks
Preparation	1. Participation in the organization of a construction work
	2. Preparation of a construction work
	3. Establishing a record book
	4. Checking-up the construction materials before intervention
Organisation	5. Organizing work stations of a team
	6. Organizing construction work supplies
Implementation	7. Enforcing the rules of hygiene, safety and health protection
	8. Ensuring waste treatment of the construction site
	9. Implementing and/or drawing the whole construction or part of it
	10. Participating in the site installation
	11. Directing and participate in the handling and storage
	12. Conducting and participating in earthmoving operations
	13. Conducting underground networks
	14. Installing the shoring
	15. Erecting and dismantling scaffolding
	16. Conducting reinforced concrete structures
	17. Performing masonry
	18. putting-up prefabricated components
	19. Modifying existing structures
	20. Executing finishing touches
	21. Performing first-level maintenance on equipment and tools

1.4. Conditions of exercising the activities:

Here, each activity is broken down in terms of a set of performance indicators:

- Level of autonomy and responsibility (from 1 to 3);
- Use of available means and resources;
- Expected performances and results.

Thus, the “occupational référentiel (RAP-Référentiel des Activités Professionnelles)” describes the professional activities to be exercised by the holder of the certification. It is based on the analysis of the real activity and anticipates its developments as described in the application file submitted to the CPC commission. It does not describe the professional activities of a beginner, but it identifies a professional target by taking into account the broader process of adaptation to employment and employability requirements. It is this référentiel which constitutes the basis for designing the certification référentiel, based on a set of identified skills which go through an assessment and validation processes which constitutes the subject of certification.

2. Certification référentiel:

The *certification référentiel (le référentiel de certification)* is a regulatory document which describes the skills to be attained in a vocational field. The document applies to skills assessment just as the occupational référentiel applies to working situations. A diploma is awarded to attest these skills. The certification référentiel specifies the conditions, the indicators and criteria for the assessment of skills. It should be noted that only the occupational field is considered since the field of general knowledge is subject to another principle of definition and validation.

The structure of “certification référentiel” is based on a set of descriptors : capacities, skills and knowledge:

- Capacities (“*capacités*”) as a way to qualify in general and transversal know-how (for example, analyse, prepare, communicate, implement).
- Skills
- Associated knowledge (“*savoirs associés*”) corresponding to the whole body of knowledge or information in the domain held by the individual and relevant to the objects and the environment, the properties of

these objects and the laws related to this environment. The knowledge is defined in association with the skill to be performed.

Concretely, the "certification référentiel" is regulatory document in the occupational field which is composed of five basic sections:

2.1. Summary description of capacities and skills:

Skills: held by the individual and related to his or her actions in the surrounding work related technical and social environment. These skills can be appreciated only through the observation of the undertaken actions and their concrete manifestations (words, gestures, transformation of objects, etc.).

Illustration through the case in the construction sector as described below in table 2:

Table 2: an example of certification référentiel (case of a "building technician" holding a "Bac. Pro." in "organisation and production of structural works", FQF level 4 – EQF level 4):

Capacities		SKILLS
Getting informed	C1	C1.1. Collecting and classifying information C1.2. Decoding information and documents
Analysing, deciding, communicating	C2	C2.1. Planning his/her activity in the environment of site
		C2.2. Selecting equipment, materials and tools
		C2.3. Quantifying the needs for the team
		C2.4. Producing documents
		C2.5. Communicating orally
Implementing (carrying out)	C3	C3.1. Organising the workplace
		C3.2. Implementing collective and individual protection means
		C3.3. Treating the waste and protecting the environment
		C3.4. Implementing and drawing construction structures
		C3.5. Preparing, using and maintaining equipment and tools
		C3.6. Putting up and down a scaffolding, a shoring
		C3.7. Constructing underground structures
		C3.8. Performing masonry structures
		C3.9. Constructing reinforced concrete structures

2.2. Detailed description of capacities and skills:

Each competence is described by specifying what the qualification holder should be capable of performing, and the implementation conditions and resources and the evaluation criteria of expected performance.

C.A.P. Maintenance des Véhicules Automobiles

Capacité C3. RÉALISER (suite)		
Savoir-faire Être capable de :	Conditions de réalisation	Critères et indicateurs de performances
C 3-3 Démonteur remonter des sous ensembles		
<p>C 331 – Démonteur, remonter les éléments ou les organes.</p>	<ul style="list-style-type: none"> - Un véhicule ou un sous ensemble. - Le poste de travail équipé - L'outillage spécifique, - La documentation technique du constructeur et ou de l'équipementier, - Le contrat de réparation - La démarche qualité de l'entreprise. 	<ul style="list-style-type: none"> - L'élément ou l'organe est démonté, remonté en conformité en respectant les prescriptions du constructeur et/ou de l'équipementier ou la procédure fournie. - Les joints et pièces d'usure sont remplacés. - Les serrages, étanchéités niveaux sont vérifiés et conformes. - L'action respecte les règles en matière d'hygiène, sécurité et de respect de l'environnement. - Aucune détérioration n'est constatée

Skills

Performance indicators and criteria

Conditions for achieving

2.3. Relating occupational activities and tasks to capacities and skills:

The relationship between the "occupational référentiel" and the "certification référentiel" is specified by means of a table in a matrix format linking different tasks in the occupational activities (of table 1) to capacities and skills in the occupational field (of table 2).

2.4. Description of "associated knowledge":

Associated knowledge corresponds to all information acquired by the qualification holder, which are relevant to the objects and the environment in of the concerned field, including the properties of these objects and the laws related to this environment.

Example: in BTS (FQF level 3- SQF level 5) Electrotechnics

COMPÉTENCES	CONNAISSANCES ASSOCIEES	LIMITES
Situer l'activité d'un service dans l'activité générale de l'entreprise et repérer ses principaux éléments d'environnement économique	<ul style="list-style-type: none"> Les finalités de l'entreprise. Éléments généraux de gestion de l'entreprise : <ul style="list-style-type: none"> - notion de patrimoine ; - notion de bilan ; - notion de résultat ; - notion de compte de résultat ; - notion de produits ; - notion de charges. 	<p>La présentation du bilan se limite à : capitaux propres, dettes financières, dettes d'exploitation, immobilisations incorporelles, immobilisations corporelles, stocks, créances, trésorerie, ...</p> <p>La présentation du compte de résultat se limite aux principaux produits et charges.</p>
Calculer des coûts et des coûts de revient	<ul style="list-style-type: none"> Les coûts constatés : <ul style="list-style-type: none"> - Les coûts complets : <ul style="list-style-type: none"> - charges directes ; - matières et composants (stocks et valorisation des sorties) ; - main d'œuvre. - Les charges indirectes et leur traitement : <ul style="list-style-type: none"> - centres d'analyse ; - coûts d'unités d'œuvre ; - taux de frais. Les coûts hiérarchisés. Les marges et les résultats analytiques. Les coûts partiels : charges fixes, coût variable (« direct costing »). 	<p>Les procédures de détermination des coûts sont définies.</p> <p>Méthodes du coût moyen pondéré et premier entré, premier sorti.</p> <p>Les prestations croisées entre centres d'analyse sont exclues.</p> <p>Coûts d'achat des matières et composants, coûts de production, coûts de revient.</p>

2.5. Relating associated knowledge to capacities and skills

In a matrix format table, the relationships between the basic elements of associated knowledge and skills in the whole field of occupational activity concerned by the qualification are specified.

Example : CAP (FQF level 5 – SQF – level 3) car maintenance and repair

CAPACITÉS		SAVOIRS ASSOCIES														
et		S 11	S 12	S 21	S 22	S 23	S 24	S 25	S 26	S 27	S 28	S 31	S 32	S 33	S 34	
Compétences		Analyse fonctionnelle et Structurale	Lecture de la représentation d'un élément d'écu	Mesure des dimensions	Montage	Inspection – Administration en Carburant et en Air	Transmission – Adaptation couple et vitesse	Transmission – Adaptation – Train roulant – Pneumatiques – Direction	Freinage	Chassis – Châssisage – Eclairage – Signalisation – Lubrification	Carburant – Sécurité – Chauffage – Climatisation	Diagnostic des réseaux Hydrauliques et/ou Pneumatiques	Communication	Organisation de la Maintenance	Qualité	Prévention des Risques Professionnels
C3 REALISER	Mesurer – contrôler															
	C 341 Réaliser les mesures, les contrôles sur les organes mécaniques.															
	C 342 Réaliser les mesures, les contrôles sur circuits hydrauliques, électriques et pneumatiques.															
	C 343 Identifier le ou les élément(s) défectueux.															
	C 344 Signaler les anomalies périphériques.															
	Régler des sous-ensembles															
	C 351 Réaliser les réglages sur des sous-ensembles isolés															
	C 352 Réaliser les réglages sur des véhicules															
	Appliquer les procédures qualité et de respect de l'environnement															
	C 361 Récupérer les fluides et réaliser le tri sélectif des déchets.															
C 362 Évaluer la qualité de son intervention																

3. Référentiel of certification : delivery

This is composed of a set of processes which include basically the following: design of the qualification units, establishing the examination regulations (definition of validation tests, fixing-up the required workplace training periods, establishing a table of correspondence between qualification units and validating tests including specifying the exemption units).

3.1. Design of the certification units

Professional certifications are organized into units (professional units). Each consists of a coherent set of skills and knowledge that are associated with these skills.

The definition of the contents of units of the certification (a diploma) is intended to specify, for each of them, what tasks and skills are involved and in what context. It is intended for both:

- Allowing for mapping the professional activities and units within the "validation of acquired experience (VAE)";
- Establishing the link between the units (corresponding to exams and test) and the "occupational référentiel" in order to specify the assessment modes and frameworks.

In this process, certificates are structured in units in order to take into account within the structure of related certifications the diversity of the candidates' learning and professional trajectories and needs (personal and professional learning and training courses). This is based on the principle that there is no single model for the preparation and certification path. Therefore:

- The vocational certifications are structured around units, regardless of their delivery mode.
- The certification référentiel is focussing exclusively on the objective of certification;
- There exist pathway bridges between the certifications of the same level or levels, or even between different sectors.

The adopted concepts in this process are the following:

- The unit is the basic element in the certification structure of the qualification. This is what the candidate seeks, regardless of the chosen delivery mode. The units are capitalized over time, until graduation (usually within the limit of 5 years maximum of accumulation). Although it is possible to transfer a qualification to another within the qualification system of national education, there is no transfer from one system to another outside it without explicit agreements among different awarding bodies. The units do not show progressive learning in terms of the required level: in fact, the unit is defined by its content which coherently associates the characterizing skills with related occupational référentiel.
- The test is a measure of performance through a testing medium or a situation. It takes place in a real or a simulated situation.
- The assessment situation allows for carrying out an activity in a given context. It allows for skills assessment according to the systemic approach of the activity. The assessment situation can be defined in connection with the referential of the professional activities (RAP-Référentiel des Activités Professionnelles).

Thus it is important to underline that the units are primarily constructed on the basis of professional activities. They consist of skills described in the référentiel and take into account the real professional activities while avoiding

excessive globalization or fragmentation, as this excessiveness might eventually undermine the value of the undertaken assessment. The number of units is variable according to the nature of the certification.

3.2. Establishing the examination regulations:

The examination regulations (examination regulations) define basically:

- The nature of the testing;
- The aims of the testing
- The form of the assessment (written, practical, oral, continuous assessment during training);
- The coefficient assigned to each test;
- The duration of each test,
- The period when the assessment takes place
- The context, the type of situation
- The type of expected content
- The evaluation criteria

Each test is modeled according to

- The skills to be assessed,
- The associated knowledge to be validated,
- The means and resources used
- The nature of the expected performances from the candidate.

Example

For more information, see examples of French "référentiels" in the automotive sector on VETAS portal:

http://www.vetas.eu/site/country_informations/view/6

References:

- With some abstracts from presentation at the European Conference on Educational Research, ECER 2010 on "Education & Cultural Change" - University of Helsinki, Helsinki (Finland), 25-27 August 2010, by M'Hamed Dif, BETA/Céreq Alsace - University of Strasbourg (UdS), France

For further information on the project please consult:

www.project-predict.eu

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