



European Federation
of Building
and Woodworkers



Education and Culture DG

Lifelong Learning Programme

**Leonardo Da Vinci Project
„Bricklayer“**

Bricklaying Country report

Netherlands

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Preface

The purpose of this paper is to analyse the Dutch Bricklayers qualification from seven dimensions, being the key concepts of this research project: governance, vocational education, qualification, competence, utilization of labour and the currency of a qualification on the labour market.

In the Netherlands VET debates are dominated by issues at system level. A major push in this debate was in the 1980s when a high profile Commission, chaired by the former Shell CEO Wagner, advised to improve the relations between the economic and VET system as a remedy to revitalise the national economy. Better links were defined in terms of establishing social partner-led committees to be responsible for producing national qualifications for all VET courses at all levels defined in for instance VET. Over the years this debate and subsequent legislation resulted in a comprehensive VET system characterised by large regional VET schools (ROCs) offering courses at various levels and for almost all economic sectors (1996). Roles are strictly defined in VET: national sector based committees are responsible for the production of national qualifications, while it is the schools' responsibility to organise courses qualifying for these qualifications.

The introduction of comprehensive systems for the production of VET qualifications and for the organisation of VET courses means that all VET qualifications are products of almost identical procedures and used in almost identical contexts, as all qualifications are developed for (VET) educational purposes. In other words, since 1996 a comprehensive VET system regulates the entrance to almost all job positions in the labour market segment between unskilled labour and professional positions.

The Ministry of Education's VET policy in this period was (and still is) aimed at establishing a system with a limited set of rules and regulations. Almost as a contrast, the production of VET qualifications recently became the object of stringent government regulations. While VET schools have freedom in policy making in terms of establishing local stakeholder relationships, education policy, staff policy, housing and the provision of courses for private bodies, procedures for the production of National VET qualifications are closely supervised, while the qualification template is more detailed than ever. This means that all national VET qualifications are almost identical in lay-out and type of content and produced in almost identical procedures.

Nevertheless, there are significant differences between qualifications and the procedures that produced them. These differences are the result of the fact that the stakeholders tend to compromise between the official procedures and sector-specific traditions and above all sector-specific policy priorities. For instance, while the national stakeholders (government, social partners at national level) agree that VET qualifications should be broad in covering a wide area of positions, sector based social partners could very well agree that this broadness is not in the interest of a particular sector in terms of validation and ownership. In system terms, tensions in the production process of VET qualifications are manifold, as these qualifications are supposed to address three aims:

- 1) According to the law and government regulations, a VET qualification is the basis of a curriculum to be developed by all VET schools individually (there are neither national curricula in Dutch VET nor national exams). As VET schools are supposed to prepare students for a lifetime career, lifelong learning and citizenship and not for a single job position, qualifications should cover a number of occupations, while a qualification file should also contain content referring to lifelong learning and citizenship.
- 2) For VET schools the comprehensive set of qualifications is in fact a frame of reference for the development of school based curricula. Most schools operate on a kind of

‘teaching on demand’ policy; a course will be organised under the condition that students have subscribed to this particular course. From this perspective, schools are not very keen on working with a set of specialised qualifications, attracting only small numbers of students per qualification.

- 3) For economic sectors qualifications are the communication line to VET. Traditionally, the entrance to skilled jobs is regulated through VET qualifications/the national VET system. For economic sectors VET qualifications represent the criteria young people should meet as closely as possible in terms of occupational performance. In terms of Marsden’ classification of employment systems¹ Dutch VET responds to a occupation based labour market, where one is admitted to skilled jobs when in possession of a corresponding formal qualification.

The government position is visible in the validation of the VET qualification framework template and in the qualification validation procedures, while (representatives from) schools and (representatives from) social partners have to negotiate and compromise their priorities in the production process of these template-based qualifications.

Characteristically for Dutch debates on VET, these tensions are *de facto* accepted by all stakeholders and seen as a consequence of the fact that three major stakeholders share responsibility for VET. The issue in many debates is not to deny the right of other parties to intervene, but to come up with compromises (for the time being), acceptable for all.

This is why these debates have rather a pragmatic, instead of a philosophical or conceptual nature. Keep and Brown’s conclusion, that the key point in Dutch VET reforms is the ‘clear and explicit attempt to plan the reforms systematically and to design a new system as a whole’ (Keep & Brown, 2004, p. 258), can be read as the preference in Dutch policymaking to address issues at system level but also as an utilitarian view on policy making. This observation is shared by many other researchers. For instance Reuling, in his conclusion that education policy debates in the Netherlands concentrate on the pros and cons of pragmatic solutions rather than on principles, writes: ‘In general the arguments for reform measures have a ‘technocratic’ basis; arguments in terms of content and pedagogy are rarely heard’ (Reuling, 2000, p. 33), while Leune points to the broad consensus on educational ideas between political parties and the business-like, pragmatic arguments that dominated political debate on education issues (Leune, 2001). As a consequence there is little (research) documentation referring to the meaning and understanding of concepts and very few formal definitions for the concepts central to this paper, except for Qualification and Competence. Concepts will be analysed both from official documents and from research sources.

The paper has seven sections. The first concentrates on the governance dimension: the role and position of government and other stakeholders in the production of qualifications in general and in the bricklayer qualification in particular. The second deals with the vocational education dimension; the nature of the educational system and the position of VET in this system. The third section, on qualification, together with the fourth, on competence, concern the two concepts that represent vehicles for bridging the world of learning and the world of work. The last two sections, on the utilization of labour and the currency of a qualification on the labour market, represent the labour market dimension: the status of the bricklayers qualification in industrial relations.

¹ Marsden identifies internal labour markets (ILM) and occupational labour markets (OLM). They differ in their relations to the education system. In countries with an internal labour markets newcomers to the labour market start their career in low qualified jobs, learning on the job; additional courses will help them to acquire the competences needed for a career; the relation to the education system is rather loose. The United Kingdom, France and Ireland are examples of ILM countries. In OLM countries (Germany, the Netherlands, Denmark) it is the role of the education system to qualify young people for the labour market (Marsden., D. (1999). *A Theory of Employment Systems*. Oxford: Oxford University Press.

1. Governance

The process of deregulation and increased autonomy in VET have important consequences in terms of governance. Many aspects of (strategic and operational) educational policy making are in the hands of VET schools (ROCs) and the social partners (in sector based Knowledge Centres, responsible for the production of qualifications). Government abandonment of the view that detailed regulations (and observance of these regulations) would provide the best guarantee for quality and system responsiveness became manifest in the 1996 Law on VET (and adult education). However, one could say that what was given with one hand was taken away by the other in new sets of control and accountability mechanisms. Accountability is not for instance only defined in *vertical*, but also in *horizontal* terms. Vertical (top down) mechanisms for the schools are:

- A new National Inspectorate's reference framework of performance indicators used to assess the performance of each VET institution
- Sets of Ministerial regulations for the spending of annual government grants, including procedures for (independent) accountancy checks on budget spending.

Accountability is also defined *horizontally* in terms of regulations for organising stakeholder (industry, society) involvement, teacher and student involvement in school policy-making (staff and student advisory boards will become obligatory by law in 2009). It is also the schools' responsibility, in cooperation with its local stakeholders, to define for instance quality performance indicators, as well as to organise feedback on their actual performance (in the light of the aims decided on).

A third, not very well articulated forum for policy making, is at VET school system level. Some school directors plead for the transformation of the National Council of VET Schools into an organisation willing to be held accountable for the sector's performance. But as long as sanctions for ill-performing schools are not accepted as a Council policy instrument, these initiatives are rather powerless.

In conclusion, the trend towards deregulation, or better the redefinition of responsibilities for VET between the state, the VET institutes and local stakeholders has not yet resulted in a new equilibrium in governance relations at system level. Events (incidents like the reduction in the number of teaching hours by schools, the low performance in Dutch language by VET students, the quality of school exams) are seized on by stakeholders to propose new mechanisms and procedures, resulting either in a new dominance of the state, a stronger position for sector organisations or more power and influence for the schools' executive and non-executive management boards. In 2008 a Parliamentary Investigation into the Innovation Policies and Outcomes in Education, inspired by a general sentiment that recent innovations have ended in a deterioration of the quality of education, resulted in a proposal for a strict division of responsibilities. The proposal was welcomed as the formula for defining this equilibrium, at least for the time being:

- the state is responsible for the output (in terms of the definition and/or validation of learning aims)
- schools are responsible for the quality of the programmes leading to these aims.

Responsibility for the output of VET is organised according to the same policy principles. Social partners are responsible for the identification and content (learning aims) of national qualifications. It is the role of the state to validate the qualifications; this validation process is necessary for the accreditation of qualifications in a National VET qualification framework; VET schools are only subsidised by the state for courses preparing for the qualifications in this framework.

Table 1 summarizes the position of the stakeholders involved in the production of qualifications; in this case the bricklayers qualification. The production of qualifications is regulated by the government and executed with the regulated participation of social partners and schools.

Table 1: the governance system for four qualification

| governance | Bricklayer |
|------------------------|--|
| <i>Government</i> | setting the rules for the production and content of qualifications |
| <i>Social partners</i> | moderate consensus |
| <i>VET mode</i> | VET schools dominant |

Some differences can be found in the positions taken by the social partners and in the educational routes. In 1999, government and national social partners agreed to define both qualifications and VET programmes in terms of competences. New templates, procedures and innovation programmes were launched for this purpose. As a consequence, qualifications no longer cover one single occupation, but a range of occupations. Sector-based social partners felt the pressure to broaden qualifications and so reduce the number of qualifications.

Bricklayers operate in all-round construction firms, as well as in specialised bricklaying firms. The qualification is a compromise between the interests of both types of firms. Of course social partners can opt for two qualifications. The only consequence will be that these qualifications will not be accepted in the VET qualification framework. However, it is exceptional that social partners prefer to operate outside the VET system when offering training schemes for young people. Generally speaking, social partners are reluctant to operate outside the formal VET system or to develop a sector exclusive training system. Compromises are found within the regulations agreed by all national stakeholders.

2. IVET and CVET education and training facilities for bricklaying

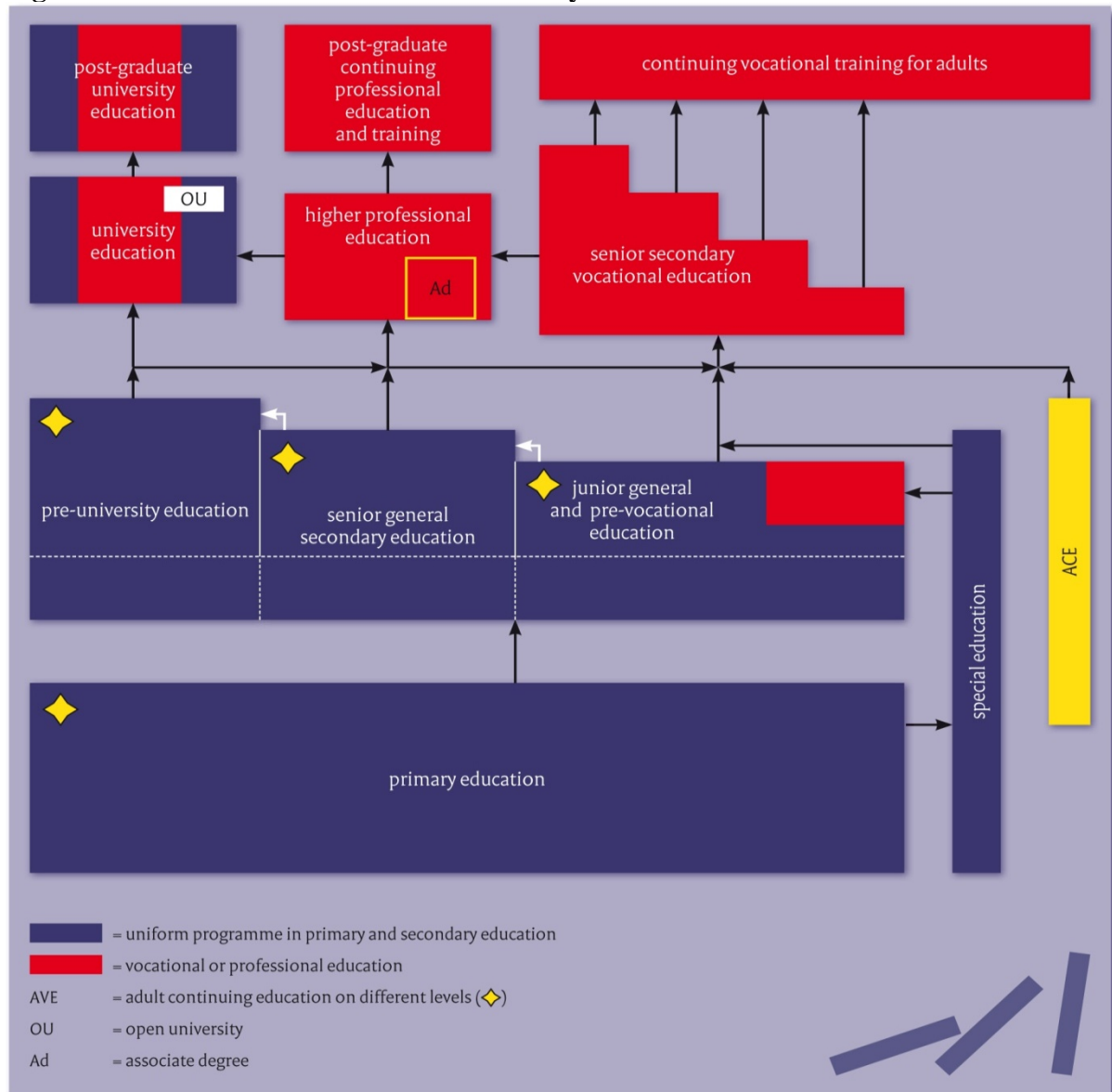
2.1 IVET facilities

Figure 1 gives an overview of the Dutch Education System. The figure shows that the Dutch system is organised in three layers with primary education at the bottom layer. The second layer consists of three types of secondary education. That is, there are three school types; junior general and prevocational education preparing for senior secondary vocational education (VET), and two school types preparing for Higher Education; senior general secondary for higher professional education, ranked at BA level and pre-university education for university education (MD level).

The three school types at secondary level share a two year comprehensive curriculum. Officially, pupils are allowed to postpone the choice between these school types until they have passed this two-year period but, as most are registered in either junior general and prevocational education or senior general secondary/pre-university education, they hardly change between junior and senior secondary education as possibilities for switching schools are limited by rigid curricula and lack of cooperation between schools. This makes Dutch secondary education highly selective ('early tracking'). The third layer is designed as the system's transition phase. From the system's point of view, VET and HE prepare for working

life; young people should not leave the system before having passed this phase; this is true for 85% of the students in general education (Heijke, 2008:17).

Figure 1: overview of the Dutch Education System



Source: CINOP, 's-Hertogenbosch, 2008

Because of the strong links between qualification levels in VET and occupational hierarchies, characteristic for occupation based labour markets, VET is preparing for a station in life. However, with the rise in awareness that the Netherlands (and the rest of the EU) should increase the numbers of students with a degree in HE, possibilities were created to fast track from VET to HE - higher professional education in particular.

From the governance section of this paper it will be clear that national qualifications are designed for VET routes. Dutch VET is offered in two equivalent tracks: a dual track (originally the apprenticeship system, now part of the comprehensive VET system) and a school-based track. The formal difference between the two tracks is in the number of hours dedicated to learning at school and the number of hours dedicated to learning in the workplace.

Although both tracks give access to the same qualifications/diplomas, tracks differ in terms of drop-out risk as table 2 shows. This table gives the overall number of students in VET by levels, tracks and sectors (first column), the number of students that leave VET with and

without a diploma (second column) and the % of drop outs of the total number of school leavers (third column). It can be concluded from Table 2 that school-based tracks are dominant at level 4 and dual tracks (still) at level 2 and 3 and that the risk of drop out is relative high at the lower VET levels. Bricklayer qualifications are at level 2 and 3 and usually organised in dual tracks:

Table 2: Drop out figures for tracks, levels and sectors in VET (2006/2007)

| | Number of students (x 1000) | Number of leavers (x 1000) | % of leavers dropping out |
|------------------------------------|-----------------------------|----------------------------|---------------------------|
| VET | 397 | 109 | 33 |
| <i>Level 1 dual tracks</i> | 3 | 1 | 96 |
| <i>Level 2 dual tracks</i> | 38 | 11 | 55 |
| <i>Level 3 dual tracks</i> | 25 | 9 | 14 |
| <i>Level 4 dual tracks</i> | 7 | 3 | 14 |
| <i>Level 1 school based tracks</i> | 11 | 4 | 94 |
| <i>Level 2 school based tracks</i> | 63 | 16 | 61 |
| <i>Level 3 school based tracks</i> | 70 | 14 | 32 |
| <i>Level 4 school based tracks</i> | 175 | 48 | 18 |
| <i>Economy & Management</i> | 143 | 42 | 35 |
| <i>Science & Technology</i> | 112 | 28 | 39 |
| <i>Health & Care</i> | 122 | 32 | 27 |
| <i>Agriculture</i> | 10 | 6 | 27 |

Source: CBS Statline 2008

The numbers of VET students are still rising. Table 3 shows the development of the number of students in VET between 1995 and 2007. The figures for BA students are included for reasons of comparison. It is clear from the figures that participation in VET is still rising. The still growing participation in VET has two sources. The first is the growing number of youngsters in the relevant age cohorts (Population Effect; 3%). The, more important, second source is the growing number of people from various age cohorts wishing to qualify in VET (Participation Effect: 15%). According to the 2009 National Council for VET schools' 2008 benchmark report 19% of the VET population is over 23 (MBO 2009).

Table 3: Participation in VET and non academic HE – BA level (in 1000)

| | 1995 | 2005 | 2007 | Rise 2005>2007 |
|---------------------------|------|------|------|----------------|
| VET | 436 | 483 | 513 | + 6% |
| <i>School-based track</i> | 320 | 347 | 355 | |
| <i>Dual track</i> | 116 | 143 | 141 | |
| HPE | 271 | 357 | 374 | + 5% |

Source: Jaarboek onderwijs in cijfers 2009, CBS: den Haag, 2009

VET is seen as an essential element in the national state regulated education system to allocate young people to the labour market. In terms of educational routes, all qualifications are available through formally regulated VET. Being part of the 'transition phase' of the system, VET has a threefold aim for young people;

- to prepare for an occupation and choosing an occupational career
- to prepare for being an active member of Society
- to prepare for and stimulate lifelong learning

Education routes for bricklayers

For young school leavers at the beginning of their career this is by far the most common, if not the only, route to enter these occupations. For bricklaying a VET qualification is not obligatory. However, most bricklayers do have a formal VET qualification; 64% of all bricklayers have this qualification, for bricklayers under 30 the figure is even 79% (Beerebohm 2005).

Regular VET is offered in two tracks. The difference between the tracks is the amount of time spent on work based learning. School-based track emphasises on learning in school. Dual track emphasises learning in practice in a specific company or in a workshop organised by a number of firms. In the construction industry, students in dual tracks are under the collective labour agreement and have a contract with a firm or, in most cases, with a local training firm for the construction industry set up by local building firms. Traditionally courses in bricklaying are organised in dual tracks.

2.2 CVET facilities

There is a kind of system in further education for occupational development. The level 1 course ‘assistant in construction/housing and road/water construction’, part of the qualification framework for VET, gives a right to continue at level 2 in for instance, bricklaying. A level 2 diploma entitles to continue at level 3 (‘all round bricklaying’). In bricklaying, routes for adults are almost exclusively organised for the reintegration of the unemployed. These reintegration routes are organised by VET schools (on contract) or by private training institutes. Significantly, from the employment point of view, career changes are conditioned by the possession of higher VET corresponding qualifications.

On average, 70 percent of companies invest in training their employees. Until recently, courses in Health & Safety were most in demand. Nowadays it is scaffolding, the application of lead, and courses for tutors (assisting in workplace learning).

In terms of a professional career a bricklayer can end up as a gang leader or works foreman, or might proceed to managerial office posts concerned with work preparation.

In terms of further training (CVET) rights, all construction employees have the right to two days training per year, paid from a levy through the sector’s social partner led Training and Development Fund. Training and Development Fund grants cover gross wage costs, travel costs and training costs, under condition that the courses have been accredited by the Training and Development Fund. Furthermore, under the Collective Labour Agreement it is obligatory for construction firms to develop annual training and development plans that takes the firm’s employees training priorities into account.

2.3 Training regulations in the Collective Labour Agreement for the construction industry

Typical for the construction industry, the Collective Labour Agreement contains a number of articles referring to the (salary rights) of VET students in construction and the training rights of construction workers, bricklayers included. In contrast to VET students in the school based tracks, VET students in the work based track have an employment contract with a firm or with cooperative associations of construction firms dedicated to the collective organisation of the work based part of VET courses in construction. Trainees with this status of ‘pupil-employee’ fall under the functional B group of the Collective Labour Agreement whilst the functional A level is reserved for low skilled work (the Agreement distinguishes five levels A-E). The groups are based on education, experience, autonomy in work, executive tasks, etc.

Within this B group wages are based on age for those under 22, but trainee-employee's are paid one grade above their actual age (as a stimulus for young people to qualify for a formal VET diploma²). Young people (<22) without work experience in the construction industry and not in education are paid significantly less.

Instructors, responsible for the organisation of the workplace training of VET courses are paid an additional fee up to €56,40 per week (June 2009) and are exempt from their work tasks for 5% of their working hours (for 1 trainee-employee) and up to 20% of their work tasks for 4-7 trainees-employees.

3. Dutch Bricklayer qualifications

3.1 general information

In the Netherlands the concepts of qualification, competence, knowledge and skill are at the core of a current massive innovation process in VET. The term qualification (in Dutch: *kwalificatie*) has two meanings in Dutch VET. Qualification stands for: i) the file containing all learning outcomes deduced from occupational analysis and ii) a VET diploma, that somebody has obtained a qualification. In 1999 the Advisory Board for the validation of VET on qualifications produced a policy paper favouring innovation of the VET Qualification Framework (ACOA, 1999). The aim was to change the nature of qualifications and as a consequence the *qualification process* (used as a synonym for learning process). Qualifications should no longer be expressed in terms of learning aims, but in terms of competences; the full set of VET qualifications should be *lean and mean* as well as comprehensive (no gaps or overlaps). However, the most important position in this paper is defining a difference between occupational profiles (*beroepscompetentie profielen*) and qualification profiles, or qualifications. Where occupational competence profiles are the result of (empirical) occupational analyses commissioned by the social partners, qualification profiles are the translation of these profiles (one of more) into the qualities a person should have after finishing VET. The point is that this translation process cannot be deductive in transforming occupational data into competences that young people should master at the beginning of their career in life and work.

In 2002 it was decided that all qualifications should be defined in terms of competencies. But, when the Board did not give details as to how to define competences and how to use the concept in defining the content of the competence based qualifications, the process of redefining had a trial and error status (ACOA 2005; Cras 2006; COLO 2006). Every Knowledge Centre and every committee in charge of producing new qualifications gave their own interpretation to the competence concept. In general, the first generation of competence-based qualifications were in fact defined in traditional activity-based learning aims, but now presented as competences (Onstenk 2005).

Since 2004 the process has become more organised and supervised in terms of process managers, validation committees, new formats and manuals. All VET qualifications are identical in terms of lay-out and information categories, and divided into four sections:

- An A section with a short general description of the occupation or set of occupations, covered by the qualification
- An overview of the core tasks and corresponding work processes of a particular qualification is given in the B section. In this section all work processes belonging to a

² The current Collective Labour Agreement also states that employers and employees will promote the work based VET track for under 27 year old employees and that the employer has to offer an under 27 year old a pupil-employee contract when he /she want to qualify (further) in VET.

core task are characterised with the aid of 25 standardised process elements (key words: management & decision making; support & cooperation; networking & presenting; analysing & interpretation; creation & learning; organisation & execution; dealing with stress & adaption to conditions; entrepreneurship & performance).

- In the C section all work processes are subdivided into competence elements, performance indicators and knowledge and skills.
- The D section accounts for the development process and the points for discussion in the development process and the planning of the updates of a qualification.

Additionally, all qualification documents include standardized sets of citizen and learning competences. It is agreed that by 2010 all Knowledge Centres will have replaced the learning aim based qualification files by the new competence-based qualification files.

3.2 The structure of the bricklayer qualification

The new competence-based bricklayer qualification document covers five qualifications in bricklaying. Each qualification stands for a Diploma. In other words, the qualification document covers five distinct, partially overlapping, bricklayer qualifications (see Figure 2):

Level 2:

2.1 Bricklaying including gluing interior walls and floors

2.2 Bricklaying including light partitioning walls

Level 3:

3.1 All round bricklaying including new bricklaying techniques

3.2 All round bricklaying renovation and restoration

3.3 All round bricklaying rebuilding

To give an impression of the level of detail of the information: the document contains 177 pages. According to the new Template instructions, the standards for mastering Dutch language and mathematics are defined at diploma level.

Section A of the bricklayer qualification document explains that the qualification is based on four occupational profiles, validated by the social partners in 2005:

- Bricklaying newly built
- Bricklaying all round
- Bricklaying restoration
- Gluing.

The trends and innovation part of this section explains that the construction sector is characterised by ongoing specialisation and that this is also true for bricklaying. Although many firms are active in a wide set of bricklaying activities (smooth stonework, rough stonework, gluing supporting/non supporting partitioning walls, gluing blocks, pointing), a growing number of firms specialise in, for instance, smooth stonework, gluing non supporting partitioning walls, gluing sand-lime elements into complete sets of interior walls and floors). Furthermore, environmental and sustainability issues and Health and Safety regulations have a significant impact on construction activities in terms of work procedures, tools, machinery and other adaptations to prevent health risks. Although a specific Health and Safety certificate ('*Basisveiligheid VCA*') is not obligatory by law, possession of this certificate is a necessary work condition for a great many building sites. It is advised to obtain this certificate.

Section B, gives an overview of the five core tasks and work processes of the bricklayer qualification for all 5 qualifications (Diploma's). This overview is presented in Figure 2:

Figure 2: overview of the Dutch qualification document ‘bricklaying’

| Core tasks 1: bricklaying activities | | | | | |
|--|---------|-----|-----|-----|-----|
| | Diploma | | | | |
| | 2.1 | 2.2 | 3.1 | 3.2 | 3.3 |
| 1.1 preparation of the workplace | x | x | x | x | x |
| 1.2 adjusting and calibration | x | x | x | x | x |
| 1.3 putting up temporary constructions | x | x | x | x | x |
| 1.4 bricklaying | x | x | x | x | x |
| 1.5 putting up construction aids | x | x | x | x | x |
| 1.5 joining | x | x | x | x | x |
| 1.6 covers brick work | x | x | x | x | x |
| 1.8 tidying up the workplace | x | x | x | x | x |
| Core tasks 2: gluing activities | | | | | |
| | Diploma | | | | |
| | 2.1 | 2.2 | 3.1 | 3.2 | 3.3 |
| 2.1 preparation of the workplace | x | x | x | | |
| 2.2 adjusting the perspective/horizon | x | | | | |
| 2.3 adjusting and calibration | x | x | x | | |
| 2.4 putting up temporary constructions | x | | x | | |
| 2.5 put up architectural features | x | x | x | | |
| 2.6 manual adhesive work | x | x | x | | |
| 2.7 mechanized adhesive work | x | | x | | |
| 2.8 finishing gluing | x | x | | | |
| 2.9 cleaning glued surfaces | x | x | x | | |
| 2.10 tidying up the workplace | x | x | x | | |
| Core task 3: Renovation, restoration, rebuilding | | | | | |
| | Diploma | | | | |
| | 2.1 | 2.2 | 3.1 | 3.2 | 3.3 |
| 3.1 drawing up a plan of action | | | | x | |
| 3.2 preparation of the workplace | | | | x | |
| 3.3 removing elements of constructions | | | | x | |
| 3.4 putting up temporary constructions | | | | x | |
| 3.5 repairs construction elements | | | | x | |
| 3.6 covers the new construction elements | | | | x | |
| 3.7 tidying up the workplace | | | | x | |
| Core tasks 4: concrete work | | | | | |
| | Diploma | | | | |
| | 2.1 | 2.2 | 3.1 | 3.2 | 3.3 |
| 4.1 preparation of the workplace | | | | | x |
| 4.2 putting up temporary constructions | | | | | x |
| 4.3 pouring out concrete | | | | | x |
| 4.4 after treatment of poured concrete mortar | | | | | x |
| 4.5 stripping concrete formwork | | | | | x |
| 4.6 works with prefab concrete elements | | | | | x |
| 4.7 tidying up the workplace | | | | | x |
| Core tasks 5: work organisation for gangs | | | | | |
| | Diploma | | | | |
| | 2.1 | 2.2 | 3.1 | 3.2 | 3.3 |
| 5.1 instruction of gang members and division of tasks among gang members | | | x | x | x |
| 5.2 quality control, checks on regulations and instructions | | | x | x | x |
| 5.3 consultation with third parties | | | x | x | x |
| 5.4 check on progress | | | x | x | x |
| 5.5 reports to firm management | | | x | x | x |

The C section contains 130 pages with all work processes subdivided into competence elements, performance indicators and the relevant knowledge and skills. These elements are not included in this document. To give an impression, the information given for the first work process of the first core task (preparation of the workplace) is:

Core task 1

1.1 preparation of the workplace

Description:

A bricklayer operates on an assignment and/or construction drawing when preparing the work place. He (!) studies the situation and draws up a plan of action, possibly after consulting with his colleagues. An all round bricklayer applies, in cooperation with his colleagues, provisions needed to work safely. He takes care that all materials and bricks are in place, cleans surfaces when needed, checks tools, materials and equipment according to numbers, type, quality and regulations.

Result:

An efficient and safe work place with material checked on quality and quantity. The workplace is in order. Someone's work place is not a blockade for others to carry out their work

| competence | elements | performance indicator | skills & knowledge |
|-------------------------------------|--|--|--|
| Carry out instructions & procedures | Operating according to safety regulations Operating according to law-based regulations | A bricklayer follows safety regulations when preparing a work place and applies law-based regulations so that work is carried out according to regulations | (relevant) knowledge and skills for handling tools and aids, needed for working up materials for bricklaying |
| Materials & equipment | Selection of appropriate materials and equipment Taking care of materials and equipment | A bricklayer takes account of the characteristics of materials and takes care of materials and equipment to prevent damage | |
| Cooperation and consultation | Attuning with others | A bricklayer attunes with colleagues when preparing a workplace so that the workplace is designed in an efficient way | |
| Application of expertise | Show insight in space and direction Show trade-specific physical qualities | A bricklayer uses his sense of direction, works fast and exact when preparing the work place and everything is ready for bricklaying | |

4. Competence

4.1 general information

As competences are defined in the context of occupational practice, it is crucial what perspective is taken in defining competences on site. Is it the 'reality of the shop floor' or a constructed definition of a qualification that is inspired by occupational practice, but does not coincide with practice? In Anglo-Saxon definitions, for instance, competence-based education stands for 'a rigid backward mapping approach, in which the state of the art on the shop floor is the starting point for the definition of occupational competencies, leading to routinised job descriptions' (Biemans et al 2004: 527). As a result, National Vocational Qualifications are

mechanistic, reductionist and denying the importance of human agency in processes of learning (Boreham, 2002).

In order to avoid this pitfall, an integrative approach is advocated in the Netherlands. In VET competence is understood as the integration of abilities required to cope with - complex - tasks. What does work demand from a person? In answering this question, Dutch researchers tend to cover a wide area of human behaviour in their definition of competences in terms of knowing, wanting, being and being able. For Mulder (2002), for instance, a person's competencies comprise integrated performance-oriented capabilities, consisting of clusters of knowledge structures, but also cognitive, interactive, affective and, if necessary, psychomotor capabilities, as well as attitudes and values. All are required for carrying out tasks, problem-solving and more generally, effectively functioning in a certain profession, organisation, position or role' (Biemans et al: 530).

In the Netherlands competence is understood as an integrative concept, the concept aims to cover a wide set of abilities required to cope with - complex - tasks. Integrative stands for the fact *i*) that competences are multidimensional and *ii*) that one can only speak of a competent performance if all dimensions are addressed according to a set of standards.

In the definition in the template of the competence based VET qualifications³, 'competences are 'capacities' (that can be developed) of human beings enabling them to act in an adequate and dedicated way with a focus on processes and results. That is to say, to select and apply appropriate procedures to attain the desired outcomes. Competences are multidimensional and refer to underlying skills, knowledge and attitudes'⁴. The significance of competences is context-dependant. As Rychen & Salganic (2003) put it:

Competences are the ability to successfully meet complex demands in a particular context through the mobilization of psychosocial prerequisites (including both cognitive and non-cognitive aspects).

The definition presupposes that a person is competent only under the condition of being able to choose from a wide repertoire of knowledge, skills and behaviour. Competence is not defined by the mere possession of certain knowledge, skills and behaviour *as such*, but by the ability to make an appropriate choice from a wide range of alternatives (all to be mastered by the students) and the ability to amalgamate knowledge, skills and behaviour in a combination the specific situation calls for.

This integrative approach assumes that a performance is only successful when conditions are met; prerequisites have to be fulfilled in terms of skill development and acquisition of knowledge. Nijhof (2008) assumes a causal relation between performances and prerequisites: without - in particular knowledge based - prerequisites a performance cannot be adequate. Both prerequisites and performances need attention, i.e. should be subject of learning. The CBE approach does not differ from the integrative approach in defining learning goals in terms of 'real life' situations taken from working life, but in the exclusion of intermediate goals of the education process - in terms of Bloom's taxonomy, the domains of educational activities.

³ Source: <http://www.colo.nl/begrip.php>. The elements of this definition are taken from an inductive study into the definition of competences, identifying six characteristics frequently encountered in competence definitions:

- Competence is an indivisible cluster of knowledge, insights, skills and attitudes (alternatively - within an HRM or CVT framework - supplemented with the term 'qualities')
- Competence is contextual
- Competence is linked with tasks or activities
- Competence changes over time
- The acquisition of competence assumes learning and development
- Competences have a particular interrelationships (Merrienboer, J. van, Klink, M. van der & Hendriks, M. (2002). *Competenties van complicaties tot compromis. Over schijffes en begrenzers*. Den Haag: Onderwijsraad.

⁴ The knowledge, skills & attitudes triplet is taken from the three domains in Bloom's taxonomy: the cognitive, psychomotor, and affective, also known as knowledge, skills, and attitudes (KSA).

Competence-based qualifications focus on *handelen* (performing, in German: *handlungsfähigkeit*). The aim of VET is to deliver a *competent handelende beroepsbeoefenaar*. This crucial concept can be understood as '*handlungsfähig* behaviour'; somebody's behaviour will demonstrate, in an occupational context, whether or not he/she masters the necessary skills and knowledge and addresses people with an appropriate attitude (as defined by the social codes of the professional community).

Competence-based learning links knowledge to performance ('professional behaviour'). Knowledge must be functional to do the right things in the right way: to know what, to know why, to know how and to know who (to ask for support/advice). But what knowledge is functional? And how can knowledge be made functional? Moreover, what knowledge does one need to evaluate one's professional behaviour and to interpret one's practical experiences (implicit knowledge)? These questions are unanswered so far, and the object of research (Onstenk & Huisman 2007).

Onstenk & Huisman concluded that knowledge transferred in VET courses is derived from three sources:

- Knowledge that is seen by the school/teachers as functional for professional behaviour
- Knowledge that is negotiated by schools (either at system level or at local level) and seen as necessary to move up to VET courses at a higher level or for entering Higher Education
- Knowledge described in the 'Learning, Career and Citizenship competences document'; each VET course has to address the subjects/themes in this document.

The 'knowledge' debate has recently acquired a new impulse from a State Committee Advisory Document defining (minimum) standards for the Dutch language and mathematics for all sectors in the education system, VET included. One of the major reasons for introducing a comprehensive set of standards at system level is to make it easier for students to move on in the system (Expertgroep Doorlopende Leerlijnen Taal en Rekenen 2008). The document aroused mixed feelings in VET; how to compromise between defining language and mathematics as functional elements of occupational competences and identifying language and mathematics as traditional subjects recognisable for other segments of the education system?

It will be obvious that the Dutch equivalent of the term 'skills' is not synonymous with 'competences'. Skills are understood as somebody's practical performance in terms of manual activities and communication. It will not be the skills *as such* that define professional behaviour; professional behaviour also encompasses somebody's manner of operation (attitudes) and knowledge that demonstrates that somebody knows what he/she is doing in terms of ability to explain the organisation of the work process, the choice for a solution, the nature of interventions, etc.

There is no common concept of 'attitude' in Dutch VET, either with reference to learning or behavioural theories or in terms of an interpretation that is shared by all people/ experts involved in the development of qualifications. As can be learned from the various qualification documents, the concept is given different meanings in different qualifications.

The fact that prerequisites have to be derived from working life situations makes the integrative competence concept vulnerable and open for discussion. How much knowledge, and what knowledge precisely, does one need for an adequate, if not state-of-the-art, performance? And does it matter how competence development is organised? A recurrent critique of Dutch stakeholders, also at firm level, on the new competence based VET programmes is that the knowledge component suffers from too little attention, for instance (van der Meijden et al 2009). And while this discussion is only about the amount of

knowledge inserted in a curriculum, what about the *locus* of competence development and the organisation of competence development? Are *loci*, or a variation of learning processes, also essential prerequisites⁵?

The Achilles' heel of the integrative concept is its lack of clear implications for learning and development processes; either at national level, nor at school level (see paragraph 5.4). The problem is not only the great number of definitions of competence and its status as a 'fuzzy concept' (Bon and van der Klink 2002) in a semantic perspective, but also its chameleonic nature in taking the meaning as invested by its users when developing learning processes in terms of qualifications, standards and curricula.

4.2 Knowledge, skills and attitudes in the bricklayer qualifications

According to the national format criteria, all competences should be defined in terms of behaviour, knowledge and skills. Competences, behaviour, knowledge and skills are not listed separately; the definition of competences should be multi-dimensional.

The bricklayers' qualification is defined in these categories, but with information at a low level of complexity, concentrated on job activities. (See for example the information on the first work process in the qualification section of this paper.)

Table 4 summarizes the nature of the competences, attitudes/behaviour, knowledge and skills in the bricklayer qualification file:

Table 4: analyses of the content of bricklayer qualification file

| | Bricklayer |
|-----------------------------|---|
| Competence | Activity based |
| Attitudes/ behaviour | Defined as an element of work processes |
| Knowledge | Occupational knowledge deduced from work processes |
| Skills | No substantial differences between skill and competence |

5. The utilisation of labour

The degree of specialisation in bricklaying depends largely on firm characteristics. Nevertheless, the occupational analyses indicate that all bricklayers cover a relatively wide range of activities in terms of building interior and exterior walls (*schoon en vuil metselwerk*) with various types of bricks, concrete blocks and natural stone, according to technical drawings under different conditions, in different layouts and according to his own work planning. Besides the activities directly related to bricklaying, bricklayers are active in placing insulation materials between walls and (to a lesser extent) gluing concrete and natural stone blocks to facades, but hardly at all in scaffolding, gluing interior wall sand-lime bricks and pointing; pointing is another trade. It is explicitly stated in the occupational profile that being able to work independently is not new for bricklayers, but it is for VET to prepare its students for this competence (Beereboom, 2002).

⁵ See for instance Birenbaum's thesis that there are different types of knowledge demands for different types of learning environments (Birenbaum, M. (2003). *New Insights into Learning and Teaching and Their Implications for Assessment*. See also M. Segers, F. Dochy & E. Cascallar (Eds.). *Optimising New Modes of Assessment: In search of Qualities and Standard*) or Schön's reflective practitioner concept, which argues that it is not competences and behavioural training that determine how actors behave in a particular context, but rather their prior beliefs and personal theories (Schön, cited by Ronald G. Sultana in: *Competence and competence frameworks in career guidance: complex and contested concepts*. Published online: 30 October 2008 _ Springer Science+Business Media B.V. 2008); a theory that clearly has found its way into the curricula of Dutch VET.

Bricklaying is a minor trade in the building industry as can be seen in Table 5. The number of bricklayers has been declining over a long period now, from 38,000 in 1976, 20,000 in 2002 to around 12,000 in 2008. Although the number of people working in the building industry is declining in general for a long period, as can be concluded from Table 6, the decline in the numbers of bricklayers is even faster even if we account for the bricklayers re-entering the industry with a self-employed status (around 15 percent of the number of retiring bricklayers) (Beereboom, 2005):

Table 5: Employment figures for bricklayers

| | 2006 | 2007 | 2008 |
|---|---------|---------|---------|
| Bricklayers* | 15.730 | 12.175 | 12.146 |
| Construction Industry** | 387.000 | 392.000 | 395.000 |
| Bricklayers as % of the Construction Industry | 4 | 3 | 3 |

* source: Fundeon; ** source: CBS (press release PB08-088)

Table 6: Employment figures for the construction industry

| | 2002 | 2003 | 2004 | 2005 |
|---------------------------------|---------|---------|---------|---------|
| Carpenters | 76.558 | 72.617 | 69.806 | 66.956 |
| Bricklayers | 34.416 | 30.848 | 29.219 | 27.805 |
| Total of people working on site | 185.698 | 172.796 | 163.842 | 155.275 |

Source: Bouwend Nederland, 2007

Table 7 indicates that employment in the building industry is declining. This no indication for a declination of production volumes:

Table 7: production volumes (in terms of milliards Euro's, price level 2005)

| | 2003 | 2004 | 2005 | 2006 |
|------------------|--------|--------|--------|--------|
| Building volumes | 46.010 | 45.830 | 46.680 | 49.460 |

Source: Bouwend Nederland, 2007

The use of migrant workers in bricklaying is low according to the figures. However, no recent research figures are available. Research in 2005 concluded that hardly anybody from outside the Netherlands is employed as a bricklayer in the Netherlands. However, 9 percent of companies expect to employ bricklayers from abroad in the near future because of the low numbers of school leavers expected to enter the trade.

Transferability of bricklaying competences to other trades or occupations is limited. The competences are certainly relevant for a career in bricklaying (at higher levels at building sides or in office jobs), but not so much in a horizontal perspective, perhaps with the exception of tiling. Vertical transferability in terms of occupational careers is limited to gang leading and bricklaying-related office work. Horizontal transferability is limited to the number and variety of activities related to bricklaying (including scaffolding and tiling).

Traditionally, figures for absence because of sick leave are high for bricklayers. Table 8 presents figures for carpenters, bricklayers and semi-skilled workers on site. Figures are declining for bricklayers in particular:

Table 8: figures for absence because of sick leave (in % of working time)

| | 2002 | 2003 | 2004 | 2005 |
|--------------|------|------|------|------|
| Carpenters | 6.7 | 5.8 | 5.3 | 5.7 |
| Bricklayers | 8.1 | 5.8 | 5.5 | 5.4 |
| Semi-skilled | 7.3 | 6.6 | 5.9 | 6.1 |

Source: Bouwend Nederland, 2007

Working conditions are severe for bricklayers. Relatively many bricklayers leave the trade because of these working conditions (Beereboom, 2005). The most serious health risks for bricklayers are physical (back trouble, muscles inflammation, high noise levels and the risk of falling from scaffolding lung problems (because of working with unhealthy raw materials) (Arbouw wbsite).

The average age of bricklayers is 40 years (figures from 2003) and is rising. Compared to other occupations in the building industry, this is high. The reason is that the number of people entering the trade is declining as young people prefer other occupations (in the service sector). However, once employed as a bricklayer, people will stay in this trade, for 22 years on average. In 2003 no less than 49 percent of the bricklayers had been employed in the trade 25 years or longer, mostly with a permanent contract with their firm (80 – 90 percent). These figures confirm that initial VET is the most important route into an occupation or trade in the Netherlands. Once qualified for and employed in an occupation/trade, most people will stay in this occupation/trade. Put otherwise, the numbers entering an occupation are to a large extent determined by the numbers of young people entering the IVET courses that prepare for this occupation.

6. The labour market currency of the bricklayer qualification

One consequence of having a comprehensive VET system is the almost monopolistic status of a VET diploma as an entrance ticket to employment. For almost all skilled occupations there is only one route in VET. In terms of currency, differences in the market prospects of VET diplomas is largely, but not only, explained by level. In terms of the risk of unemployment, the ROA Institute concludes (ROA 2007):

- at level 1, 30% of the students are unemployed for a minimum of 4 months
- at level 2, 18% of the students are unemployed for a minimum of 4 months
- at level 3, the number of students unemployed for a minimum of 4 months varies between 2% (health care) and 15% (trade and administration)
- at level 4, the number of students unemployed for a minimum of 4 months varies between 8% (agriculture) and 12% (trade and administration).

Not much data are to be found for the currency of VET diplomas in terms of career prospects. Table 9 gives figures for risks of unemployment and salaries by VET and HE levels. Data are collected from school leavers one year after finishing school (Ibid, p. VI). The table suggests strong links between levels of education, unemployment risk and wage levels:

Table 9: school leavers' views on the currency of diplomas (2007)

| | <i>Unemployment (%)</i> | <i>Gross wage per hour (€)</i> |
|--------------------------|-------------------------|--------------------------------|
| VET 1 | 22 | 5,55 |
| VET 2 | 11 | 6,85 |
| VET 3 | 7 | 8,64 |
| VET 4 | 6 | 9,45 |
| HE (non academic) | 5 | 12,70 |
| HE (academic) | 4 | 14,75 |

Source: ROA (2007). *Schoolverlaters tussen Onderwijs en Arbeidsmarkt*. Maastricht: ROA, p. VI

Table 10 shows the status of the qualifications in industrial relations terms. From section 1 it has become clear that qualifications are produced by social partners first and foremost for educational purposes. Although wage structures, working hours and other labour rights are regulated in most cases through Collective Labour Agreements, wage structures and labour rights are not strictly linked to particular qualifications, the exceptions being occupations that are legally bound to specific (European) regulations (for instance nurses and lorry drivers).

In the case of bricklaying the possessor of this qualification is not automatically entitled to a particular wage grade. However, the collective labour agreement in the building industry is exceptional in having created a wage structure exclusively for young people in VET, on the condition that they are trained via the work-based (dual) track and not via the school-dominated route, in other words on an employment contract. This wage structure was developed a) to attract more young people to the building industry via this training route and b) to stimulate young people to complete their training. In general, links between wage levels and qualifications are of an indirect nature. It is the freedom of employers to assess the currency of a particular qualification and/or qualification level in the process of negotiating a labour contract. Other aspects taken into consideration are usually shortages of labour and experience and age.

Table 10: the status of qualifications in terms of industrial relations

| Industrial relations | bricklayer |
|---|--|
| <i>Occupation subjected to collective labour agreements</i> | yes |
| <i>Qualification- employment ratio</i> | most brick layers have a VET qualification |
| <i>Attractiveness of the qualification/occupation</i> | low, labour shortages |
| <i>Mobility in the school-employment transfer phase</i> | low |
| <i>Occupational career mobility</i> | low |

Bricklaying does not enjoy a particularly high status, as indicated by the diminishing number of students in VET level 2 bricklaying courses. Table 11 shows the destination of trainees at the end of three school years. As a course takes two years, significant numbers will attend the same (bricklaying) course in the next year. However significant numbers transfer to another course. It can also be concluded from Table 9 that over the three years the number of trainees drops.

Table 11: bricklayer trainee destinations at the end of the 2006/2007; 2007/2008 and 2008/2009 school years

| | Not in education anymore | | Same course | | Other course | | Total | |
|-----------|---------------------------------|----------|--------------------|----------|---------------------|----------|----------------|----------|
| | numbers | % | numbers | % | numbers | % | numbers | % |
| 2005/2006 | 216 | 28 | 361 | 46 | 200 | 26 | 777 | 100 |
| 2006/2007 | 205 | 29 | 301 | 43 | 193 | 28 | 699 | 100 |
| 2007/2008 | 189 | 39 | 168 | 34 | 130 | 27 | 487 | 100 |

Source: Fundeon

All construction workers on site are covered by the ‘collective agreement for the construction industry’, signed by the employers’ association and three trade unions and covering about 180,000 employees both in construction, the utilities and civil engineering. For the construction industry, the collective agreement distinguishes five functional groups based on education, experience, health and safety, physical work load, executive tasks and autonomy in work covering 117 job profiles. Lower skilled work for helpers, porters, cleaners is classified at function level A. A ‘second class’ worker beginner, having finished the two-year VET programme is ranked at function level B. A first class worker is classified at function level D. First class workers will have two to three years’ experience and have finished a specialization course (level 4). Additionally, the collective agreement gives the possibility to pay bonus rates, as a fixed part of the weekly wage, and in practice most companies apply these.

All employees are ranked according to their age, experience and education. New entrants are in wage scale B and adult tradespersons with more qualifications and work experience are in scale D. The best skilled workers are paid according to scale D but receive in addition a permanent bonus from 10% to - in exceptional cases - 25% of the rate. Forepersons, instructors and tutors are also paid an additional fee (column D, E). Shift work may be

compensated with a 10% (two shifts) or 15% plus (three shifts) payment. The wage structure is relatively flat.

A separate wage structure exists for young workers, having a dual learning and working contract in the BBL learning track at level 2 in VET. Weekly wages are determined on the basis of a 25 hour week. For younger people, wages rise with age. As they complete parts of their training (modules) or work more hours per week, their wage will rise by a certain percentage so that they arrive at the adult rate by the age of 22. When they are married, they are ranked three additional years in tenure.

For people entering the industry who are inexperienced, there is a special 'entry-wage level', created in order to bridge the 35% difference between the legal minimum wage and function level A, a difference generally held to be too large and a hindrance to those with lower productivity finding a job at about the minimum wage level. The entry wage level, created for this reason in the late 1990s, is equal to the minimum wage in the first half year, plus 25% of the difference between the minimum wage level and function level A. In the second half year, the entry wage is the legal minimum wage plus 50% of the difference so that, after one year, people should at least be calculated according to function level A.

Except for the salary, there are no other labour rights associated with the qualification of bricklaying. Labour rights associated with VET qualifications were explained in section 2.

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