



European Federation  
of Building  
and Woodworkers



Education and Culture DG

Lifelong Learning Programme

**Leonardo Da Vinci Project  
„Bricklayer“**

# **Bricklaying Country report**

## **Belgium (Flanders)**

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# **Introduction**

## **Belgium**

Belgium became independent from the Netherlands in 1830; it was occupied by Germany during World Wars I and II. The country prospered in the past half century as a modern, technologically advanced European state and member of NATO and the EU.

**Population:** 10,414,336 (July 2009 est.)

### ***Age Structure***

0-14 years: 16.1% (male 857,373/ female 822,303)

15-64 years: 66.3% (male 3,480,072/female 3,419,721)

65 years and over: 17.6% (male 760,390/female 1,074,477) (2009 est.)

### ***Economy***

This modern, private-enterprise economy has capitalized on its central geographic location, highly developed transport network, and diversified industrial and commercial base. Industry is concentrated mainly in the populous Flemish area in the north. With few natural resources, Belgium must import substantial quantities of raw materials and export a large volume of manufactures, making its economy unusually dependent on the state of world markets. Roughly three-quarters of its trade is with other EU countries. Public debt is more than 80% of GDP. On the positive side, the government succeeded in balancing its budget during the 2000-2008 period, and income distribution is relatively equal. Belgium began circulating the euro currency in January 2002. Economic growth and foreign direct investment dropped in 2008. In 2009 Belgium is likely to have negative growth, growing unemployment, and a 3% budget deficit, stemming from the worldwide banking crisis.

### ***Unemployment rate***

6.5% (2008)

## **Flanders**

Flanders is both a cultural community and an economic region within the Belgian state, and has significant autonomy. For the last few decades, with the legal establishment of the Flemish Community (Dutch: *de Vlaamse Gemeenschap*), the Flemings have their own political institutions. The parliament and government are the governing institutions of the Community. It has legislative powers for the matters prescribed by the Belgian constitution.

These competencies (among others) include:

1. *Education:* from kindergarten to university incl. scholarships, through the establishment of the period of compulsory education,
2. *Economy, employment and energy policy:* includes government support for business, employment policy, agriculture and fisheries, the distribution of electricity and natural gas, the exploitation of new energy sources and the promotion of responsible use of energy

**Population:** 6,161,600

Since education and employment are competence-related, attributed and assigned to specific communities in Belgium, we would need to write three country reports: one for the Flemish community, one for the French community and one for the German speaking community. We have decided to supply the project with information regarding the situation in Flanders.

# **1. Governance**

## **The role of the state**

The main role of the state is the development of policy in matters of education. This policy is developed in cycles. The minister of Education and Training (or his team of co-workers) prepares a decree (a decree is a Flemish law). In this preparatory stage, the Ministry of education looks (must look) for advice from different third parties (e.g. concerning Finance, concerning the validity of the legislation, ...). One of these important third parties is the 'Vlor' ('*Vlaamse OnderwijsRaad*' = Advisory Council for Education). The council operates independent of the Department of Education and Training and of the Minister responsible. The Vlor is composed of a General Council and a council for each of the four levels of education: primary, secondary, higher and lifelong learning. The Vlor also counts a considerable number of commissions which deal with specific themes or educational forms: special education, vocational training ... This advisory body represents all stakeholders:

- the representative authorities of the organizers of education;
- training centres;
- educational advisory services;
- the teachers and other educative staff via the unions;
- the parents;
- pupils and students;
- the social partners,
- experts with practical educational experience;
- elected heads of school.

When developing policy, the Minister of Education must seek advice from this advisory board. The Vlor however can take the initiative to give advice. In order to fulfil its task, this advisory board has an extensive knowledge centre. After the Vlor has had the opportunity to formulate its advice, the decree can be passed by parliament. Then it is the competence of the Executive branch (Department of Education) to implement policy. While policy is implemented, it is evaluated by schools and inspection (auditing services).

## **Education in the field and the state**

Since freedom of education is stipulated in the Belgian constitution, and therefore it also applies in Flanders, education is organised by different 'networks' or branches' (In Dutch: 'netten', in French: Réseaux'). This guarantees the free choice for a certain school, with a certain educational approach. There are three major branches:

1. Education organized by the community (= organised by the state)
2. Official subsidized education (organised by Municipalities or provinces)
3. Free subsidized education (Catholic schools, Jewish schools, ... or method schools)

All branches have Technical schools, Vocational schools, Special education schools, etc.

### ***Umbrella organisations***

All these schools are united in umbrella organisations (one for state schools, another for the provincial schools, another for city schools, one for catholic schools, etc.)

### ***Governing Bodies***

These bodies can be considered as the board of directors of a (or several) school(s). For the state schools, there is one major Governing Body. For town or provincial schools, the governing body can be the town or the province.

### ***School councils***

A school council is a platform where different stakeholders can interact. It represents parents, students and local stakeholders. It is an advisory board; it is a place for discussions.

### **What are the processes for developing, recognising and regulating qualifications and skills?**

The first step is the drawing up of professional profiles. These documents contain the requirements of the construction industry relating to a skilled and experienced worker. These professional profiles are documents that contain:

- Description of the profession
- Content of the profession
- Tasks and activities (preparatory, executive and supporting)
- Related knowledge, skills and attitudes
- Specific working conditions
- Specific qualification problems
- Future evolution

The objective of these profiles is: “the development of an instrument, validated by a specific sector, which enables the match of vocational training and the reality of the labour market’. These documents are drawn up by means of a standardized procedure. Moreover, before these documents are used, they need to be validated by all representative social partners. One could say that the profiles that relate to the construction industry are drawn up by the construction industry.

The second step consists in drawing up professional educational profiles. This task is undertaken by the Vlor (Flemish educational council). These profiles try to meet these objectives:

- To match education and labour market demands
- To promote the transition of qualified workers
- To guarantee the quality of education

These profiles contain the required skills and supporting knowledge that are supposed to be possessed by a construction worker at the beginning of his career. The third step is the drawing up of educational programmes, which is the sole responsibility of the Governing Bodies. However, most often this task is undertaken by the respective umbrella organisations.

In summary, the state does not decide what the individual school should use as an educational programme. What the state does (by means of the Ministry of Education and Training), is to determine development goals and objectives (=Learning outcomes). The way in which these objectives are met is the responsibility of the vocational schools and/or training centres. Of course, whether or not these objectives are met is evaluated by the state.

### **What is the role of the following in these processes and in VET provision:**

- ***the state?***
  - Develops guidelines, after consulting with social partners and education (Vlor).
- ***the social partners (trade unions and employers associations)?***
  - Social partners are consulted before adapting policy (By means of the Vlor)
- ***educationalists?***
  - They have an imported role. Mostly they stress the importance of general education.
- ***Employers, trade associations, guilds, chambers?***
  - At national level, social partners (employer side) formulate the desires of the employers and trade associations (by means of the Vlor). At a more local level, employers, guilds and chambers can interact with individual schools.

## *In what type/size/sector of activity are those employers involved?*

### **Bricklayers by company size**

Company size	1-4	4-9	10-19	20-49	50-99	100+	total
Bricklayers	1346	1942	3746	7263	3697	6006	24000
Percentage	5.6%	8.1%	15.6%	30.3%	15.4%	25.0%	100.0%
All blue collar workers	139	450	1456	4714	15262	49416	160000
percentage	4.5%	7.5%	12.5%	3.,4%	14.3%	30.9%	100.0%

### **Sector: Number of bricklayers by company size and activity**

Sector	Company size						total
	1-4	4-9	10-19	20-49	50-99	100+	
Stone carving	0%	0%	0%	0%	0%	0%	0%
Demolition	0%	0%	0%	0%	0%	0%	0%
Building	5%	8%	14%	28%	14%	19%	87%
Roofing	0%	0%	0%	0%	0%	0%	0%
(rail)Roads	0%	0%	0%	0%	1%	2%	3%
Dredging	0%	0%	0%	0%	0%	1%	1%
Other hydraulic engineering	0%	0%	0%	0%	0%	1%	2%
Other construction activities	0%	0%	1%	1%	1%	2%	5%
Isolation	0%	0%	0%	0%	0%	0%	0%
Plumbing	0%	0%	0%	0%	0%	0%	0%
Woodwork	0%	0%	0%	0%	0%	0%	0%
Tiling	0%	0%	0%	0%	0%	0%	0%
Other finishing activities	0%	0%	0%	0%	0%	0%	0%
Total	6%	8%	16%	30%	15%	25%	100%

### **What is the division of funding and sources of finance?**

The (Flemish) state finances schools and there is also an important intervention by the federal state in the salary of working people who follow training (Paid Educational Leave, an intervention of 15 euro per hour up to 180 hours per annum).

By means of a levy on all salaries paid to blue collar construction workers, the FVB (foundation for vocational training in the construction industry) receives funding (+/- 0.6% of total salary mass=20,000,000 euros). The mission of the FVB is the promotion and support of vocational training in the construction industry. It is a paritarian organisation (only social partners make up its board of directors). The FVB finances vocational training for employed construction workers (it pays for the cost of the training and refunds a part of the salary paid toward the workers), supports vocational training for the unemployed, and by means of covenants with education and schools, supports the vocational training of students.

### **What is the relationship between public and private training providers?**

In order to be eligible for sectoral financial support, training needs to take place in training centres that are certified by the FVB. This ensures that public as well as private training providers offer the same quality in training.

### **What changes are taking place in governance?**

More emphasis on prior learning, more emphasis on the combination of learning in a school like setting and learning in a workplace.

### **What role, if any, does the collective agreement play?**

=> Collective Labour agreements determine:

- wage grades are determined by means of a (collective labour agreement) CLA. They are the result of the negotiations between social partners. All blue collar workers in the construction industry are subject to this CLA, regardless of occupation.
- In the construction industry, social partners negotiate a CLA, that specifically deals with VET in the construction industry. In order to implement that CLA, the sector founded a foundation for vocational training in the construction industry (FVB).

### **Who are the key players concerning NQF and EQF?**

- Ministry and department of education
- SERV (Flemish Social and Economical Council): a platform where social partners and government interact. Its enables government to take the desires of social partners into account. Policy is not presented to social partners as such, but social partners can influence the development of policy.
- Social partners
- Education

## **2. Vocational Education and Learning**

In order to obtain the qualification of a bricklayer, different routes exist. As a short introduction: the different educational levels in the system will be explained (in a general way, secondary education starting from the age of 12 years).

*Special Secondary Education (BuSO)*: an educational system oriented towards students with a handicap, with learning difficulties or with developmental difficulties. Students can obtain a qualification as a bricklayer as a result of education in this system. In order to obtain this qualification, a student follows a minimum of 2 and a maximum of 4 years of training (training phase in a school, specifically oriented towards masonry/bricklaying. After this first comes the qualification phase, again 2, 3 or 4 years of training, now the student also performs an internship in a company. When successful, the student receives a formal qualification. Afterwards a student can opt for an optional year of learning through a system of alternation (2 days per week in school, 3 days per week in a company). Successful completion results in the qualification of bricklayer.

All the following educational systems try to focus on three domains:

- General education: how to function in society and how to develop oneself as a human being.
- Preparatory education: in order to prepare a student for higher education
- Labour market-oriented orientation: the acquisition of competences that can be used to find a place in the labour market.

All schools (need to) pay attention to general education, preparatory education and labour market-orientation. However, the emphasis can differ according to the type of education. Special education is almost completely oriented towards the labour market. On the other hand, General Secondary Education (ASO) schools prepare students almost solely towards higher education. The six years of secondary education (between the ages of 12 and 18) are divided into three degrees or grades of 2 years. The first grade/degree (year 1 and 2) within all these educational systems is basically the same. In the second grade/degree (year 3 and 4), a student chooses a certain domain (e.g. construction), whilst the third grade/degree (year 5 and 6) consists in the choice of a more specific domain (e.g. all-round construction worker).

*Professional Secondary Education (BSO)*: this educational system seeks to qualify students for employment as skilled workers and contributes to the students' professional and social

development. Students can obtain a qualification as a bricklayer as a result of education in this system. At the second grade, students can opt for the domain Construction; at the third, a student can opt for the specific domain Masonry and Concrete Work and obtain the qualification: all-round Mason and Concrete worker. This qualification is somewhat larger in scope than just Bricklayer (or Mason) because of the demands of the labour market.

Technical Secondary Education (TSO): The goal of this educational system is twofold: to prepare students for the labour market, but also to prepare students for higher education. In the second degree, a student can opt for the domain Construction and Woodworking. A student will learn masonry and bricklaying, but does not obtain a specific Bricklaying qualification. The curriculum focuses more on design than on the execution of tasks.

General Secondary Education (ASO): the goal of this educational system is to provide general education and to prepare students for higher education. As such, this system does not provide construction qualifications.

*Adult Education*: adults can follow courses in centres for adult education. Adults can obtain the qualification of Bricklayer (*Metselaar*) by following several modules.

Therefore, a youngster who seeks to enter into a schooling scheme in order to obtain a VET qualification level needs to successfully finish the second year of secondary education (=finish the first grade).

The aforementioned system consists of full time education in a school (albeit with certain periods of internship). However a youngster who reaches the third grade can also opt for an apprenticeship in alternation. In these systems, a youngster spends most time (60 – 80%) in a company and the remaining time in a recognized school.

The percentage of students in any one cohort following the different routes is:

- Special education: 20%
- Professional education: 40%
- Industrial apprenticeship: 20%
- Self-employed apprenticeship: 20%

There are two different systems of apprenticeship. Although they are very similar with regards to the vocational training, there are differences with regard to the governing body and the ultimate goal.

- *Industrial apprenticeship (JLW)*: a scheme that tries to qualify students to become employed as skilled workers.
- *Self-employed apprenticeship (Leertijd)*: a scheme that tries to qualify students to become self-employed. The major difference between this type of apprenticeship and the industrial apprenticeship consists in the fact that students also learn the basics about ‘business management’. This is a prerequisite if one wants to establish oneself as self-employed. The training within the company is more or less the same as the previous apprenticeship, with this difference: the student spends 80% of time within the company. In the industrial apprenticeship this can be 60%. Training in the school (there exist specific learning centres for this form of apprenticeship) also teaches the students business management, albeit not at MBA level. Many do not become self-employed right away; most of the time they become regular construction workers in order to gain experience.

**What is the type and required duration of VET to obtain bricklaying qualification/s (e.g. apprenticeship, including different levels)?**

- Special education: a minimum of 3 years, depending on the specific situation of the student
- Professional education: full time: 4 years

- Apprenticeship: 3 years
- Adult education: 3 years

**What are the main locations of VET provision (e.g., college, classroom, workshop, and workplace)?**

- *Professional education*: classroom, workshop, internships (9 weeks per annum)
- *Apprenticeship*:
  - Classroom, workshop (together 40% of the time). These classrooms and workshops are set up in educational centres that exist specifically for this target audience. However, these ‘educational centres for alternation’ are always tied to a vocational college, except as concerns the self-employed apprenticeship for which specific learning centres exist.
  - workplace (60% of the time)

***What happens in each place and how is this monitored? By whom?***

- Classroom: theoretical education, by a teacher
- Workshop: Vocational training, by a practical teacher
- Workplace: person who is responsible for training (person who is certified by the FVB to fulfil this role).

***Monitoring***

Special and Professional Education: since a lot of the responsibility with regard to the quality and effectiveness (are the learning outcomes reached) of educational schemes lies within the discretion of the governing body or the school, the State audits schools to see whether learning outcomes are achieved. Moreover, this Auditing Service also audits:

- whether schools meet minimal requirements and follow the approved educational programmes.
- whether learning outcomes are met
- whether the infrastructure is adequate

To perform these audits, the different teams evaluate documents as provided by the schools regarding:

- Vision
- Decision making (reports, etc.)
- Quality Management
- Human Resources Management
- Wellness
- Learning Programmes and Curriculum
- Outcomes (transition, completion rate, etc.)
- Client Satisfaction

The Audit Service also makes on site visits. As an important player in the field of education, it may also advise the Minister of Education.

*Industrial Apprenticeship*: Within the construction industry there is a Committee on Learning in the Construction Industry. It is composed of the social partners of the construction industry. It has an important role to fulfil. Before an industrial apprenticeship comes into effect, a contract must be signed between the pupil and a company. This contract must be recognised by this committee.

Other prerequisites that need to be met:

- The company must appoint a Training Responsible (e.g. an experienced worker). This person needs to meet specific requirements (age, experience, etc.)

- The trainee needs to follow training in a Centre for Alternating Education. This centre needs to be approved by the committee. It is evaluated on aspects like: qualified personnel, presence of the necessary material and tools, safety, etc.
- Learning Programme. The learning programme is custom made. It takes into account the specific situation of the youngster. It is based upon the professional profile for a bricklayer.
- During the apprenticeship, the youngster is evaluated by means of tests. The final test is a practical test, where the youngster is evaluated by a representative of the School (Centre for Alternating Education), of the company, and of the FVB (to represent the construction industry) and by local social partners.
- The centres for alternating education are audited by the ministry of education (Audit Services). The in-company training is evaluated by employees of the FVB.

### **What pedagogical approaches does it involve (e.g. directive, self-directed, interactive)?**

In the Flemish educational system, each school is responsible for enabling students to obtain learning outcomes. However, the way in which students obtain these learning outcomes lies within the discretion of the school. Therefore, the pedagogical approaches can be quite diverse.

### **How far does VET cover other related occupational areas (e.g. stone masonry, concrete work)?**

Related areas are also covered in VET, such as: concrete work, form setter and steel fixer.

### **How does theory relate to practice?**

Theory always supports practice.

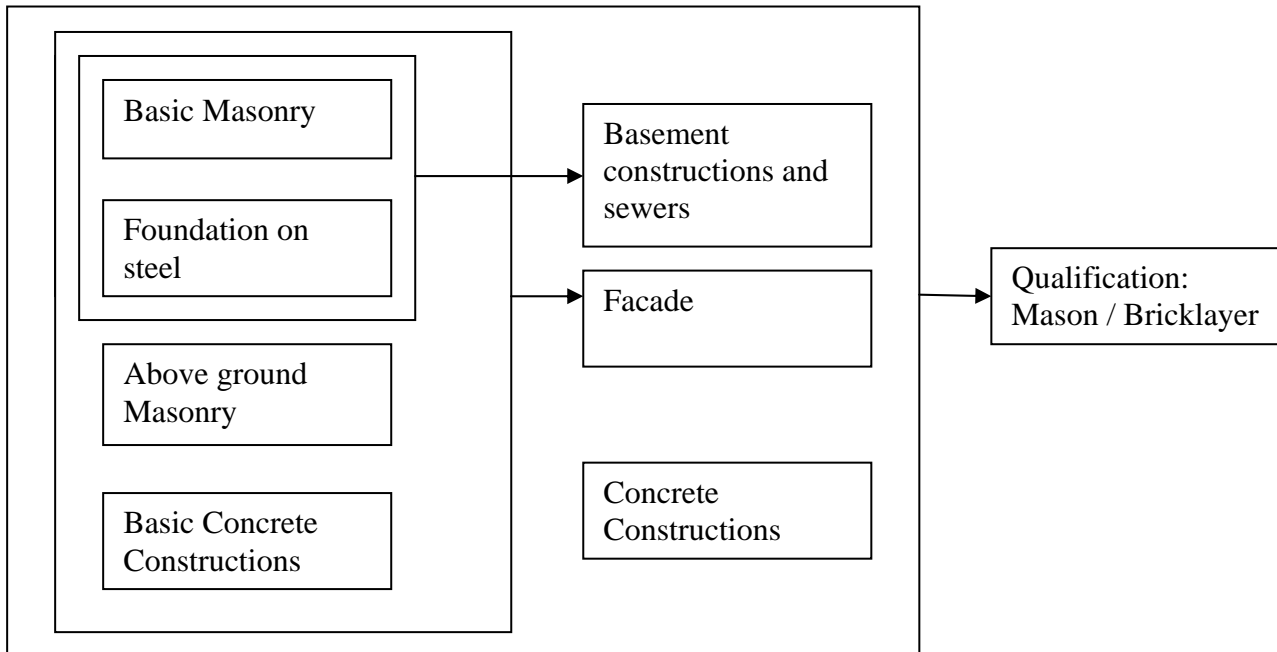
### **What is the structure and content of the curriculum?**

The structure and content is fully modularized. This means that the entire curriculum is subdivided in different modules and the completion of one module entitles the student to a certificate. As a result, a student who does not completely finish his/her education still possesses several certificates. In order to present the structure and content of the curriculum, the different modules that make up the qualification of Bricklayer/Mason (Metselaar) will be presented. In total the entire qualification of Bricklayer can be obtained after following seven modules. These modules exist in the different educational systems (Special Secondary education, Professional Education and Adult education offer the same modules). The different learning programmes (=operationalisation of the modules within a certain school) can differ with regard to target audience and educational system. Some of these modules will be shown in detail. The information about all related modules is available in the Dutch language.

In special education, adult education and the different apprenticeship schemes, only the modules related to the competence of Mason are dealt with. However, within the professional educational system, the education is not limited to these modules. After full completion of the domain Masonry and Concrete work in Professional Secondary Education, one obtains the qualification of All-round construction worker. This qualification basically entails three other qualifications: Mason, Form Setter and steel fixer. But even when one does not fully complete this secondary education, the aggregate of the different modules, as presented in the scheme below, yield the qualification of bricklayer. These modules, when successfully completed will yield the qualification of Mason. Not all of these modules will be presented in detail. The following modules will be shown as an example:

- Basic Masonry,
- Foundation on steel,
- Vertical Masonry,
- Facade

## Modules:



### *Content modules*

These modules form the basis for all pathways, except for the two apprenticeship schemes. In these schemes the curriculum is more tailor-made to fit the needs of the particular student. However, the basis for the modules and the individual learning programme is the professional profile.

### **1. Basic Masonry**

=> Execution of simple masonry.

### *Entrance requirements*

Finished first degree of secondary education

### *Content:*

1. Basic competences
  - a. The pupil can:
    1. plan his activities
      - a. prepare his workplace
      - b. judge the usability of materials
    2. follow guidelines concerning quality, wellbeing and environment
      - a. Evaluate ones one work
      - b. Apply rules
      - c. Follow guidelines about hygiene
      - d. Keep a descent workplace
      - e. Maintain tools and protective equipment
    3. Perform masonry
      - a. Make mortar
      - b. Lay bricks
      - c. Construct walls
      - d. Joint
2. Integrated learning outcomes (these learning outcomes are integrated into general courses (math, language, etc.)
  - a. The pupil can:
    1. Listen and read

2. Use basic math, can assess, measure and calculate measurements an functional situations
  3. Use and understand textual material and forms.
  4. Organise, execute and evaluate simple tasks
  5. Respect the environment.
3. Key Skills
- i. Persistence
  - ii. Ability to learn
  - iii. Safety and environmental consciousness
  - iv. Orientation towards ergonomics.

## 2. Foundation on steel

=> Execution of foundations on steel. It entails manual digging, preparation of concrete work, bricklaying of foundation walls etc. ... The masonry must be able to resist weight and protruding groundwater.

### *Entrance requirements*

Certificate Basic Masonry

### *Content:*

1. Basic competences
  - a. The pupil can:
    1. Plan his activities
      - a. Clarify his assignments
      - b. Prepare his workplace
    2. follow guidelines concerning quality, wellbeing and environment
      - a. conform to safety measures
      - b. work in an ergonomic fashion
      - c. evaluate his work
      - d. sort and store waist and left over products
    3. perform groundwork
      - a. dig and level ditches of pits
      - b. assess danger while digging
      - c. assess the extent of support soil will give
      - d. distinguish between touched and untouched soil
      - e. fill ditches and pits
      - f. install and connection an earth connection
    4. execute subterranean foundation masonry
      - a. mason concrete walls
      - b. mason tubs
      - c. apply a layer of mortar
      - d. install draining and protection material against the walls
      - e. attach foundation and the floor
    5. construct floors
      - a. install foil
      - b. install reinforcement
      - c. attach tubes
      - d. dump concrete and level it
2. Integrated learning outcomes (these learning outcomes are integrated into general courses (math, language, etc.))
  - a. The pupil can:
    - i. Use adapted language and social skills

- ii. Read and interpret a schematic representation
  - iii. Use and understand textual material and forms.
  - iv. Organise, execute and evaluate simple individual assignments. In the case of a group assignment, he or she can negotiate and participate, follow instructions, reflect.
  - v. Respect the environment
3. Key Skills
- i. Persistence
  - ii. Plan ones work
  - iii. Ability to learn
  - iv. Safety and environmental consciousness
  - v. Oriented towards ergonomics.

### 3. Aboveground Masonry

=> Masonry of walls, hollow walls, door and window spaces

*Entrance requirements*

Certificate of Basic Masonry

*Content:*

1. Basic competences
  - a. The pupil can:
    1. Plan his activities
      - a. Clarify his work assignments
      - b. Prepare his workplace
    2. follow guidelines concerning quality, wellbeing and environment
      - a. conform to safety measures
      - b. work in an ergonomic fashion
      - c. evaluate his work
      - d. sort and store waste and left over products
    3. install scaffolding and ladders
      - a. install rigid and spirit level scaffolding
      - b. defend his choice for mortar or glue
      - c. judge the usability of mortar and glue
    4. perform masonry
      - a. saw or chop bricks to the right size
      - b. construct walls out of bricks and building blocks
      - c. masonry of columns
      - d. masonry of double leaf walls
      - e. construction of spans across window or door spaces
      - f. reinforce masonry
    5. glueing of bricks and building blocks
      - a. saw or chop bricks to the right size
      - b. construct walls by means of glueing bricks and building blocks
    6. install moisture isolation
      - a. determine the place where it should be installed
      - b. install isolation in single or hollow walls
    7. joint
      - a. scratch out joints
      - b. joint

- c. execute pre-treatment and post treatment
- 2. Integrated learning outcomes
  - i. Use adapted language and social skills
  - ii. Read and interpret a schematic representation
  - iii. Use and understand textual material and forms.
  - iv. Organise, execute and evaluate simple individual assignments. In the case of a group assignment, he or she can negotiate and participate, follow instructions, reflect.
  - v. Respect the environment
- 3. Key skills
  - i. Persistence
  - ii. Plan ones work
  - iii. Ability to learn
  - iv. Safety and environmental consciousness
  - v. Oriented towards cooperation

#### **4. Façade**

=> This module mainly focuses on the construction of hollow walls (or veneer walls). Contrary to above-ground masonry, this kind of masonry will greatly determine the looks of a building.

##### *Entrance requirements*

Certificate of modules: basic masonry, foundation on steel, concrete constructions.

##### *Content:*

- 1. Basic competences
  - a. The pupil can:
    - 1. plan his activities
      - a. Clarify his work assignments
      - b. Draw work plans
      - c. Prepare his workplace
      - d. Perform administrative tasks regarding his activities
    - 2. follow guidelines concerning quality, wellbeing and environment
      - a. finish the work in the allotted time
      - b. evaluate his work
      - c. secure one's own and another one's safety and well being
      - d. work in an ergonomic way
    - 3. perform masonry
      - a. erect and take down scaffolding and ladders
      - b. make mortar
      - c. mason bricks, building blocks and natural stone
      - d. saw or chop bricks to the right size
      - e. construct hollow walls
      - f. perform simple decorative masonry
      - g. create door and window openings with horizontal and non-horizontal spans
      - h. reinforce masonry
      - i. install and protect provisory tubes
      - j. scratch out joints
    - 4. install moisture isolation

- a. determine the place where it should be installed
    - b. install isolation in single or hollow walls
    - c. install of vent rosters
  5. install thermal isolation
    - a. prepare the surface that needs isolation
    - b. cut materials
    - c. put materials in hollow walls
  6. install elements in the masonry
    - a. check and prepare the surface
    - b. elaborate on the different prefabricated elements
    - c. install wainscot
  7. joint
    - a. joint
    - b. prepare joint mortar
    - c. guarantee steady color and quality
2. Integrated learning outcomes: students
  - i. Students can use information gathered orally; they can put simple information in writing
  - ii. Apply proportions:
    - percentages
    - scaling
    - Rule of three
  - iii. Plan, organise, execute, evaluate en adapt assignments.
  - iv. During group assignments they can:
    - discuss and participate
    - execute assignments in team
    - Reflect and adapt
  - v. Are motivated to look after one's own and another one's health and well being. Assume a safe attitude in daily situations.
3. Key skills/attitudes
  - i. Accuracy
  - ii. Flexibility
  - iii. Result-oriented
  - iv. Safety and environmental consciousness
  - v. Autonomy
  - vi. Sense for co-operation
  - vii. Sense of aesthetics

**What are the proportions and types of students by level of qualification and as % of workers in the occupation?**

- Special education: 346 students in their final two years
- Professional education: 908 students in their final two years
- Industrial Apprenticeship: 367 students
- Self employed apprenticeship: 387 students
- Adult education: no data

**What are the completion/ drop-out rates?**

No such data

**What is the extent of modularisation?**

In the school system modularisation is 100% This modularisation means that a student, after successfully completing a module, receives a certificate. In order to be eligible for certain (more advanced modules) modules, a student must possess certificates of specific module(s).

The possession of a certificate is also a way of giving a student an intermediate view of his learning progress. It enables a student to be more flexible; if a student wants to change his objective (e.g. a change from all round construction worker towards another vocation), he can use (if they are relevant) certificates of certain modules towards his new objective. Furthermore, a qualification (e.g. mason) can be obtained by means of obtaining the certificates for the different modules as presented in the text above.

#### **Do courses allow for accreditation of prior learning (APL)?**

Courses do not as a rule allow for APL accreditation. Of course when a student has a certificate of a certain module, he can use this certificate to become eligible for certain modules. When starting an apprenticeship, the specific experience of a student is also taken into account when determining the learning programme.

#### **How important is informal learning and what forms does it take (e.g. tutorship)?**

Informal learning is important in respect to the socialisation within a company. It enables workers to know the ropes, especially concerning the particular way of doing things within a given company. Informal learning is also important because, albeit students who have obtained a qualification should be 'competent', new bees can still learn a great deal from experienced colleagues, especially in regards to quality and speed of work.

#### **What is the role, nature and organisation of continuing VET ?**

Continuing VET can take place in public or private training centres. In order to lower the threshold for companies who want to organize training sessions for their workers, there is an important financial contribution from the FVB. The FVB pays for the cost of the training and intervenes in the wage cost for up to 18 Euros a month. The FVB can do this because it is financed by a levy on all wages paid to construction workers. The mission of the FVB is the promotion and support of vocational training in the construction industry. It is paritarian organisation (only social partners make up its board of directors).

#### **What changes are occurring in VET for bricklaying? What are the reasons for these?**

No major changes.

### **3. Qualification**

#### **What are the relevant bricklaying qualifications (including at different levels)?**

- Professional education: fulltime schooling can result in a bricklaying qualification.
- Technical education: fulltime schooling can result in a bricklaying qualification
- Special education: fulltime schooling can result in a bricklaying qualification
- Apprenticeship: for youngsters 15-18: can result in a qualification
- Apprenticeship: for young unemployed (18-25): can result in a qualification
- Adult education: can result in a qualification

#### ***Relevant qualifications:***

Form setter, Iron fixer, decorative masonry, restorative masonry, renovation masonry.

#### ***What are the completion/ drop-out rates?***

No such data

#### **How are occupational standards defined, and what is their role?**

Occupational standards (professional profiles) are validated by social partners. They are the basis to determining learning outcomes in different pathways (classroom-based, learning and/or in training centres). They are developed in a structured and scientific way.

- First, different source material is gathered: courses, manuals, literature, but also interviews with companies and experts.
- Secondly, a draft version is produced. This draft version is presented to social partners and experts in the field, so as to allow for corrections and changes.
- Thirdly, the final document is presented to all relevant social partners. After this stage minor alterations remain possible. This process guarantees that all social partners agree on the content of the document. As such, it can be used as the occupational standard or reference material. It is therefore used as source material for school courses, for modules, and also for training in training centres, etc.

### **What is the understanding of and relationship between learning inputs and outputs?**

Education in Flanders is fully oriented towards learning outputs. As mentioned before, the state decides on the learning outcomes. An overview of some relevant learning outcomes concerning masonry modules is given above. It is the role of the schools to develop specific learning programmes that enable students to reach the learning outcomes (“eindtermen”). Learning outcomes are defined with regards to specific courses, other learning outcomes do not relate to specific courses but should transgress courses.

As an example: the basic competences should be reached during practical courses. The integrated learning outcomes should be obtained during the general courses. The key skills should be the results of the overall schooling.

As such, as far as schools are concerned, they have the obligation to reach results (= learning outcomes reached); the way in which the learning outcomes are reached is their responsibility. When taking this all into account, one might say that the emphasis lies on the learning output, instead of on the learning input.

### ***How are learning outcomes defined and what is their role?***

Learning outcomes are defined by the Ministry of Education. Because freedom of education is one of the four liberties that are stipulated in the Belgian constitution, government cannot oblige schools to reach those learning outcomes in a certain way. So: government defines learning outcomes.

These learning outcomes are derived from the professional profiles (occupational standards). These are documents that contain all tasks and competences that a certain professional needs to perform, and for which certain competences are needed. Schools define the ‘roadmaps’ to those learning outcomes. As mentioned, they have a large degree of freedom in the development of these roadmaps.

### ***What is the role of curricula?***

The curricula are the aforementioned roadmaps. They are the specific way in which schools try to enable students to obtain learning outcomes. The curriculum is made up of:

- *General courses* (that can be grouped into one “Project General Courses”. Students need to work on a project, that should enable them to obtain all of the related learning outcomes).
- *Practical courses*: courses related to construction (Masonry)
- *Short internships* in companies.

### **What is the assessment process and who is involved?**

#### ***Assessment in professional education:***

During the student’s career, he/she has regular tests and exams to monitor advancement. These tests are organised by the teachers or school. The validity of these tests can be monitored by de Auditing services. At the end of the final year, the youngster has to pass an

Integrated Test. This test consists in an assignment that is given to the student, a practical assignment which he/she must fulfil in a satisfactory way. He/she must present and defend his/her masterpiece in front of a jury. This jury is composed of members of the school, teachers of practical and theoretical courses, entrepreneurs from the construction industry, etc. The goal is to assess all the competences that were acquired throughout the student's entire student career.

***Assessment in an apprenticeship:***

After the first year, the apprenticeship is evaluated by employees of the FVB/FCC, representatives of the school for alternation, etc..

After completion of the apprenticeship, the student is assessed by means of two tests. There is a test within the school for alternation. When passing this, the student obtains a degree that is awarded by the state. Besides this school-based test, there is also a final test in which he (or she) is given a practical assignment. Again, this test is presented to a jury composed of the employer of the student, a teacher of the school for alternation, a representative of the FVB/FCC. When successful, the youngster receives a certificate that is awarded by the construction industry.

**How are attainment levels specified?**

Attainment levels are specified as described above in the content of the different modules.

**What is the transferability/permeability of the qualification?**

The qualification obtained can be used to gain access to complementary courses (e.g. decorative masonry). It can be used to prove the necessary practical skills when setting oneself up as a self-employed worker.

**How do qualifications take account of/ provide scope for innovations?**

Qualifications provide no specific scope for innovations.

**What are related qualifications?**

- decorative masonry,
- restorative masonry,
- renovation masonry
- form setting
- iron fixer
- All round construction worker

**Is there an APL process in place?**

Since the educational system for bricklayer is completely modularized, there is an APL process. When students obtain intermediate certificates for certain modules, they can use these to enter into subsequent modules.

Secondly, whenever a student enters an apprentice scheme, an individual learning programme is drawn up (albeit based on existing frameworks). While developing this individual learning programme, prior knowledge and skills are taken into account.

**What role does certification play?**

For workers who work on scaffolding or other places of height, there is a certification concerning 'working in high places'. Another certificate that exists in the Belgian construction industry is the 'Safety certificate'. All students who are enrolled in compulsory education can obtain this certificate after passing an exam. This exam is evaluated by an independent partner.

**Is the qualification changing?**

No

## **4. Knowledge, Skills, Competence**

**How is competence understood and what role does it play in qualifications, VET and in workplace/ labour market practice? e.g. task-based, occupational, procedural, social and personal competence**

Competence is the mixture of knowledge, skills and attitudes. It is mostly task-based. Students, trainees, etc. need to be able to accomplish tasks. The aggregation of accomplishing different tasks should enable them to be competent in a certain occupation. In order to perform tasks, they need knowledge (properties of mortar), skills (placing of bricks and combining them with mortar) and (work) attitudes (e.g. a certain degree of accuracy, efficiency, teamwork, etc.). Learning outcomes are described in terms of competences: A student can perform a task, a student knows certain facts, or a student has a certain attitude.

**How is knowledge understood, and what is the significance of knowledge to competence? e.g. theoretical, practical, occupational, industrial.**

Knowledge is considered to be theoretical. For instance, a mason needs to know the properties of certain types of cement or certain types of mixtures of mortar (e.g. with regard to temperature in which it is used, the time it takes to harden, etc.). This is theoretical knowledge, which of course can be used in a practical or work like setting.

**How are skills understood, and what is the significance of skills to competence? e.g. cognitive, practical, social, psychophysical**

Skills: is the psychophysical ability to perform a certain task.

**What is the extent of integration of knowledge, skills and competence and what is the main learning place/location of each?**

- Theoretical knowledge: classroom
- Skills: workshop or workplace
- Attitudes: workshop or workplace

Since learning outcomes are defined in terms of competences, or the possibility to perform a certain tasks, all underlying knowledge, skills and attitudes are supposed to be present.

**What are the processes for achieving and assessing competence and its components?**

The assessment can be dual, theoretical knowledge can be assessed by means of an 'exam' (oral or written). Skills and attitudes (but also knowledge) can be assessed by making trainees perform certain tasks (e.g. construction of a certain type of wall).

**How does competence relate to the education dimension?**

Competences can clearly be found in the learning outcomes as described in the different modules.

**Are there practical skill tests? What form do these take?**

Yes there are, for example, trainees or students in order to obtain their qualification need to make a 'masterpiece', which basically is a practical skill test. By way of this, indirectly, theoretical knowledge may also be assessed.

**What transferable skills are identifiable?**

In the description of some of the modules that give way to the Qualification of Mason (bricklayer), a lot of transferable skills can be found :

- Students can use gathered information orally, they can put simple information in writing
- Students can apply proportions:
  - percentages
  - scaling
  - Rule of three

Almost all of the integrated learning outcomes and key skills can be considered to be transferable.

### **What is the level and scope of responsibility/ autonomy achieved through competence?**

A bricklayer is a blue collar worker who works under the supervision of a foreman. Under this supervision, he performs tasks which he is ordered to do.

## **5. Utilisation of labour**

### **What is the understanding/ definition of:**

- **the 'sector'**; *Construction sector*, all companies active in: Demolition, deconstruction, laying of foundations, excavating, drilling of holes, groundwork, bricklaying, woodwork, roofing, HVAC, plastering, painting, masonry, plumbing, scaffolding, dredging, renovation, restoration, road building, water management, etc.
- **the 'occupation'**; Dutch: *metselaar* ; French: *maçon*. The skilled worker who builds constructions out of bricks, blocks and stones, by means of mortar. He constructs inner and outside walls, but also lays down foundations. He connects plumbing, and sewage systems. Sometimes he assembles scaffolding, installs insulation.

### **What are the scopes and types of activities bricklayers fulfil in the workplace?**

The skilled worker who builds constructions out of bricks, blocks and stones, by means of mortar. He constructs inner and outside walls, but also lays down foundations. He connects plumbing, and sewage systems. Sometimes he assembles scaffolding, installs insulation

#### ***Non manual tasks:***

- Planning:
  - planning and organising the work
  - inventory of materials
  - contacts with suppliers
- guaranteeing safety and hygiene.
  - Paying attention to safety measures and applying them
  - Posting complaints when necessary
- Quality management
  - Respecting deadlines
  - Inform about the demands of the client
  - Dealing with work permits
  - Dealing with customers, contractors and co-workers

**What sectors of activity (house building, commercial, repair and maintenance) are they involved in?** House building, commercial building, repair and maintenance, restoration, ...

### **What is the degree of specialisation?**

Specialisation varies. In SMEs there is a lesser degree of specialisation when compared to bricklayers active in larger companies. In larger sized companies, there is a higher degree of specialisation, whereas smaller companies require bricklayers that are more 'all round' (e.g. plastering, etc.). This explains why the fulltime professional education does not only require students to obtain the qualification, but also the qualification of form setter and iron fixer.

Smaller sized companies need these all-round employees, whereas larger companies can make do with specialized employees.

### **What are the available routes for progression?**

By gaining experience and acquiring skills, one can reach a higher pay grade. If one desires, one can become a foreman of a gang or one can start one's own company. In order to do this latter, one must prove that one is qualified on several topics:

- one needs to prove that one is qualified for the job (e.g. by means of a qualification);
- one needs to prove that one is skilled in administration as this relates to the construction industry.
- One needs to prove that one can manage a company.

There is a specific apprentice scheme that prepares students to become self-employed. Besides this, the construction industry offers a wide array of different training modules, accessible to all construction workers.

### **How mobile is the workforce?**

Typically, the Flemish (and to an extent the Belgian) workforce lacks geographical mobility; the typical worker is bound to a certain geographical region. However, within the construction sector, there exists a large degree of turnover (rotation of employees within in the sector and towards other sectors).

On a yearly basis, turnover in the construction industry in Belgium is 25%. This means that one in four employees leave their employer for another one per annum. 10% is the turnover within construction (a construction worker who finds a new position within the construction industry). 15% leave the construction industry (retirement, change of sector, unemployment, etc.). These numbers also apply to bricklayers, although the specific sectors and company sizes in which bricklayers are active are confronted with an even higher turnover. Most of the time, the reason why people want to leave the construction industry, is because of the lack of career opportunities, the physical hard work and the salary level.

### **What is the extent of migrant labour used? Where do migrants come from? In which areas are they employed?**

In 2006, 404 workers from Poland, Czech Republic, Slovakia, Slovakia, Slovenia, Hungary, Estonia, Latvia and Lithuania worked in Belgium. In 2007 there were 1254 and in 2008 there were 1195 (active as bricklayers / tilers).

### **What related occupations are there? Do bricklayers ever fulfil some of the work involved?**

Construction of sewers, plastering, setting up of scaffolds, jointing. Bricklayers do fulfil some of the work involved, especially in smaller sized construction companies (which is the vast majority). Research shows that bricklayers most often perform tasks related to the following professions:

- Form setter
- Tiler
- Scaffolding
- Jointer
- Woodworking
- Driver

### **What is the process of entry/recruitment/access to the occupation?**

Recruitment is often done by means of informal channels; often people receive information about job opportunities by word of mouth (through friends, family, etc.). Sometimes entire

gangs of bricklayers change one employer for the benefit of another. Another entrance route is an apprenticeship. In larger sized companies, entrance routes can be more formal.

### **What health and safety risks are associated with bricklaying?**

- Bruises and injuries as a result of getting caught in a mortar mixer or as a result of handling heavy and large bricks or stones.
- Electrocution
- Slipping and/or falling when working on a scaffold.
- Injuries as a result of handling cement (burns, irritation, etc.)
- Injuries as a result of handling isolation materials (e.g. rock wool or glass wool)
- Inhaling of dust
- Loud noises can impair hearing
- Lifting of heavy objects can result in problems with joints and muscles

**What is the usual type of employer (main contractor, subcontractor, labour-only subcontractor)?** Main contractor

### **What employment status do bricklayers have (e.g. self-employed, agency, temporary)**

Blue collar construction workers on permanent contracts. In Flanders and Belgium there is a difference (with an impact on social legislation) between blue collar workers (manual labour) and white collar workers (intellectual labour). There exist no specific data on self-employed masons, but the overall proportion in the construction industry is one self employed for every four blue collar workers. 4% of the total workforce are temporary workers working through agencies.

### **What tools and equipment are required to be used by the bricklayer? Who provides these?**

Mixer, water, cement, hammers, cord, profiles, trowels, wood, spirit level, folding rule, boots with steel tips (and other protective gear), broom, joint filler ...They are provided by the employer. When a bricklayer uses his own material, he will receive an allowance.

### **What changes are observable in the occupation and the activities involved, including regarding technology and work organisation?**

Product innovation: glue in stead of mortar, the usage of 'ytong' blocks, the use of prefabricated elements.

## **6. Currency of qualification**

### **What is the status of bricklaying in the occupation/ the sector/ society?**

The status of bricklaying in the sector is rather high, though in society the status is lower as is typical (sad but true) for many jobs that require manual labour.

### **What is the value of qualifications/ skills on the labour market?**

Bricklaying features on a list containing all the professions for which there is a shortage of skilled workers. Therefore, someone who has the qualifications/skills is valued highly on the labour market. However, because of the lack of skilled workers, construction companies often have to make do with other not-qualified workers. Often those unskilled (who do not possess the qualification of bricklayer) workers will receive on the job training or they can follow short modules in private or public training centres.

There has never been a requirement to have the qualification, although ideally a future employer would prefer to hire someone who was qualified. But in no way was there an obligation to do so. He could just as well hire someone with no qualifications.

**What value does the qualification have for entry to further/higher education?**

When finishing secondary technical education, you are eligible to go into further/higher education. When finishing professional education a person is not eligible to enter further/higher education. A student who finishes professional education up to the compulsory age of 18, can choose however to continue his education in what has been commonly referred to as a 'seventh' year (since secondary education consists of 6 years). The student can opt for different specialisations within the field of masonry (decorative masonry, restorative masonry, renovation masonry), the entry requirement being of course the possession of the qualification of Mason (bricklayer / *metselaar*).

**How important is the bricklayer as an occupation in the sector?**

Bricklaying is rather important. As a profession, bricklaying is still the 'foundation' of construction work. Most houses constructed are still brick houses. In Belgium, there are about 160,000 (Flanders: 100,000) blue collar workers (manual labour) active in the construction industry, 20,000 (Flanders: 13,000) white collar workers (intellectual labour) active in the constructive industry, and 40,000 (Flanders 23,500) self employed.

Detailed information about the occupation only exists for the population of manual workers. In total, there are 24,000 bricklayers (*metselaars*) active in the construction industry (14,000 in Flanders).

Bricklayers are more present in smaller sized companies. They are the largest group of professionals active as blue collar workers in the construction industry, followed by woodworkers (20,000 in total).

**What are the proportions of workers holding the qualification?**

There exists no data on this topic.

**What is the profile of workers with bricklaying qualifications?**

There exists no data on this topic

**Is there a link between qualifications/skills and pay? (e.g. through collective agreements?)**

In a way there is a link between qualifications/skills and pay. The graded wage structure consists of six different wage scales. Someone who obtained a qualification as a result of fulltime education will immediately enter in the second wage scale. Someone who obtained the qualification as result of an apprenticeship will start in the 1st wage scale, but this needs to be re-evaluated after nine months.

**What is the basis of the wage for bricklayers paid (e.g. output/performance, time)?**

Time and only time. A working day consists of 8 hours, commuting is not part of these 8 hours. The collective labour agreement contains specific regulations (overtime, working during the weekend, training, etc.)

**What is the average weekly earning of the bricklayer? How does this compare with related skilled occupations in the sector (e.g. carpenter)?**

Since there is a sector-wide graded wage structure, every construction worker basically has the same earning. What differs is the wage grade in which an individual finds himself. The weekly earning: 550 euro before income taxes.

**Are there any labour rights associated with the qualification?**

Rights as related to the entry position in the graded wage structure.

**Are there changes in the currency of the qualification? No**