

Referencing report for the Principality of Liechtenstein (NQFL)



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Foreword

The Principality of Liechtenstein, like many other EU Member States as well as Switzerland, has decided to classify its own vocational and university qualifications according to a National Qualifications Framework (NQF) the basis of which is the European Qualifications Framework (EQF).

This qualifications framework has been established to facilitate comparability of educational qualifications and levels, to promote regional and occupational mobility, transparency and lifelong learning.

The qualification framework consists of eight qualification levels based on learning outcomes which are defined in terms of knowledge, skills and competences. The focus is on what a person with a specific educational background actually knows and how he is able to apply this knowledge. This will improve the concordance between education and labor market needs and will facilitate the use of a qualification across different EU countries.



Liechtenstein has internationally oriented industrial, commercial, service and educational sectors which on an educational level are well connected regionally as well as Europe-wide. The comparability and transparency of the qualifications obtained are important criteria for promoting educational and economic quality.

Educational mobility is of great importance to Liechtenstein, as many young Liechtenstein students look to other countries for further training once they have completed their compulsory schooling. With this in mind, the European efforts to promote educational mobility are of great importance to our country.

Liechtenstein traditionally maintains very good relations with its neighboring states, Switzerland and Austria, and is also actively involved in international committees. Liechtenstein has been able to adopt the Swiss VET (Vocational Education and Training) qualifications as Liechtenstein and Switzerland have a similar education system. For this we are very grateful.

The present National Qualifications Framework for the Principality of Liechtenstein demonstrates that all eight levels of education can be achieved locally, both on a vocational and an academic basis. This forms the educational foundation for a diversified path to future success.

Dominique Gantenbein
Education Minister

Executive Summary

The present referencing report concerns itself firstly with VET, and secondly with higher education. The NQFL is a snapshot of the educational landscape and the political efforts currently underway within the particular sub-sectors of the NQFL. At this point in time, and in agreement with the strategy group of the NQFL, general school education continues to be excluded, and any relevant developments in neighboring countries will be monitored. If however, significant changes were to appear within the educational landscape of Liechtenstein, then these changes will be included in a reworked version of the report. For this reason, the current framework of the NQFL exhibits a Y-form. Within this Y-framework, VET has been allocated to the lower levels, which then merge into levels 6 to 8 of the left strand covering professional/higher vocational education. The right strand depicts academic higher education framework.

As already mentioned in the foreword, the NQFL distinguishes itself through many particular features. Firstly, it is worth mentioning that VET is not classified by Liechtenstein, but by Switzerland. Consequently, Liechtenstein has adopted within its own NQFL, the VET framework employed in Switzerland. The Swiss report was presented to the EQF Advisory Group in Spring 2015 and duly taken note of. Although the school-based component of an apprenticeship occurs in Switzerland, the practical component takes place in companies within Liechtenstein. As a sovereign country, Liechtenstein has introduced laws and ordinances, which in terms of content, lean heavily on Switzerland, but which nevertheless may be autonomously enforced. Consequently, an ordinance was drafted for the NQFL in VET, which takes as its controlling body, the highest within the government of Liechtenstein.

In Liechtenstein there are two different pathways which can be titled as “equivalent but different”. The first encompasses that of a practical vocational education, which includes basic VET (apprenticeships or fulltime), the vocational baccalaureate (Berufsmaturität), higher vocational/professional education and higher/advanced and specialist examinations. The second pathway involves a baccalaureate from a general upper secondary school, followed by an academic higher education. Over the years, both systems have become permeable in themselves, and mutually to each other. Between the two pathways, there are numerous transfer opportunities. A vocational baccalaureate certificate from Liechtenstein opens up access to universities of applied sciences in Switzerland.

With respect to the VET sector, it must also be mentioned that up until this point in time, there is no higher VET on offer in Liechtenstein. However, within the ordinance, allowances have already been made for higher VET programs, meaning that in the event that such programs were to be introduced, the foundation would have already been established. Consequently, in terms of the ordinance applying to the VET sector of the NQFL, only basic VET is of relevance in Liechtenstein.

As already mentioned, academic higher education comprises the right side of the Y-Model. In 2013, the self-certification process was accomplished for academic higher education. The subsequent report

has also been included within this present report, since the NQFL has as its focus an integrated framework. The process of drafting, and of self-certification of the higher educational framework, was performed by the working group under the leadership of the Office of Education, in conjunction with international experts.

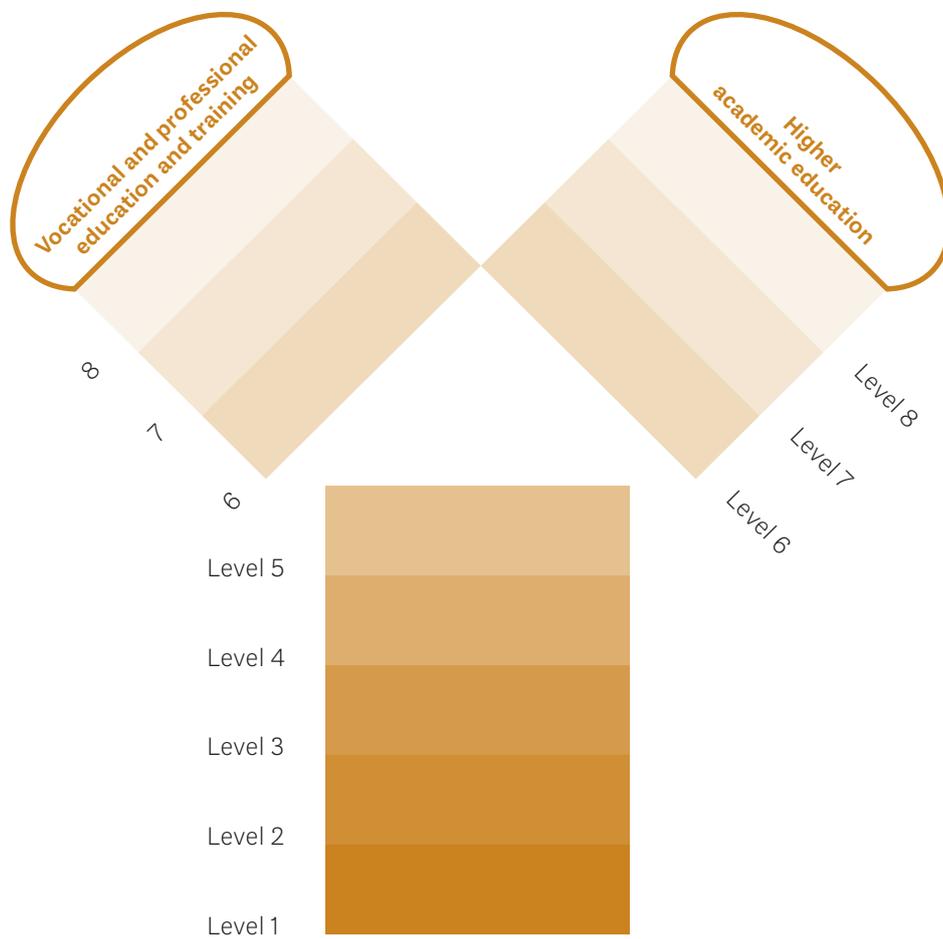


Abb.: 1: Y-Model of the NQFL

1. The education system in Liechtenstein

Within Liechtenstein itself, some 5,000 pupils visit kindergarten, primary education, and secondary education respectively. There are 22 public, and three private schools. The public schools are divided into 11 district schools, which include kindergartens and primary schools, and 11 secondary schools. Within this public system, approximately 600 teachers are employed, in either full-time or part-time positions. Within the higher education system, Liechtenstein currently boasts public university, and two state-recognized, private universities. The range of subjects offered is however extremely limited, necessitating that the majority of students from Liechtenstein complete their studies abroad.

Owing to its relatively small size, Liechtenstein has adopted a pragmatic approach to its educational infrastructure, and this has allowed its population to benefit from a full range of educational services accessed in neighboring countries, especially Switzerland.

This approach has also resulted in the establishment of a common VET system with Switzerland. This means that the school-based component of VET can be undertaken in Switzerland. Furthermore, the signing of a mutual agreement with Switzerland guaranteeing the recognition of qualifications for basic VET, ensures that no skilled workers from both countries must overcome additional bureaucratic hurdles, in order to access respective job markets, or to undertake courses for higher VET. All certificates for higher VET, including the master's certificate, are awarded in Switzerland. Thus, the holders of these qualifications receive a Swiss qualification, which is also recognized in Liechtenstein.

Within the academic higher education/university sector, there exist further agreements with Switzerland allowing students from Liechtenstein, who have a Liechtenstein baccalaureate, to study at all Swiss higher education institutions under identical conditions as their Swiss counterparts.

Across the entire education sector, the government of Liechtenstein is pursuing the fundamental principle of providing a first-class education system, which enables lifelong learning, and which opens doors to the best educational opportunities for all people in the country. By providing excellent public education programs, and an attractive environment for teachers and learners alike, outstanding individual, social, cultural, and economic benefits will be fostered. In addition, lifelong learning will be promoted, and the innovative power of the country will be strengthened. Through this process, the country's prosperity will be secured in a sustainable way.

By providing excellent public education programs, and an attractive environment for teachers and learners alike, outstanding individual, social, cultural, and economic benefits will be fostered. In addition, lifelong learning will be promoted, and the innovative power of the country will be strengthened. Through this process, the country's prosperity will be secured in a sustainable way.

For a small state, the ability to offer a diverse education system is extremely limited. In Liechtenstein, this meant that although the general education sector is well covered by national educational institutions, the school-based component of VET occurs almost exclusively in Switzerland. A major challenge therefore lies in the creation of conditions which guarantee access to all services of a well-developed education system. This can only be achieved in a setting of close transnational partnerships. The goal of providing high-quality educational opportunities, spanning all training sectors, is thus strived for through well-coordinated cooperations with neighboring countries, Switzerland and Austria.

Structure of the educational system in Liechtenstein

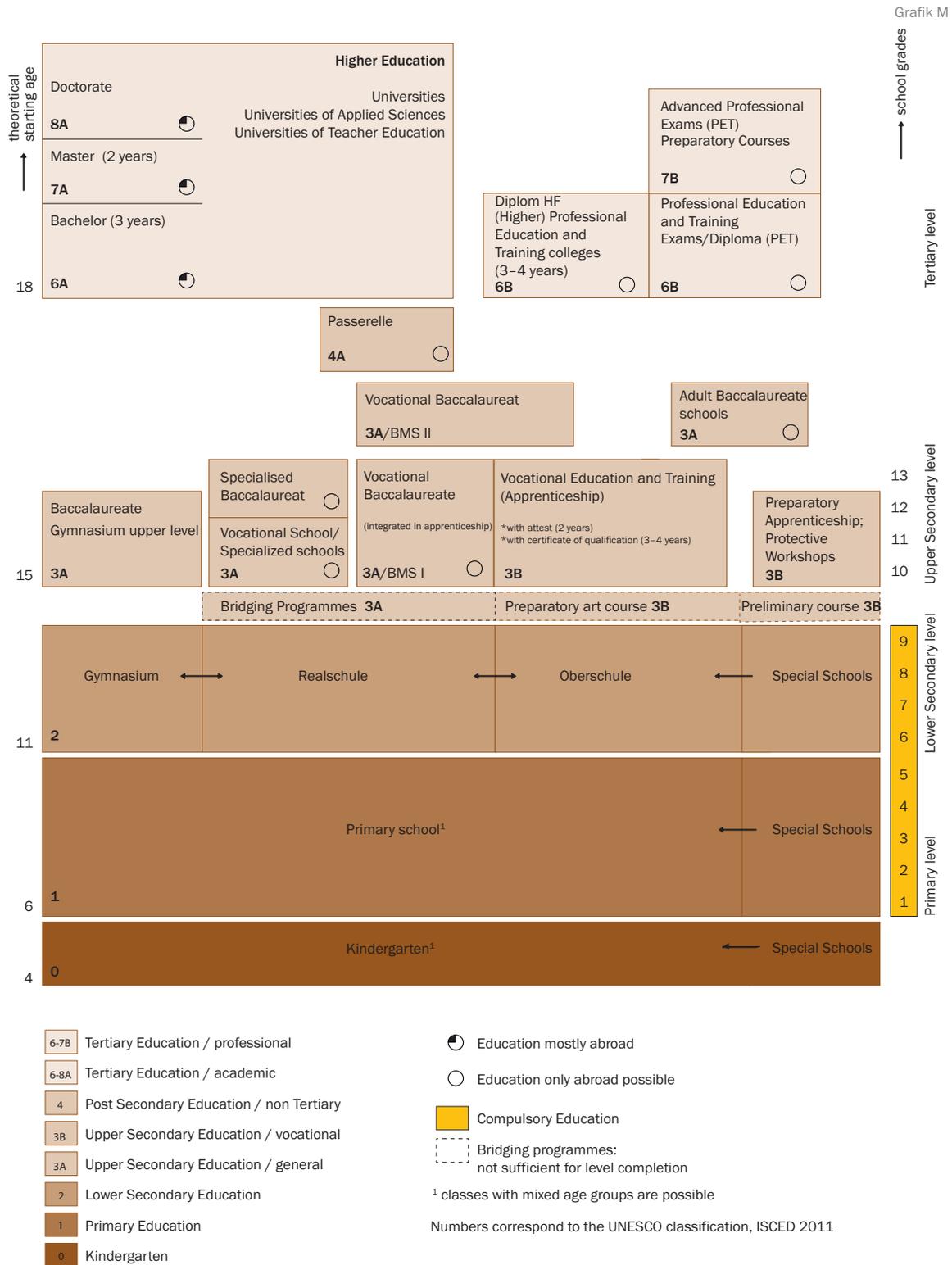


Abb.2: ISCED Levels (Office for Education)

1.1. Kindergarten

The two-year kindergarten period is the traditional form of pre-school education for children after the age of four. Attending kindergarten is voluntary for German-speaking children, but virtually all children of the appropriate age, do attend. There are no charges. However, for children with a non-German speaking background, attending kindergarten is mandatory for one year.

1.2. Compulsory education sector

Compulsory education lasts 9 years. It begins at age 6 and includes 5 years at primary level, followed by a subsequent 4 years at lower-secondary level (Sekundarstufe I). This lower-secondary level is divided into three different school types. The allocation of pupils after the primary level is based on academic performance and adheres to the following guidelines: for the "Oberschule", 28%; for the "Realschule", 50% (at this school, pupils are trained for a vocational career or for a baccalaureate); and for the "Gymnasium", 22% (this secondary school prepares pupils for academic higher education). All schools within the lower-secondary level are general education schools, and follow a common curriculum up to the 3rd class. The aim of these lower-secondary level schools is to prepare pupils, aged 11 to 16 years old, for either vocational schools or pursuant baccalaureate. Pupils with special needs are supported in their development by a well-developed support framework, which also applies to the kindergarten level. Children who are impaired in their development have the right to attend a remedial kindergarten, or remedial school. Upon parents' request, the Office of Education decides whether or not a child should attend such a special school, or rather, should attend a normal class with an inclusive approach. The Office of Education takes into account the special educational needs of the child, and his or her school environment.

Great importance is placed on supporting the permeability between school types. If certain conditions are met, it is possible after almost every school year to switch to another type of school type. This may occur without examination upon the achievement of a certain grade point average, after passing an exam, or depending on the class level, via a recommendation system. Further measures to promote this permeability include common work plans for achieving learning targets, and the alignment of teaching materials across the different school types.

With completion of the lower-secondary level, students have also simultaneously completed their compulsory education.

1.3. Upper-secondary level (Sekundarstufe II)

After completing compulsory education, the majority of pupils (approx. 55%) undertake basic VET in the form of an apprenticeship (dual or triple system), or in the form of full-time education at a vocational college, e.g. as a medical practice assistant (MPA). Basic VET usually lasts two, three, or four years, and leads to the following qualifications: certificate of Preparatory course for VET or certificate for elementary VET

(such a certificate is a 1.5 to 2-year VET for adolescents that cannot complete a regular VET qualification because of a disability or other social circumstances), VET certificate (Berufsattest (BA), 2 years), and VET diploma (Fähigkeitszeugnis (FZ), 3 or 4 years). As well as undertaking their practical training at a host company, 3-4 days/week, apprentices in the dual system must also attend a vocational college, 1-2 days/week (depending on the vocation), thus facilitating the parallel acquisition of theoretical knowledge. In the triple system, training and education are

supplemented by association courses, so-called external or industry courses, in which basic practical skills are further deepened. The certificate of proficiency allows access to further education, and programs of higher/advanced vocational/professional education at the tertiary level.

The school education of apprentices from Liechtenstein undertaking VET, takes place at vocational colleges in Switzerland. There is the possibility of completing a baccalaureate, either during the three- or four-year long apprenticeship, or subsequent to this. This then affords access to an academic higher education. The vocational school leaving certificate, undertaken after the apprenticeship, can only be completed at specific vocational schools offering this possibility. Such a possibility is offered in Liechtenstein at the Vocational Baccalaureate School Liechtenstein (Berufsmaturitätsschule Liechtenstein), where the course can be completed either part-time, in 2 years, or full-time, in 1 year.

After compulsory education, a relatively small percentage of adolescents (10 to 15%) go on to complete a school-based, full-time VET at a specialized upper-secondary school in Switzerland (Fachmittelschule) or Austria (Berufsbildende Höhere Schulen). Here, learners acquire the required vocational knowledge, and additionally complete several placements or internships, both during school hours as well as outside. Once again, the possibility of earning a baccalaureate degree in addition (special baccalaureate) exists.

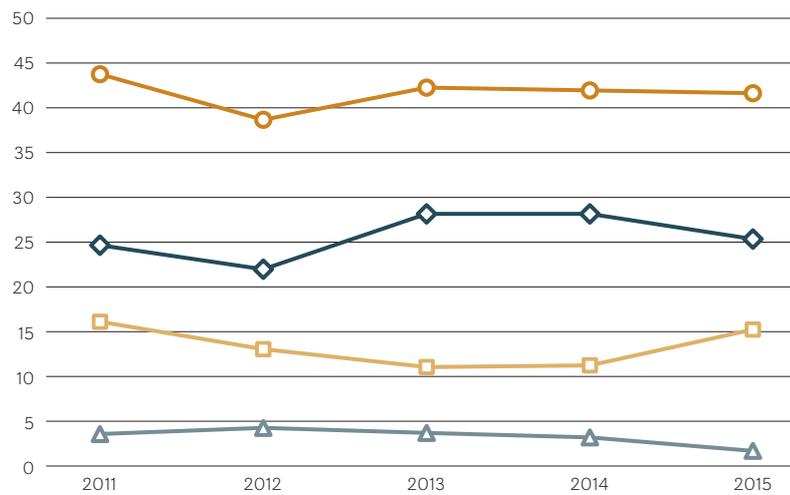
Baccalaureate certificate rate

In 2015, the baccalaureate certificate rate in Liechtenstein amounted to 41.6% of individuals of the appropriate age. This included a rate of 25% for a general baccalaureate, a value of 15% for those finishing with vocational baccalaureate, and 1.4% for those graduating from specialized baccalaureate. Switzerland's baccalaureate rate is on average around 37%.

Approximately 30% of pupils complete a general upper secondary education, which takes place at a Gymnasium. This upper-secondary level school prepares pupils for university studies and takes seven years from primary level until completion (baccalaureate). The Liechtenstein upper-secondary level school encompasses the so-called long form, including lower-secondary level and upper-secondary level. Gymnasium is completed with the school

leaving certificate (baccalaureate), which allows unrestricted access to university studies. The entire school time until obtaining the school leaving certificate comprises 12 years. Taking into account the different educational pathways (general baccalaureate, vocational baccalaureate), Liechtenstein has achieved an overall baccalaureate rate of around 40%.

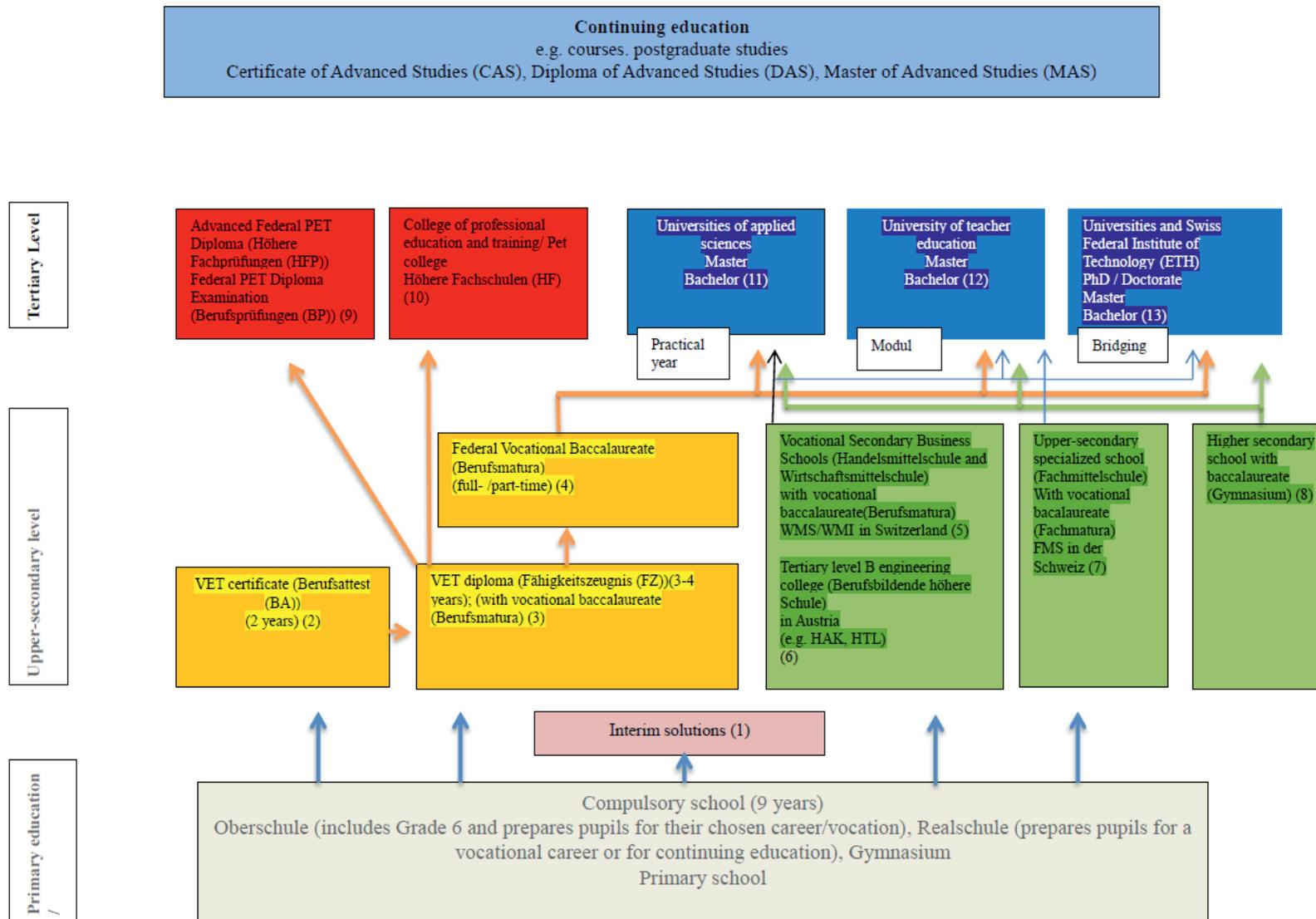
Baccalaureate certificate rate



◆ Baccalaureate Vocational	24.5	21.8	28.0	28.0	25.2
□ School leaving certificate	15.9	12.8	10.8	11.0	15.0
▲ Fold baccalaureate	3.3	4.0	3.4	2.9	1.4
○ Total	43.7	38.6	42.2	41.9	41.6

Abb. 3: Baccalaureate rate Liechtenstein, 2011-2015 (Department of statistics)

Educational pathways following compulsory schooling / Liechtenstein



1. Interim solutions

e.g. voluntary 10th school year, preliminary design course at the Liechtenstein School of Art. Following compulsory education, these offers are aimed at preparing pupils for vocational training or Gymnasium

2. Certified two-year VET program (Berufsattest (BA))

This 2-year basic VET (apprenticeship) is orientated at more practically-skilled young people. After obtaining a vocational certificate, learners can normally enter the 2nd year of basic VET (apprenticeship), with a VET diploma (Fähigkeitszeugnis (FZ)).

3. Basic VET diploma (Fähigkeitszeugnis (FZ))

Depending on the vocation, basic VET (apprenticeship) takes 3 to 4 years. In a setting of a good academic performance, a vocational baccalaureate may be acquired.

4. Vocational baccalaureate (Berufsmatura)

Following successful completion of VET, the vocational baccalaureate can be obtained in either 1 year (full-time) at day school, or in 2 years (part-time) at evening school. Classes are provided at the Vocational Baccalaureate School Liechtenstein (BMS) in Liechtenstein.

Comprising different areas of focus, the Liechtenstein vocational baccalaureate entitles the holder to study at all higher education institutions in Liechtenstein and Austria as well as universities of applied sciences in Switzerland.

5. Vocational secondary business schools

The Vocational Secondary Business School, focusing on languages, and the Vocational Secondary Business School, focusing on computer sciences, are full-time schools at upper-secondary level in Switzerland.

These schools combine broad general education with vocation-related training. The baccalaureate gained here, qualifies holders for automatic transfer to universities of applied sciences, but also qualifies as completion of merchant training with certificate of proficiency.

6. Tertiary level B colleges

Tertiary level B colleges in Austria such as HAK, HTL, tourism schools, BAKIP, and CPR, provide professional qualifications and a consolidated general education. They last 5 years, end with a baccalaureate and the acquiring of a vocational qualification entitling holders to study at all higher education institutions in Austria. Admission to a university course in Liechtenstein and Switzerland is partially possible.

7. Upper-secondary specialized school

These Swiss vocational upper-secondary specialised schools prepare pupils for vocational training at colleges of professional education and training/ PET colleges in the vocational fields of health, social issues, education, and design/art. Completed within 4 years, pupils earn a specialized baccalaureate, entitling them principally to enter courses at universities of applied science in Switzerland

8. Gymnasium

The baccalaureate obtained at higher secondary schools in Liechtenstein is equal to the corresponding certificates in Switzerland and Austria. Thanks to bilateral agreements this certificate enables:

- access to all faculties of higher education institutions (advanced colleges of applied sciences in Liechtenstein and Austria
 - access to all faculties of the universities in Switzerland, and with an additional year of practical experience, to universities of applied sciences
- With a baccalaureate a shortened basic VET (apprenticeship) can be completed.

9. Federal PET diploma and advanced federal PET diploma

Professionals with a VET diploma, or a similar equivalent qualification, are entitled to take PET and advanced PET diplomas (cf. meister examination). These examinations enable professionals to undertake professional development and specializations. The preparation for these exams usually takes place alongside the job, through part-time courses.

10. College of professional education and training/ PET colleges T

These study programs provide professionals with VET diploma, or other equivalent competency qualifications, and enable holders to independently assume professional and managerial responsibility within their specific field. Study programs can be taken either part-time (3 years), or full-time (2 years).

11. University of applied sciences

Universities of applied sciences offer practice-oriented courses, and continuing education at university level.

12. University of Teacher education

These colleges prepare teachers for preschool, primary school, and lower-secondary level.

13. Universities and Swiss Federal Institute of Technology (ETH)

Universities and ETH offers courses, programs and continuing education in various disciplines.

Bachelor/Master

The bachelor program is completed after 3 years with the bachelor's degree (e.g., Bachelor of Arts or Science). With an additional 1.5 to 2 years, the master's degree (e.g., Master of Arts or Science) can be obtained.

Bridging

"Vocational baccalaureate - university higher education"
This test entitles access to all Swiss universities

Further information can be obtained at the vocational information center (Berufsinformationszentrum) of the Office for Vocational Training and Career Counseling (Amt für Berufsbildung und Berufsberatung)

2. The National Qualifications Framework of Liechtenstein

2.1. Basic vocational education and training

2.1.1. System of basic vocational education and training

Similar to neighboring countries, dual-track VET programmes are the backbone of the VET system, and contribute decisively to ensuring the competitiveness of local companies. The educational distinctiveness of VET lies in its dual objectives: the realizing of both a vocational qualification, and vocational training and school education. This is achieved within the period of a two-, three- or four-year apprenticeship. The system is based on the interplay between practical vocational training within a company, and a theoretically-oriented education at a vocational college.

VET comprises apprenticeships, vocational colleges, and higher vocational education on the one hand, and VET in specialized vocational secondary schools (Fach/Diplommittelschulen), and similar educational institutions on the other.

2.1.2. Legal foundations, jurisdictions and services

For VET, the relevant legislation includes the Vocational Education and Training Act (Berufsbildungsgesetz) (BBG, LGBl. 2008 No. 103)¹, and the Vocational Education and Training Ordinance (Berufsbildungsverordnung) (BBV, LGBl. 2008 Nr. 177 / Ordinance from 26. January 2016 on the amendment to the Ordinance on Education (Bildungsverordnung) (LGBl. 2016 Nr. 29)². The National Qualifications Framework for its part on VET is governed by the National Qualifications Framework of Liechtenstein - Vocational Education and Training Ordinance (NQFL-BBV)³.

The Vocational Training Act maintains in Article 1 the following purpose and objectives: professional and personal development and integration into society and working life; practical relevance; maintenance of the competitiveness of businesses; balance of educational opportunities in social, regional, and international contexts; de facto equality between men and women; cessation of discrimination against persons with disabilities; permeability of educational courses; transparency of the VET system; as well as international cooperation and mobility of learners.

The basis for ordinance of the NQFL-BBV is the Vocational Education and Training Act (BBG), Art. 1 para. d), e) and f), which concerns itself with the permeability between different VET programs and forms within VET, as well as with VET and the remaining educational branches. In addition, the transparency of the VET system, and the international cooperation and mobility of learners, is highlighted. VET is regarded as a common task of state and professional organizations.

Among other duties, the Office for Vocational Education and Career Counseling performs supervision of VET. It is subordinated to the Ministry for Foreign Affairs, Education and Culture. The Government are assisted by the Vocational Training Council, which is comprised of a maximum of seven members, including representatives from professional organizations, one representative from school-based VET, as well as one representative from the Office of Education, and the Office for Vocational Training and Career Counseling, respectively. The Office for Vocational Training and Career Counseling offers vocational, study and career guidance for adolescents and young adults up to the end of their 25th year, free of charge.

¹ Vocational Training Act / Berufsbildungsgesetz (www.gesetze.li).

² Vocational Education and Training Ordinance / Berufsbildungsverordnung (www.gesetze.li).

³ NQFL-BBV, Appendix 1.

Within the framework of the agreement, the state bears among other things the following costs: school fees for authorized vocational colleges and schools offering vocational baccalaureate programs (Berufsmaturitätsschulen); compulsory training course fees for apprentice trainers conducted at authorized institutions; costs associated with examinations and other qualification procedures as part of VET; remedial and optional courses at vocational colleges; as well as the determination of facility locations.

2.1.3. Career choices in Liechtenstein

Around half of all young people, approx. 250 per year, commence an apprenticeship after lower-secondary level education. At the end of 2014, the total number of people involved in an apprenticeship amounted to 1,217, and extended over 110 different vocations and semiskilled vocations (Anlehrberufen). From this figure of 1,217, 36% were female, and 64% male. Two-thirds of trainees in Liechtenstein are residents in Liechtenstein, one-third have residency in Switzerland, and a few in Austria. Since 2005, the number of apprenticeships completed in Liechtenstein

has plateaued at a relatively constant level, of approx. 300 to 350 certifications. Almost 90% of apprentices from Liechtenstein undertake their apprenticeship in a company in Liechtenstein, with the remaining 10% going to the canton of St. Gallen. The number of apprenticeships being completed in the various educational streams is subject to annual fluctuations; however, over a period from 2005 to 2013, the metal and machine industries, areas mostly chosen by men, led overall, whereas women tended more strongly towards streams such as organization / management / office clerking.⁴

“Apprentices in” and “Apprentices from” Liechtenstein

When speaking about VET, it is necessary to differentiate as to whether an apprentice is viewed as in Liechtenstein, or from Liechtenstein. Regarding apprentices in Liechtenstein: Apprentices from abroad who are engaged at host companies in Liechtenstein must be counted; however, apprentices from Liechtenstein who have gone abroad are not included. Regarding apprentices from Liechtenstein: both host companies and educational institutions in Liechtenstein, as well as abroad, must be taken into consideration when counting apprentices from Liechtenstein involved in VET.

1. Preparing pupils for career choices at school reads them for entry into the professional world, and promotes the so-called transition skills. Alongside a school education, this preparation focuses on both personal development and becoming familiar with one's own strengths and interests, as well as with the world of work.

2. Parent orientations at school or in the vocational information center: parents influence, either consciously or unconsciously, the career choice of their child. At the same time, career opportunities in jobs and schools have dramatically changed since their schooldays. Consequently, parents want to be brought up-to-date. And they should be informed about which training opportunities are available, and what will be expected of those interested. In the company of their children, parents are informed about where they can find relevant information and receive offers. Choosing a career is a family project.

3. Class events in the vocational information center (Berufsinformationszentrum (BIZ)): As part of the event, the class receives initial information about career choices, job descriptions and opportunities for vocational guidance. In doing so, a first contact is made between the school class and the responsible vocational guidance counselor. This introduction is a good

4. Vocational orientation / information sessions / day placements: With a little effort, all these opportunities can communicate first-hand impressions of jobs. Apprentices and vocational trainers provide inside information about learning content, requirements, training schedules, and continuing education opportunities. Sometimes, a few activities can already be tried out independently. Such events are organized by vocational guidance counselors, related organizations, companies, and schools. Similar to work experience placements, day placements are organized on an individual basis.

5. Personal discussions with specialists in career, educational and vocational guidance (ABB) are conducted based on career aspirations, expectations and/or concerns. Together with psycho-diagnostic tests, a determination is then made as to which professions fit to one's own interests and abilities. Based on the results, the next steps are then planned. Individual vocational guidance consultations are free of charge; however, an appointment must be made.

6. School-based consultations are short talks with vocational guidance counselors at school itself. They last approximately 15 minutes and are an opportunity to discuss personal questions related to career choice, or training opportunities (Appointment for school-based consultations must be agreed with the class teacher).

7. Stellwerk-Check 8" verifies knowledge and skills at the end of 8th class, and is useful when setting targets for the next school year. Many host companies today require results from aptitude tests as part of the job application process. Depending on the vocation, varying skills are tested, for example, general knowledge, mathematics, languages, technical understanding, and ability to concentrate. Most tasks have to be solved under time pressure. In the commercial sector, "Multi Check" is frequently required.

8. Review meetings in spring of the 8th class: This meeting includes class teachers, pupils, and parents. As well as the pupil's current situation, objectives for a successful transition into vocational education and training, or into a continuing secondary school, are discussed. Together as a group, individual priorities for the 9th school year are specified.

9. Work experience or selection placements are highly valuable. They allow a pupil, within the space of a few days, to experience a dream job in daily practice, to literally look over the shoulder of an expert. Additionally, the combination of host company and vocation can be tried out, to see if they are a good match. The company itself also gets to know interested, young people, and obtains a first look at them - a personal business card.

10. A career choice is only possible when all the required information has been obtained, and when an individual's abilities, and their own ideas about a vocation, have been contrasted with the reality of working life. When the underlying feeling comes out positive, then the intended path is probably the correct one.

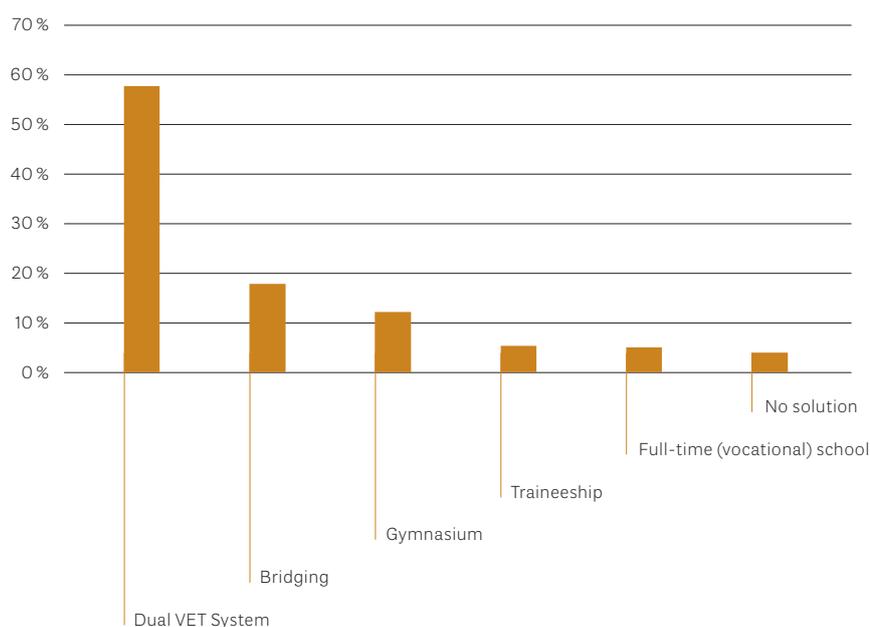
11. Vacant apprenticeship positions / Lena (the official register of vacant apprenticeship positions) are available from the start of September at www.abb.llv.li, and are updated periodically by the ABB in cooperation with participating companies. Apprenticeships in Switzerland can be found at www.berufsberatung.ch/lehrstellen.

12. Apprenticeship applications: This means promoting yourself. Everything which belongs to a good application is learned at school (writing a cover letter and a resume, as well as practicing for job interviews). The goal of a good application is to knock on the door, and to gain entrance to the world of work. On request, pupils can obtain support at the vocational guidance center.

13. Apprenticeship contracts are finalized between learners (or their parents), and the providers of vocational education and training (host companies). The contracting parties are required to use the contract forms provided by the Office of Vocational Training and Career Counseling (ABB), which are then subsequently approved by the Apprenticeship Authority (Lehraufsicht).

14. Acceptances / rejections (from 1 November) in Liechtenstein: The Bankers Association, the Liechtenstein Institute of Professional Trustees and Fiduciaries, and the "ArbeitsGruppe IndustrieLehre", have all agreed to a common standard for issuing apprenticeship acceptances. By issuing all acceptances on the first working day following November 1, pupils will be given time to re-evaluate their wishes, investigate different companies, seek out vocational guidance, and finally, make their choice with the greatest possible awareness. In case it doesn't work out straight away with the desired apprenticeship, sending further applications after the November deadline is still highly recommended.

Berufswahlverhalten (ohne Gymnasium)



In 2014, 57 apprenticeships remained vacant. In many companies, this reverse development has since continued. In fact, recently, companies have had to approach pupils with the aim of recruiting them⁵. In 2013/2014, 343 companies in Liechtenstein offered one or more apprenticeship places.

The transition from school to the world of work is one of the first important transformation processes in the life of a young person. For this transition to optimally succeed, requires the coordination of the so-called “helper system” (parents, school, industry, vocational guidance and vocational training). The employees of the Office for Vocational Training and Career Counseling (ABB) take on this task with adolescents in the

A further development in this respect is the so-called tendency towards academization (Akademisierungsfalle). More and more parents think their children should visit general baccalaureate school instead of undertaking an apprenticeship. Vocations themselves are also becoming more academic, and a general social trend towards a more academic education is placing the traditional pathway of an apprenticeship, i.e., following completion compulsory education, increasingly under pressure.

3rd and 4th grade of lower-secondary level school, likewise in the voluntarily 10th year, at private schools (Formatio and Waldorf school), as well as at the Gymnasium. The following activities are central: introduction to the vocational information center and information desk (Berufsinformationszentrum (BIZ)); parent/pupil evenings in the 3rd grade of lower-secondary level school relating to the theme “Preparing for choosing a career”; regular short consultations at school centers; conducting of information sessions

around the themes “Continuing with school?” and “Intermediate year”, for pupils in the 3rd and 4th grade of lower secondary level; conducting of psycho-diagnostic tests in single and group settings; special support of adolescents with academic performance deficiencies and with special school status; introduction to “Profilwahl/Berufswahl” (online support programs for making career choices), plus a supportive role in the project week “Company work experience” (a 3-day work experience placement in an industrial operation or commercial enterprise), for 3rd grade pupils at the Gymnasium; short seminars introducing 4th grade pupils at the Gymnasium to choosing a vocation and choosing a course of study.

⁵ As an example, the apprentice video from Hoval: <https://www.youtube.com/watch?v=CdTXcsm-8vA>.

Employees in the Department of Career Counseling at the ABB accompany and support adolescents through their career and/or study choices. Their goal is to empower those seeking advice to clearly recognize their own interests, to weigh up several options against each other, to make decisions, and then to realize these. This ultimately enhances their chances of overcoming personal development crises at school, and in their careers.

An important factor for a good transition from school into the workplace, or into a career choice, is the offer of day placements and/or trial work experience placements. During day placements, and/or work experience placements, and even prior to these, the organization of the working world plays a big role. Through the commitment of domestic business associations and their departments, adolescents are brought closer to apprenticeships, and are supported in their vocational choices.

2.1.4. Work experience placement

In a work experience placement pupils are able to familiarize themselves first hand with a vocation in its day to day practice. Pupils visit a company over the period of a few days and observe staff at close quarters, as they perform typical tasks in the pupils' "dream jobs". Placements normally last between two and five days. The insights pupils gather during a work experience placement about the nature of the vocation and company culture, typically exert the greatest influence on their subsequent career choices, and their applications to companies. Starting from their 13th birthday, pupils are able to complete a work experience placement, which usually takes place during school holidays. Companies often perform suitability tests on work experience, in order to find out if they are appropriate for an available apprenticeship. Many companies offer work experience days, and in many places these days even represent a prerequisite for obtaining an apprenticeship contract.

2.1.5. Educational concept of the apprenticeship

The apprenticeship is regulated by an apprenticeship contract, in which the host company, the type of vocation, the length of training, working hours, apprentice wages, vocational school, and insurance terms, are clearly stated.⁶ Depending on the particular vocation, a basic apprenticeship takes up to four years. In Liechtenstein, approximately 3% of all apprentices complete a two-year apprenticeship, approx. 57%, a three-year apprenticeship, leaving approximately 40% completing a four-year apprenticeship. In addition to specialist training within the company, apprentices attend vocational colleges, one or two days per week. The vocational college has its own specific educational mandate. This includes being obliged to admit all students who have an officially approved contract of apprenticeship. Conversely, anyone in the possession of such an apprenticeship contract is obligated to attend vocational college. The allocation of trainees to the respective vocational colleges is conducted exclusively by the ABB.

Vocational colleges impart not only vocation-specific, theoretical knowledge, but also general knowledge. At the end of each semester a report card is issued by the vocational college, and is sent to the host company. Vocational trainers must speak with apprentices on the basis of this report card, and where appropriate, measures to improve schools performance must be agreed upon.

The vocational college education is free for apprentices. The amount of compensation varies within the various vocational sectors, however, amounts to a gross average of CHF 500 in the

first year, increasing to approximately CHF 1,100 in the fourth year of the apprenticeship. At the end of the apprenticeship, the apprentice, after successfully passing the final examination, acquires an “Anlehre-certificate” (see below for “Anlehre”), a vocational certificate, or a certificate of proficiency. Furthermore, through continuous education programs, new career paths are opened up to the graduate, beginning with higher vocational examinations for “Meister” or tertiary-level education.

2.1.6. Economic framework

Currently, more than half of the 36,680 jobs available in Liechtenstein are occupied by foreign workers, with the majority commuting from Switzerland and Austria. Working for companies within Liechtenstein, the majority of these workers come with adequate vocational qualifications, acquired in their home countries.

A great number of management positions in Liechtenstein are administered by professionals and experts holding recognized qualifications from abroad. Liechtenstein’s predominantly export-oriented industries are successful worldwide in the production of commodities requiring intensive capital, research, and development. In order to maintain the high standard of products and services, highly-qualified workers are needed. This applies equally to the large

number of small, and medium-sized commercial enterprises. By virtue of existing location advantages, companies based in Liechtenstein are able to compete on the world market, despite high labor and production costs. Going into the future, specialized, high-quality products and services will continue to secure ongoing competitiveness. This presupposes however the availability of suitably qualified labor. With a figure of 97.6%, Liechtenstein has the highest employment rate in Europe, ahead of Luxembourg (70.9%), Switzerland (60.2%), Germany (52.3%), and Austria (50.0%). In terms of sectors, the demand for workers in the service sector (59.9%), and the industrial sector (39.3%), is highest⁷. The employment rate is derived from the permanent population of Liechtenstein, equaling 37,366 people, and the total number of available jobs, some 36,680⁸.

VET in Liechtenstein

Uncertified apprenticeship: A two-year basic VET with “Anlehre-certificate”. In comparison to a VET with vocational certificate (see below), this qualification is more basic and is completed with a practical examination leading to the “Anlehre-certificate”. Upon completion of an “Anlehre”, the opportunity exists to undertake a two-year VET with vocational certificate.

VET certificate (Berufsattest (BA)): A two-year VET (apprenticeship) oriented at practically-inclined adolescents. Upon completion of the vocational certificate, trainees are usually able to enter the second year of a VET with certificate of proficiency (see below).

VET diploma (Fähigkeitszeugnis (FZ)): Depending on the vocation, this VET (apprenticeship) lasts 3 to 4 years. In the setting of satisfactory academic performances, the possibility exists of simultaneously completing a vocational baccalaureate.

Vocational School of Liechtenstein (Berufsmaturitätsschule (BMS)): Upon successfully completing VET, there exists the possibility of undertaking a vocational baccalaureate in 1 year at the BMS (Berufsmaturitätsschule Liechtenstein). This may be completed at day school (1 year, full time), or at evening school (2 years, part time). Focussing on a variety of different subjects, the vocational school leaving certificate from Liechtenstein entitles access to all higher education institutions, and universities in Liechtenstein and Austria, as well as to universities of applied science in Switzerland.

⁷ Amt für Statistik, Beschäftigungsstatistik / Employment statistics 2014.

⁸ Current as of 2014.

Employees and commuters in Liechtenstein

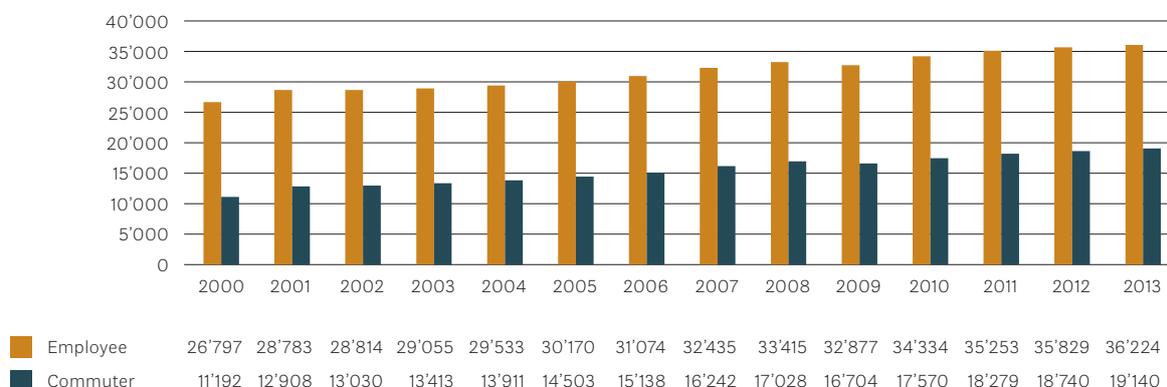


Abb. 4: Employees and Commuters, Department for statistics

The intelligent use of available resources and facilities within both the educational and business sectors in Liechtenstein, coupled with close cooperations in the VET sector with Switzerland, represent significant factors, which together will ensure continued access to a skilled workforce for the future economy of Liechtenstein. Ultimately however, the entire demand for labor can only be covered through the use of human resources from abroad.

2.1.7. Origins of the current vocational education and training system

Within Liechtenstein, school education and VET have developed almost independently. The general school system evolved out of tradition and in parallel to the respective systems in neighboring countries. On the other hand, regulated VET, owing to its origin in overwhelmingly rural structures, the minor role of trades, as well as late 19th century industrialization, only consolidated itself at the beginning of this century.

It wasn't until the Education Act of 1929 that the implementation of specialized courses for apprentices was first enshrined in law. In this period in Liechtenstein, the first considerations began to emerge with respect to establishing a Liechtenstein-based vocational college. This soon gave way to the realization however, that for this small state, the provision of an optimal and comprehensive vocational college system, encompassing a variety of different vocations, was, and still is, only possible in close cooperation with neighboring Switzerland.

The Apprentices Act of 1936 required for the first time that all learners undergo a school education in addition to their practical work. This dual apprenticeship system thus became the foundation for VET.

Developing over many years, the cooperative relationship with Switzerland still remains one of the key factors underlying the operation of the VET system in Liechtenstein. The regulations governing vocations, apprenticeships, and examinations in Switzerland, are accordingly of importance for Liechtenstein. On the official level, Liechtenstein is thereby granted the opportunity to participate in various bodies and meetings (Conference for Swiss VET Offices (Schweizerische Berufsbildungsämter-Konferenz (SBBK), membership of various vocational college commissions, corporate course commissions, apprenticeship certificate commission etc.). In

order to facilitate neighborly cooperation within the context of basic school-based education, the ABB collaborates with around 30 vocational colleges, and with numerous training centers in Switzerland. An additional task of growing significance lies in cooperative efforts in the field of higher vocational education. At this level too, efforts are being directed at capitalizing on all opportunities for co-design. Furthermore, trade associations within Liechtenstein are also closely associated with their Swiss counterparts.

Sustained by the post-war period of economic recovery, in which Liechtenstein transitioned from a poor agricultural country to an industrialized, service-based one, VET has increasingly won in importance. With the Vocational Training Act of 2008, Liechtenstein conformed to a legal system and organization adapting to changing requirements. An essential element of the Vocational Training Act is the creation of appropriate conditions, which ensure prospects from Liechtenstein access to training and apprenticeship places at foreign vocational colleges, and training facilities. In this context, Liechtenstein participates in the establishment and operation of vocational training institutions in Switzerland.

According to the Vocational Training Act, tasks within the vocational education sector are accorded to the following bodies:

- **Government:** Supervision of the entire education system, including VET, is administered by the government, specifically the Ministry of Education. The government decides on the allocation of financial resources and on the recognition of training centers and courses.

- **Office for Vocational Training and Career Counseling:** The Office for Vocational Training and Career Counseling is responsible for the implementation of the Vocational Training Act, as well as the organization and management of the entire VET system. The main tasks of this office include:
 - Conducting of vocational, educational and career counseling, and the administration of an information desk;
 - Granting and revoking of training approval;
 - Supervising of host companies, training centers, and vocational colleges;
 - Mediating of teaching posts and the administration of a public register;
 - Counseling of learners, parents, vocational and practical trainers;
 - Monitoring of compliance with legal and contractual provisions concerning apprenticeships;
 - Organizing of advanced training courses for vocational trainers and other VET-responsible persons;
 - Registration and admission to qualification procedures;
 - Implementing of entire examination system including issuing of “Anlehr-certificate”, vocational certificates, certificates of competency, and associated report cards;
 - Budgeting responsibility within the state VET system.

- **Advisory Committee for Vocational Training:** Concerning all fundamental issues of the VET system, the Advisory Committee for Vocational Training is an advisory body to the government, and to the Office for Vocational Training and Career Counseling. The seven members of the Advisory Committee for Vocational Training are elected by the government

for four years. Among other duties, the committee concerns itself with applications for recognition of vocational colleges and courses, with the organization of to-be-implemented educational programs in Liechtenstein, with the adoption of education regulations, and with the implementation of pilot programs in VET.

2.1.8. Investment in VET and capacity for innovation

The costs incurred annually for the entire VET sector in Liechtenstein are difficult to quantify. This is mainly due to the fact that financing of the VET system occurs via different supporting bodies. The majority of state-based VET expenditure is allotted to:

- Tuition at vocational colleges, and other vocational training facilities including institutions in the higher vocational education sector in Liechtenstein and Switzerland;
- Management and organization of VET;
- The provision of courses within the framework of basic VET at national level;
- The organization of courses for the education of those responsible for vocational training within companies;
- Scholarships for participants in VET and higher VET.

Alongside the influence of the public sector, the domestic economy is also instrumental in shaping educational content, and in carrying a large proportion of financial expenditure for an apprenticeship. Industrial enterprises within Liechtenstein undertake a variety of efforts in the VET sector. Of particular note are the well-equipped training workshops, the utilization of highly-qualified apprentice trainers, and the wide range of work experience placements. These factors benefit first and foremost the area of practical training. Shaped by their companies, specialists working within an industry, work simultaneously part-time as teachers at vocational institutions, thus guaranteeing the practical orientation of educational instruction.

A further indicator speaking for VET is the level of innovation within a country. In 2011, industrial enterprises associated with the Liechtenstein Chamber of Industry and Commerce invested approximately CHF 370 million in research and development activities. This value is approximately 7% of the gross domestic product of Liechtenstein. The fact that Liechtenstein is competitive despite high labor and production costs, relates directly to apprenticeships. Thanks to this system, high productivity, relatively favorable unit labor costs, and a high quality of work can be

achieved. Furthermore, customized solutions, superior quality, and niche products can be offered, all of which typically result in products commanding higher prices, and which perform successfully in the export market. For a successful claim in the global market, key factors are practice-oriented education and research. Liechtenstein companies can only maintain a competitive advantage against low-wage countries, through the production of innovative products of high quality. This requires capital-intensive produc-

Vocational training costs

In Liechtenstein, no specific data related to the net costs or the net benefits of learners has been compiled. However, a reference to related studies in Switzerland is permissible due to similar structures.

Strupler and Wolter (2012) arrived at the conclusion that the costs for a learner - almost half of which is dedicated to apprentice wages, slightly more than half for training investments - is lower on average than benefits obtained through their productivity. Depending on what kind of apprenticeship is on offer, the net benefit for companies may be greater, or the net expenditure may be elevated. For an apprenticeship with a high net benefit, a cost of approx. CHF 30,000 to 50,000 for the entire length of training can be assumed. For an apprenticeship with a high net

expenditure, training costs will amount to around CHF 30,000 to 40,000. Costs and benefits are highly dependent on how productively learners can be engaged during their training. For apprenticeships accruing net costs, benefits after the apprenticeship are sometimes crucial: In the event of continued employment in the same company, recruitment and training costs are inapplicable (SKFB, Education Report Switzerland 2014).

Since 2009, costs for VET in Switzerland have been rising. In 2009 these costs amounted to CHF 11.3 m, whereas in 2013 they rose to a value of CHF 12.3 m. The percentage of VET costs met by public expenditure rose over this same period from 5.9% to 6.8% (2013: CHF 12.3 m for VET and CHF 180.2 m for total educational expenditures).

To enable a comparison, industrial companies in Liechtenstein have conducted a survey into the costs of learners with a certificate of proficiency qualification. These costs amounted to CHF 416 m for 33 industrial companies.

tion and a high added value. This is achieved through qualified personnel, engaged permanently in continuing training.

Liechtenstein's increased openness towards the Common European Economic Area has had significant impacts on domestic industries. On the one hand, this has resulted in the opportunity of opening up new markets, whereas on the other, it has resulted in a considerable intensification of competition. Small and medium enterprises, owing to their operating structure and size, are in a position to respond very quickly to market developments; however, this flexibility presupposes employers and employees with accordingly

first-class basic training and with preparedness to develop themselves both professionally and personally. Within the overall framework of the VET system, commercial enterprises, through the practice-oriented training of their employees, realize a decisive contribution to VET.

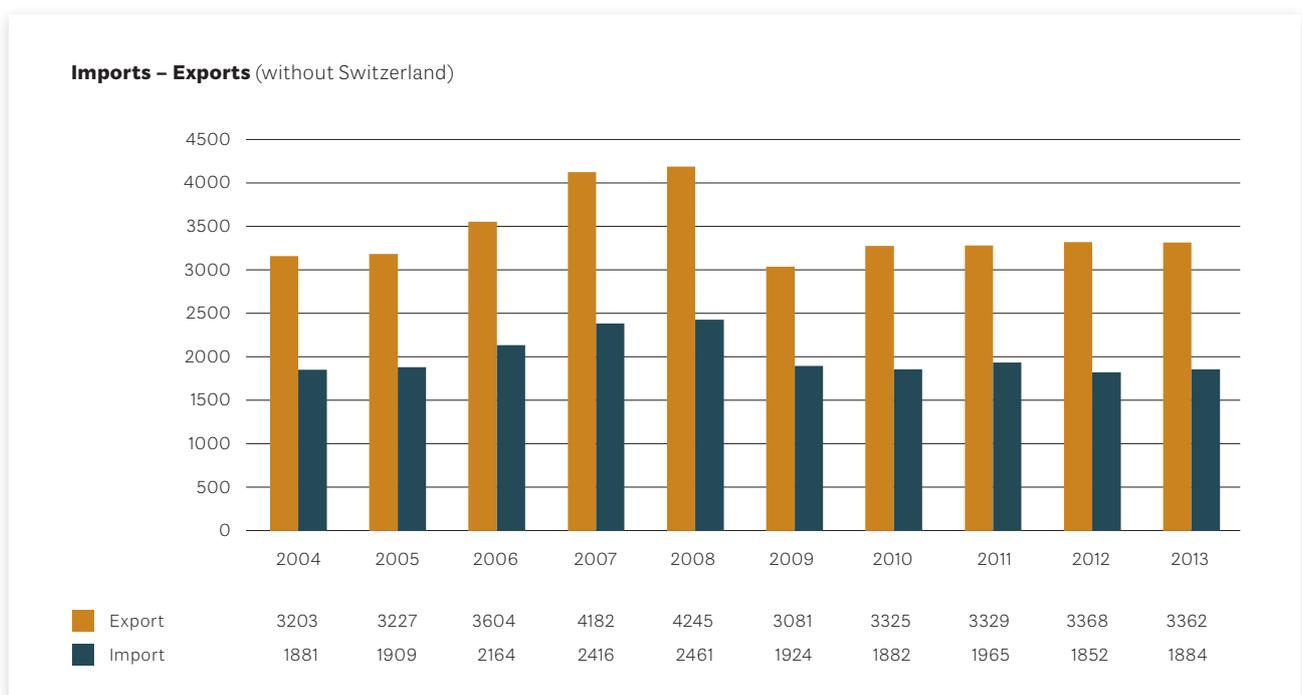


Abb. 5: Department of statistics

2.2. Liechtenstein and youth unemployment

Across the EU, youth unemployment represents one of the most significant problems of the future. Young people without perspective lose motivation, and thus weaken the economy. Youth unemployment is additionally a reliable indicator for the “integration and performance capacity of the education system”⁹. High youth unemployment is an expression of an increasingly difficult process of integrating into the labour market, and of the potential increase in precarious employment relationships. It also points to a lack of justice between generations. As an indicator, youth unemployment depicts the proportion of unemployed young people in the 15- to 24-year-old segment of the labor force.

An apprenticeship is an important factor contributing to the integration of young people into working life. Through the dual apprenticeship system, and the combination of commercial enterprises and vocational colleges, Liechtenstein is in a position to capably withstand economic

fluctuations. With 3%, Liechtenstein has the lowest youth unemployment rate in Europe. Studies conducted in Switzerland, and which lend themselves well to comparisons with Liechtenstein, show that the risk of becoming unemployed for people with an apprenticeship is two and a half to three times lower than that for unskilled workers. Of particular note is the finding that employed persons with an apprenticeship qualification are significantly less likely to be affected by unemployment when compared to workers with a purely academic-based school qualification.¹⁰

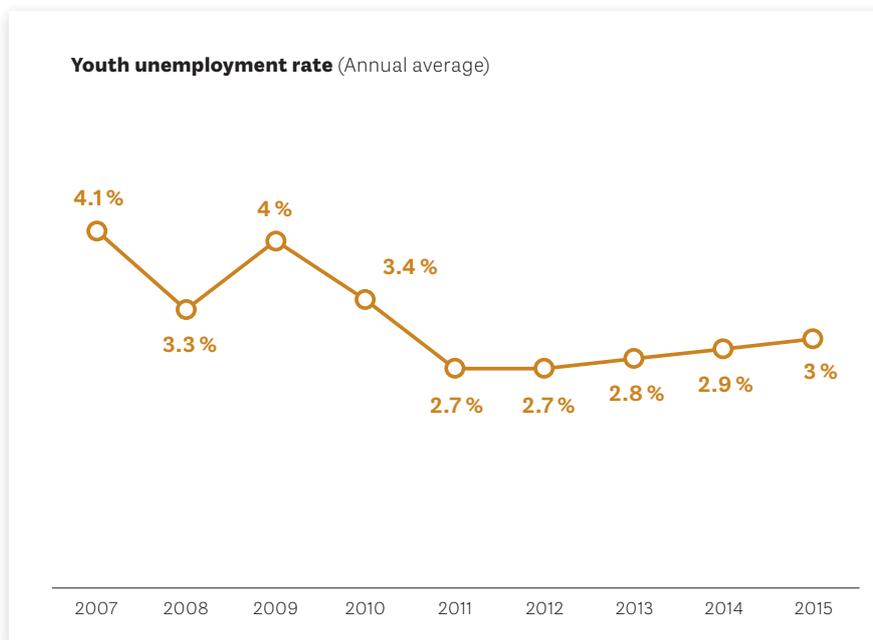


Abb. 6: Department of statistics (2015)

Discontinuation of apprenticeships

Every year in Liechtenstein around 80 apprenticeships are discontinued. In proportion to the total number of 895 trainees in Liechtenstein, this corresponds to almost 10%. Discontinuation of an apprenticeship occurs largely at the request of the trainee; in 2013 this was the case for 70 of the 85 discontinuations. Discontinuing an apprenticeship does not necessarily mean the end of a training career. According to the experience of the Office for Vocational Training and Career Counseling, 70% of young people are then able to find a bridging solution. In most cases, discontinued apprenticeships are resumed in another company, or in another vocation.

Through practical educational courses situated below the tertiary level, more young people can be successfully and sustainably integrated into vocations and the labor market. By combining practical education and school, not only will employability be improved, but economic benefits in the areas of productivity, and structural change, will be enhanced. Another factor contributing to low youth unemployment is unquestionably reflected in the proportion of those, who after completing their apprenticeship, find employment in the same company.

⁹ Strahm; Warum wir so reich sind/ Why we are so rich, p.54

¹⁰ Strahm; / Warum wir so reich sind/ Why we are so rich, p. 46.

3. Development and implementation of the NQFL

3.1. Target of the NQFL

In May 2011, the government of Liechtenstein resolved to create an integrated qualifications framework for the country. Following consultations at ministerial level, Switzerland gave Liechtenstein its assurances of close cooperation throughout this process. The Ordinance on the National Qualifications Framework for VET in Liechtenstein will be adopted by the government in October of 2016. In its main features, this is strongly based on the Swiss ordinance. In late August 2014, the Swiss Federal Council adopted the Ordinance on the National Qualifications Framework for VPET Qualifications (O-NQF-VPET).¹¹ With this ordinance on the NQFL, the basis for the referencing of VET qualifications within the NQFL, as well for the formulation of corresponding certificates, and/or qualification supplements, was confirmed. For every completion of VET, a certificate supplement is to be created. Although at this present time Liechtenstein has no higher VET sector, this was nevertheless included in the ordinance. Thus, a basis was created in the referencing sector for possible future developments in the VET landscape.

The qualifications framework for the academic higher education sector was already enshrined in the Higher Education Act, and the Higher Education Ordinance, in 2011. The configuration of the academic higher education strand and the referencing process are listed in Chapter 6¹². For this reason, the focus of the description in this section is placed on the VET strand.

The NQFL, and certificate and qualification supplements are aimed at improving the transparency and comparability of educational qualifications from Liechtenstein. The NQFL, by means of its orientation to the European Qualifications Framework for Lifelong Learning, should:

- adequately describe the educational system in Liechtenstein, thereby improving in particular the transparency, the clarity, and the comparability of qualifications in VET, higher VET, and higher education, with respect to European qualifications;
- facilitate in terms of labor market needs an employers assessment of the skills of vocational graduates from Liechtenstein, as well as, enable a similar process for graduates with European qualifications;
- owing to the improved clarity of qualifications, improve the employability of Liechtenstein-educated specialists and managers in foreign-based companies, and likewise, similarly improve their results for positions within Liechtenstein, thus increasing the overall mobility of specialists and managers.

The allocation of a VET certificate to a level of the NQFL is not tantamount to recognition of a vocational qualification, and therefore does not authorize the practicing of a regulated vocation. Crucial for the authorization of a vocation or qualification, is therefore not the allocation, but rather the certificate. The completion of a certain level of the NQFL does not automatically grant access to an education on the next higher level. With the introduction of the new NQFL, no new legal claims with respect to wage, or to mobility within the education system arise. For a specific vocation, every allocation to a level is approved by the government.

¹¹ Ordinance on the National Qualifications Framework for VPET Qualifications / Verordnung über den Nationalen Qualifikationsrahmen der Berufsbildung (V-NQR-BB), vom 27. August 2014.

¹² S. 28ff.

Owing to a government resolution enacted in 2011¹³, responsibility for the NQFL during the drafting process lies with the National Agency for International Educational Affairs (AIBA), in close cooperation with the State Secretariat for Education, Research and Innovation (SERI) in Switzerland, and the Office of Education in Liechtenstein. The drafting of the NQFL, the leadership of strategic team meetings, as well as participation at international meetings and preparatory work for the report, became the responsibility of AIBA. The elaboration of the classification grid, the classification of qualifications within the qualifications framework, as well as other initial work relating to VET, was carried out by SERI. The rating of vocational qualifications is to be approved by the government of Liechtenstein.

3.2. Structuring of the NQFL for VET

Seeing as the VET-strand within the NQFL was adopted from Switzerland, this may be used as a starting instrument.¹⁴ Within this report, if the term NQR-vocational education and training (NQR-VET) is used, this always means the VET-strand of the NQFL.

3.3. Competence-based approach and practical experience

The decisive criteria for the allocation of vocations in the NQFL are the professional competences (Criterion 3). All VET qualifications are checked in detail against these professional competences, and each is then assigned to its own level of the NQFL. Even if it is a question of qualifications for three- or four-year apprenticeships, the qualifications are allocated individually. Therefore, although qualifications may be of the same length, they are not necessarily assigned to the same level. Specifically, this means that the certificate of proficiency for a cook could for example be assigned to level 4, whereas the certificate of proficiency for an IT specialist is assigned to level 5.

In addition, professional competences enable the element of practical experience, which is an important part of the VET system, to be reflected appropriately in the qualifications framework. In VET, practical experience forms an integral part of the curricula.¹⁵ The learning outcomes to be achieved are specified in the respective VET ordinances.¹⁶ The providers of practical vocational training, i.e. the companies themselves, are committed to the best possible learning outcomes for apprentices, and monitor these periodically.¹⁷ Since the classification of VET is done on the basis of the VET ordinances, the practical experience of the graduates is automatically taken into account when referencing within the NQFL.

3.3.1. Levels and descriptors of the NQFL

The NQFL is a grid comprising eight levels to which all formal qualifications of the Liechtenstein VET system are systematically assigned. This is carried out on the basis of competence-oriented descriptors, which describe the requirements for each level. The levels of the qualifications framework correspond to those of the EQF. The descriptors are likewise closely aligned with those used in the EQF. To ensure appropriate assignment of qualifications, they were however also adjusted to suit the special features of the VET system, in particular the importance of periods of practical experience. The descriptors of the NQFL are formulated specifically with respect to vocational training across all eight levels. The development process was performed by SERI.

¹³ RA 2010/2909-4000.

¹⁴ NQR-CH-BB: <http://www.sbf.admin.ch/nqr/02824/index.html?lang=de>.

¹⁵ BBG / Vocational Training Act Art 14.

¹⁶ BBG Art 27.

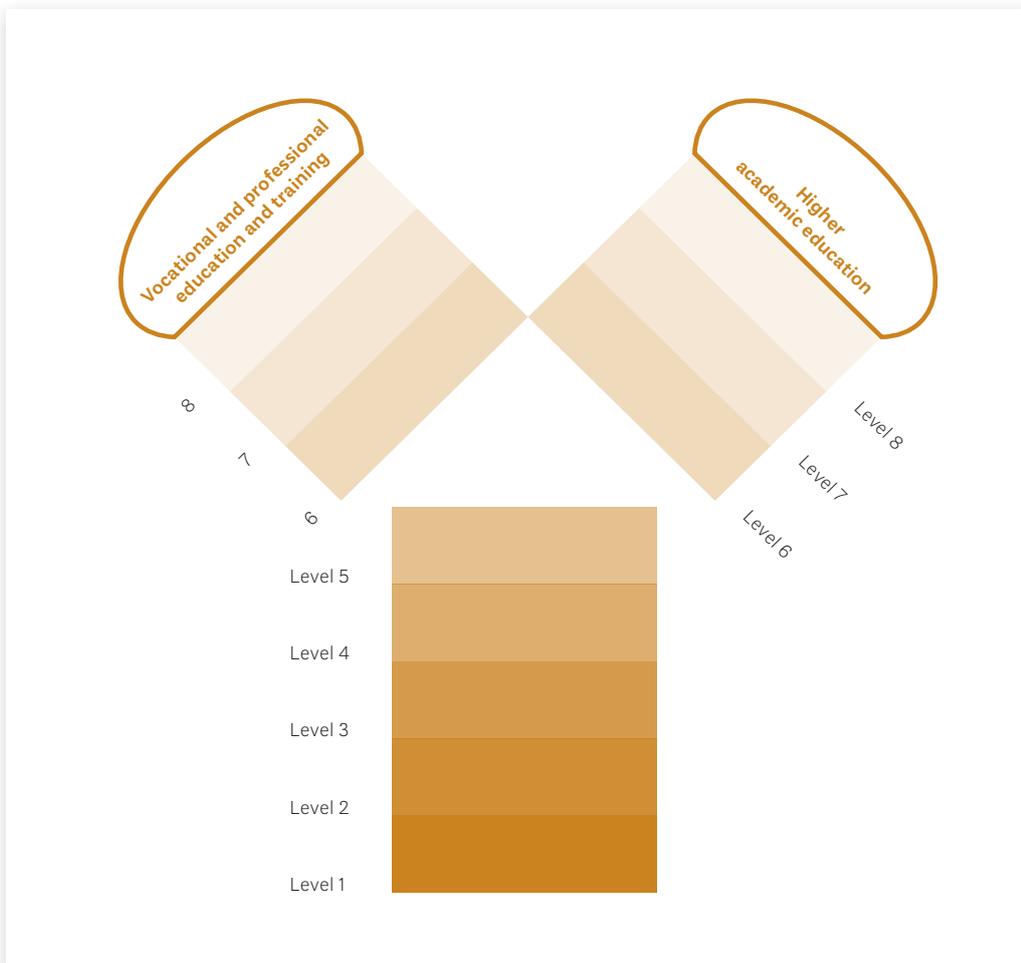
¹⁷ BBG Art 28.

The three descriptors, “Knowledge”, “Skills”, and “Competences”, were specifically defined for use in VET in Liechtenstein:

- “Knowledge” refers to declarative knowledge in work or educational domains, and is further subdivided into the categories of “knowledge”, and “understanding”.
- “Skills” refers to the capacity to apply knowledge to task completion, and problem solving. A distinction is made between procedural and sensorimotor skills.
- “Competences” expresses the regular and routine application of knowledge and skills in the work context, and is further divided into “professional” and “social” competences. The formulation of this descriptor allows for the importance of practical experience, and indicates that competences above and beyond purely technical ones can also be gained, and that these promote development of the individual within and outside the vocational activity.

Level 1 is unlikely to be occupied by VET qualifications. For VET - depending on the qualification – levels 2 through 5 are open.

Levels 5 or 6, up until 8 of the EQF are not only open to higher education qualifications, but also to VET qualifications at tertiary level (higher vocational/professional education), and will be displayed in the Y-frame on the left side. At the present time however, Liechtenstein does not award such qualifications at the tertiary level.



3.4. Implementation of the NQFL

3.4.1. Drafting of the NQFL and legal basis

In Liechtenstein, the NQFL for VET is regulated at ordinance level. It should be noted that for the higher academic education sector, an ordinance and a law in the form of the NQ.FL-HS is already in force. For the VET sector, there now exists an ordinance which leans heavily on the Swiss one. In this present ordinance, the main focus is therefore on the legal basis for qualifications, and on allocations within VET. General school education is at this present time not yet allocated. By working closely with neighboring countries, the Principality of Liechtenstein will observe developments in the allocation of levels for general school education, first in other countries. However, if in the near future an allocation of these levels is desired, this can be done as part of a revision of the law in the field of education legislation.

As the legislative process in Switzerland took a relatively long time, and was in itself a bottom-up approach, authorities in Liechtenstein also became involved. Representatives from training facilities in Liechtenstein are integrated within the “Swiss Organizations of Working Environments” (a group of Swiss organizations legally responsible for the practical component of apprenticeships, “Organisationen der Arbeitswelt”), and are also involved in many other influential processes. Owing to the fact that these representatives are organized in associations in Liechtenstein, also means that these associations are indirectly involved. For this reason, it can be assumed that the acceptance of the ordinance in Liechtenstein is also high.

With the entering into force of the ordinance on the NQFL for VET, the first vocations, arising from those already classified in Switzerland, will be able to be adopted and published. As already mentioned, this classification is done in Switzerland, however the decision-making body with respect to these classified vocations will remain the government of Liechtenstein.

3.4.2. Process for assigning VET qualifications to the NQFL

As mentioned, the process of assigning each vocation will be carried out by Switzerland. The government will then approve, in a separate procedure, those vocations assigned by the SERI. Owing to the fact that the procedures in Switzerland will be conducted using the Swiss ordinance, these processes are outlined in color in this report.

The consensual assignment process is designed in accordance with proven VPET partnership procedures. This means that the qualification awarding body (professional organisations, Colleges of Higher Education in collaboration with professional organisations in the case of professional education and training courses) perform the assignment, while an external competence centre (Swiss Federal Institute for Vocational Education and Training, SFIVET) verifies consistency and SERI takes the decision. This procedure firstly enables the knowledge of the awarding bodies about their qualifications to be utilised, and secondly ensures coherence within the education system. This creates solid foundations for widespread acceptance of the assignment levels. The focus on competences in the NQF VPET is ensured by assignment on the basis of the professional competences described in the basic reference documents¹⁸ of the VPET qualifications. This mechanism additionally serves as a catalyst for revising the VET and PET qualifications whose basic reference documents have not yet been drafted on the basis of professional competences.

¹⁸ Basic reference documents comprise: ordinances on vocational education and training, examination regulations for federal examinations, plus core syllabuses for courses at Colleges of Higher Education.

To help the awarding bodies assign their qualifications, SERI has drawn up assignment guidelines. The qualification awarding body always submits an NQF level proposal for a qualification. The specific procedure and the process from the submission of a proposal by the awarding body through to publication of the level of the qualification are described in detail in the Guidelines on the National Qualifications Framework for VPET qualifications¹⁹. The guidelines can be found in Annex 6.4.

In addition, SERI and the Swiss Federal Institute for Vocational Education and Training offer training courses to assist with implementing the NQF VPET and with drafting the certificate and diploma supplements over the first three years of implementation. The assignment process is broadly as follows:



First the qualification awarding bodies prepare a NQF level proposal on the basis of the competences described for the qualification. As the external competence centre mandated by SERI, SFIVET then verifies the consistency of the assignment and compliance with the scheme logic. SERI then takes the final decision on assignment.

3.5. Drafting a NQF level proposal

Once an awarding body is ready to assign its qualifications, it applies to SERI for a ticket. After receiving the ticket, the awarding body performs the assignment with the aid of the guide provided by SERI (Annex 6.4). The awarding body then first draws up a list of the qualifications for which it is responsible and assigns each individual qualification to a level on the NQF VPET. A certificate supplement or a diploma supplement respectively must also be prepared for each qualification. The assignment is based on the basic reference documents for a qualification and is performed on the basis of the legally binding descriptions of the competences set out in these documents. Basic reference documents are defined as follows:

- VET ordinance and training plan for vocational education and training for VET qualifications²⁰
- Examination regulations and guidelines for federal examinations²¹
- Core syllabuses for courses at Colleges of Higher Education²²

Since the terminology used to describe the competences in the basic reference documents sometimes differs from the terminology of the NQF VPET, a translation aid was created for the awarding bodies. This Grid of professional competences based on NQF VPET forms part of the guidelines and describes the levels of the NQF VPET using the terminology known to the awarding bodies from the drafting of the basic reference documents (professional competences, methodological competences, personal autonomy and social skills or knowledge, abilities and attitudes).

¹⁹ The current valid version can be retrieved from: www.sbf.admin.ch/nqr/O2439/index.html?lang=de.

²⁰ VPETA Art 19, 1; VPETO Art 12.

²¹ VPETA Art 28, 2 and 3; VPETO Art 26.

²² MiR-PC Art 6, 1 and 2, Art 7.

The awarding body may apply to the federal government for financial assistance to cover the work required for drafting the proposal and drawing up the certificate and diploma supplements. The awarding body may also obtain external assistance with drafting its proposal. The awarding body may organise the drafting process as it wishes: it may decide to form new bodies or to involve existing ones. Once this work has been completed, the awarding body submits the NQF level proposal to SERI.²³

3.6. Verification of consistency with scheme logic

Following an initial formal check, SERI passes the NQF level proposal on to SFIVET for a consistency check. This consistency check ensures that all VPET qualifications will be uniformly and neutrally evaluated and checked, and verifies the correctness of the assignment as well as coherence within the overall VPET system.

In the event of any conflicts, SFIVET will discuss the matter with the awarding body in order to reach a consensus. Once consistency has been verified, SFIVET communicates its recommendation regarding the awarding body's NQF level proposal to SERI, highlighting any remaining differences.

3.7. Decision and publication

SERI is responsible for the definitive assignment decision. Before deciding, SERI will also consult the Federal Commission for Vocational and Professional Education and Training FCVPET.

After the V(P)ET qualifications are decided and published by SERI the Liechtenstein qualifications will be approved by the Liechtenstein government. The NCP, namely AIBA, will then publish the register and the necessary documents on its website. This register consists of all V(P)ET qualifications in alphabetical order with their protected titles.

²³ The qualifications for VET professionals will be assigned by SERI as the awarding body responsible for these qualifications (VPETO Art 49).

4. The National Qualifications Framework for higher academic education in the Principality of Liechtenstein (NQ.FL-HS)

With the signing the Bologna Declaration in 1999, the Principality of Liechtenstein participated from the outset in efforts to harmonize the European Higher Education Area, and to promote transparency and mutual trust. Those instruments, purposely designed for the task (levels, ECTS, Diploma Supplement), were enshrined into law in 2004 with the revision of the Higher Education Act.

In 2008, subsequent to the resolution set down by the Minister of Education on the occasion of the Bologna conference, in Bergen 2005, the government of the Principality of Liechtenstein instructed the Office of Education to draw up a national qualifications framework for the higher education sector. This was to be achieved with the involvement of interested parties.

The following sections have been taken respectively from the Report on the Qualifications Framework for the Higher Education Sector (Section 4.1b to 4.5), and the Self-Certification Report (Section 4.6), both of which were approved by the government in September 2013. The legislation was already enacted in 2010 with the amendment to the Higher Education Act (HSG), and additionally in 2011, with the revised version of the Higher Education Ordinance (HSV). In these documents, both the key objectives, and critical elements of the NQFL-HS, as well as the competent jurisdictions for its implementation, are defined. The Qualifications Framework amends the corresponding article in the legislation, in the form of an implementation rule, and designates the use of Dublin descriptors as a reference system for the formulation of learning results. Furthermore, an amendment to the Higher Education Ordinance in February 2014, in the form of a supplement to the quality criterion (Appendix 1 and 2, HSV), ensures that all NQFL-HS quality assurance measures, including compliance, are taken into consideration.

Both the Qualifications Framework, as well as the Report on the Compatibility of the Qualifications Framework of the Higher Education Sector in the Principality of Liechtenstein (NQ.FL-HS) with the Qualification Framework for the European Higher Education Area (Self-Certification Report), are available on the website of the competent authority (Office of Education, www.sa.llv.li). Additionally, these reports are available on the official website of the European Higher Education Area (www.ehea.info), as well as on the ENIC-NARIC network website (www.enic-naric.net).

4.1. The higher academic education system in Liechtenstein

Since the adoption on November 25, 1992, of the law pertaining to universities and research institutions, the Principality of Liechtenstein has formally possessed - albeit in a limited fashion - a higher education sector. This currently consists of three universities, and one research institution:

- University of Liechtenstein;
- International Academy of Philosophy;
- Private University in the Principality of Liechtenstein, and
- Liechtenstein Institute.

4.1.1. Legal basis

The law applying to higher academic education (Higher Education Act; HSG) represents in terms of a framework law, the legal basis for higher academic education. The Higher Academic Education Act defines tasks and the locations of both universities and institutions alike. It also governs the approval process, and contains provisions regulating courses, students, teaching staff, titles and degrees, quality management and supervision, funding, as well as national, regional and international cooperation. The Higher Education Act constitutes the binding basis of the elements of higher education as described in the qualifications framework.

Since September 1, 2011, an ordinance for the higher academic education sector is also in force, which contains further regulations with respect to the organization of graduate schools, the accreditation of higher education institutions, the organization of the higher education network, the types of continuing education programs, as well as enhanced provisions on admission to higher education studies, and the protection of higher education qualifications.

The legal foundations also describe the purpose of the qualifications framework, govern jurisdictions and define the elements to be used by higher education institutions when describing awarded qualifications, in order that they may be allocated a respective rank. Higher education institutions are required to ensure the implementation of the framework.

In their legal status, higher education institutions are either institutions or foundations under public law, or legal entities under private law. Characteristic of higher education institutions is the right to freedom of curricula and research, both being contingent on legal requirements and ethical responsibilities. Furthermore, they have the right to self-management under the law.

4.1.2. International cooperation

In 1994, Liechtenstein joined the UNESCO Convention overseeing recognition of higher education studies, university degrees, and academic degrees among European countries. In 2000, Liechtenstein ratified the joint Council of Europe/UNESCO Convention referred to as the “Lisbon Convention”.²⁴ Since joining the European Economic Area (EEA) in 1995, Liechtenstein has also participated in EU education programs.

In June 1999, Liechtenstein signed the Joint Declaration of the European Ministers of Education convened in Bologna, commonly known as the “Bologna Declaration”. The Bologna process is probably the most important reform movement in the field of higher education in recent decades. With the adoption of the Higher Education Act in 2005, the legal framework for the full implementation of the Bologna reform was created.

Existing universities offer a very limited range of courses and study places, and are far from meeting current or future demand in Liechtenstein. Therefore, in the context of efforts to broaden the recognition of the Liechtenstein baccalaureate, and thus guarantee unrestricted access to Swiss and Austrian higher education institutions for students from Liechtenstein, agreements with Switzerland and Austria have been reached.

Around 65% of students from Liechtenstein successfully complete their studies at a Swiss university or university of applied science or universities of teacher education. Since 1981, Liechtenstein has been a member of the Inter-Cantonal Agreement, responsible for the funding of higher

education in Switzerland (since the late 90s: The Inter-Cantonal University Agreement or The Inter-Cantonal Agreement for Universities of Applied Sciences (Fachhochschulvereinbarung)). Through this agreement, students from Liechtenstein have unrestricted access to all cantonal universities and universities of applied science. Within the framework of the agreement, Liechtenstein, in identical fashion to Swiss cantons, financially compensates Swiss universities and universities of applied science for every student. Associated with the agreements are also quality standards, which must be met by higher education institutions in Liechtenstein, so as to obtain the appropriate financial compensation for Swiss students.

In addition to Switzerland, Austria is of great importance for the education of students from Liechtenstein. Agreements have existed between the Republic of Austria and the Principality of Liechtenstein since 1976, in which the admission of students from Liechtenstein to Austrian higher education institutions is ensured. Reciprocal rights for Austrian students in Liechtenstein have applied since Liechtenstein has had its own public university.

4.2. Quality assurance

4.2.1. Quality assurance in the higher education sector

According to the Higher Education Act the government is responsible for supervision of the higher education sector, and the introduction of a new course of study thus requires approval of the government. Concomitant with this approval is state recognition. This requirement also covers higher education institutions located in Liechtenstein, but which offer distance learning courses, and includes the awarding of titles and degrees. Accreditation first applies to a university or a program of study, once requirements specified in the Higher Education Act have been implemented, and together with proof of financing, have received a positive evaluation by a state-approved accreditation body²⁵.

Conducted by a nationally recognized agency, the (pre-) accreditation process occurring within the framework of the approval process represents a substantial quality assurance instrument. The ordinance relating to the higher education sector establishes quality standards, which on the one hand give a possible applicant wishing to establish and run a university, a frame of reference for the submitted concept, and on the other hand provide quality assurance agencies with a similar reference for the assessment of the concept. The criteria are based on European standards and directives²⁶ for quality assurance in higher education.

In addition to the (pre-) accreditation process, the law also stipulates that higher education institutions undergo regular external evaluations at intervals of at least six years. These legal provisions are based on the European standards and guidelines for quality assurance. Further to these, the associated commitments to internal quality assurance measures ensure the accordance of study programs at higher education institutions, with those criteria recommended in the Bologna reform²⁷.

In addition, higher education institutions are required to issue a yearly report detailing the number of students per degree program, the number of students per semester, teaching and research activities, knowledge and technology transfer, as well as services relating to public relations, cooperation with domestic and foreign higher education institutions, and quality management. This report must be made available to the public.

²⁵ Art. 6-16a, Higher Education Act/Hochschulgesetzes (LGBl. 2005/2) und Art. 9-14, Ordinance on Higher Education / Hochschulverordnung (LGBl. 2011/337)

²⁶ www.eua.be/fileadmin/user_upload/files/Quality_Assurance/ESG.pdf

²⁷ Bologna Working Group on Qualifications Frameworks. A Framework for Qualifications of the European Higher Education Area, S80.

4.2.2. NQ.FL-HS and quality assurance

The anchoring of the National Qualifications Framework in the Higher Education Act conforms to recommendations at a European level, which advise the inclusion of the qualifications framework within national quality assurance systems. For higher education institutions, the national qualifications framework therefore represents, in combination with the Higher Education Act, an additional guide for the design of study programs. Consequently, university-based staff responsible for evaluating study programs, national supervisory bodies, and external agencies, must take into account the NQ.FL-HS, when conducting internal and external quality assurance, and specifically in terms of the evaluation of study programs.

4.3. Qualification levels in the NQ.FL-HS

In the higher education sector, there are according to Higher Education Act, three types of courses: bachelor, master and doctoral degree programs. They are, in terms of admission, amount of ECTS points, as well as the associated titles and degrees, regulated by law. The completion of these courses leads to the conclusion of each stage of study, and enables formal access to a study program at the next stage.

In addition to the Higher Education Act, and the Higher Education Ordinance, the National Qualifications Framework sets out the admission requirements for each stage of study and stipulate descriptors for characterizing the learning outcomes of bachelor, master, and doctoral level qualifications.

With the revision of the Higher Education Act in 2010, the basis for the regulation of the continuing education area was established through the issue of an ordinance. The ordinance, which came into force in 2011, governs admission to continuing education, as well as to specific post-graduate programs at master's level, which conclude with a corresponding title (see 3.3.2). For all other offers in the area of continuing education, higher education institutions are themselves, with respect to content and format design, essentially, autonomous. In principle, the allocation of qualifications is possible, if these are described according to the criteria established in the NQ.FL-HS.

4.3.1. Criteria

With the goal of describing qualification levels, as well the development and classification of the corresponding qualifications, uniform criteria have been laid down. The NQ.FL-HS defines each level by means of the following criteria²⁸:

- Description of qualification levels in higher education in terms of the conditions for admission;
- Generic descriptors for the description of learning outcomes for the bachelor, master, and doctoral level;
- Profiles of courses of study for the description of alignment features and objectives of training courses;
- Measurement of program achievement through credit points (ECTS).

On the basis of these elements, the following table presents an overview of levels:

²⁸ Bologna Working Group on Qualifications Frameworks. A Framework for Qualifications of the European Higher Education Area.

	Bachelor Level	Master Level	Doctoral Level
Admission requirements	Completion of secondary level attested by higher education entrance qualification. This occurs usually via a Liechtenstein general or vocational baccalaureate, or a certificate of similar nature. Additional subject-specific conditions may also be defined (e.g. language ability, artistic suitability etc.). Acceptance “sur dossier” may in special cases be permissible.	Relevant university degree of at least Bachelor level (min. 180 ECTS), or equivalent degree, plus the possibility of additional admission requirements (e.g. language skills, work experience).	Relevant university degree of at least master’s level or an equivalent degree. The entry requirements are set out in detail in the PhD regulations.
Learning Outcomes¹	A bachelor’s degree will be awarded to students who:	A master’s degree will be awarded to students who:	Degrees at the doctoral level are awarded to students who:
Knowledge and Understanding	have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study;	have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with the first cycle, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context;	have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field;
Application of Knowledge and Understanding	can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study;	can apply their knowledge and understanding, and problem solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study;	have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity; have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication;

¹ Gemäss dem Bericht der Joint Quality Initiative vom 23. März 2005 (Übersetzung: Henning Schäfer, ZEVA, 2005), Quelle: <http://www.jointquality.nl/content/descriptors/DublinDeutsch.pdf>, letzter Zugriff am 4.7.2012.

² Das Wort “Forschung” wird verwendet, um eine große Bandbreite von Aktivitäten abzudecken, deren Kontext häufig auf ein Studienfach bezogen ist; der Begriff bezeichnet hier ein sorgfältiges Studium oder eine sorgfältige Untersuchung, die auf einem systematischen Verstehen und einem kritischen Bewusstsein von Wissen beruht. Das Wort wird unter Einbeziehung der Spannweite von Aktivitäten verwendet, die originelles und innovatives Arbeiten im gesamten Spektrum akademischer, professioneller und technologischer Felder inklusive der Geisteswissenschaften und anderer kreativer Künste fördern. Es wird nicht in einem limitierten oder restriktiven Sinn verwendet oder lediglich bezogen auf eine traditionelle wissenschaftliche Methode

Giving of Opinions	<i>have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments that include reflection on relevant social, scientific or ethical issues;</i>	<i>have the ability to integrate knowledge and handle complexity, and formulate judgments with incomplete or limited information, but that include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgments;</i>	<i>are capable of critical analysis, evaluation and synthesis of new and complex ideas;</i>
Communication	<i>can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences;</i>	<i>can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and nonspecialist audiences clearly and unambiguously;</i>	<i>can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise;</i>
Learning Strategies	<i>have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.</i>	<i>have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.</i>	<i>can be expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement in a knowledge based society.</i>
Qualification	<i>BA – Bachelor of Arts in [+ field of study] BSc – Bachelor of Science in [+ field of study]</i>	<i>MA – Master of Arts in [+ field of study] MSc – Master of Science in [+ field of study]</i>	<i>PhD – Doctor of Philosophy [field of study] bzw. Dr. [field of study]</i>
Continuing Study Opportunities	<i>Completion allows entry into a master’s level degree.</i>	<i>Completion allows entry into a doctoral-level program and to numerous continuing education programs/degrees.</i>	

³ Das Wort “professionell” wird in den “Deskriptoren” in seinem weitesten Sinne verwendet, bezogen auf Eigenschaften, die für die Ausübung einer Arbeit oder eines Berufes relevant sind und die die Anwendung einiger Aspekte wissenschaftlichen Lernens beinhalten. Es wird nicht verwendet in Bezug auf die spezifischen Anforderungen geregelter Berufe. Diese könnten als Profil oder Spezialisierung identifiziert werden.

⁴ Das Wort “Kompetenz” wird in den “Deskriptoren” in seinem weitesten Sinne verwendet, unter Berücksichtigung der Abstufung von Fähigkeiten oder Kenntnissen. Es wird nicht im engeren Sinn als allein auf der Basis von “Ja/Nein”-Bewertungen beruhend verwendet.

4.3.3. Overview of continuing education master's courses

Admission Requirements	<p>Typically relevant qualification at bachelor level; an equivalent higher education degree; or another qualification at tertiary level (higher vocational education), which totals at least 60 ECTS, and is supported by at least 6 years of vocational experience (of which 3 years are in the subject area).</p> <p>In exceptional cases, admission "sur-dossier" is permissible. In such cases, individual ability to study will be reviewed by the higher education institution on a case-by-case basis.</p>
Learning Outcomes	<p>Use of Dublin descriptors for relevant level according to specific profile of the study program recommended</p>
Profile	<ul style="list-style-type: none"> • Relevant consolidation/specialization • Multidisciplinary extensions/additions • Development and change
Scope	<p>min. 60 ECTS</p>
Qualification	<p>MAS - Master of Advanced Studies in ... (+ field of study) (Executive) LL.M. - (Executive) Master of Laws in ... (field of study) (E)MBA - (Executive) Master of Business Administration in ... (+ field of study)</p>
Continuing Study Opportunities	<p>No continuing study opportunities</p> <p>Module components may optionally, and in accordance with applicable admission requirements, be credited towards a consecutive master's program.</p>

4.4. Supplementary explanations regarding descriptors

4.4.1. Admission to individual courses

Bachelor The general- or vocational baccalaureate, demonstrates the attainment of skills guaranteeing the general capacity to study. In individual cases, an exception is possible in the context of a “sur dossier”. Here, the required competences are to be proved through appropriate procedures²⁹.

Master The succeeding master’s degree builds on the relevant skills acquired at the undergraduate level. A bachelor’s degree amounting to at least 180 ECTS must be confirmed. It is at the discretion of higher education institutions to establish further eligibility criteria such as proof of specific skills.

Doctoral The doctoral level builds on those skills acquired within the scope of a relevant preceding master’s degree. A minimum of 300 ECTS from bachelor and master’s studies must be verified. The detailed admission requirements are laid down in the doctoral regulations of the respective university.

Continuing education For admission to a Master of Advanced Studies program, resulting in acquisition of a protected title according to the ordinance (see 3.3.2), relevant skills acquired at the bachelor level are usually necessary. However, owing to the more practice-oriented alignment, admission without a bachelor’s degree is possible based on another higher education course, comprising at least 60 ECTS, and accompanied by a minimum of 6 years of professional experience (with 3 years being in the desired field of study). In addition, in exceptional circumstances, admission with “sur dossier” is possible. Academic suitability must in such cases be verified by the university.

4.4.2. Description of learning outcomes

The focus on learning outcomes is a central concern of the Bologna Process. Through these it is hoped to accomplish a transition from an input, to an output orientation. Qualifications are awarded on the basis of learning outcomes to be achieved. For each qualification level, categories known as level descriptors are defined for the determination of learning outcomes. These increase in scope and complexity with each increasing level. The detailed definition of the learning outcomes for courses and modules falls to the universities themselves.

The NQ.FL-HS uses descriptors originating in the qualifications framework for the higher education sector at European level (QF-EHEA). These so-called “Dublin descriptors” are divided into five description categories³⁰:

- Knowledge and understanding;
- Applying knowledge and understanding;
- Making judgements;
- Communicative competences;
- Lifelong learning skills.

²⁹ Ordinance on Higher Education / Verordnung über das Hochschulwesen vom 16. August 2011

³⁰ Working paper from the JQI conference / Arbeitspapier auf der JQI Tagung in Dublin “Gemeinsame ‚Dublin Descriptors‘ für Bachelor-, Master- und Promotionsabschlüsse”, 2004.
<http://www.jointquality.nl/content/descriptors/DublinDeutsch.pdf>

Owing to the marked differences in profiles and designs, no uniform descriptors can as yet be defined for continuing education. However, in terms of the describing of qualifications, an orientation to the Bologna-level descriptors is recommended.

Due to differences in scope, orientation and learning outcomes, continuing education programs do not lead to qualifications at levels 1-3 (bachelor, master and doctorate). Accomplishments attained as part of a continuing education qualification, can however be counted as either a whole, or as a component module within a study program, and can then be credited to the attainment of a final qualification of a level.

4.4.3. Qualifications

The qualifications framework distinguishes between degrees awarded before the Bologna reform, or before the November 25, 2004 implementation of the Bologna reform as law governing the higher education sector (Higher Education Act), and those qualifications awarded afterwards.

With the enactment of the ordinance relating to the higher education sector on 16 August 2011, titles and degrees for consecutive courses of study, as well as for continuing education master's programs, were uniformly regulated.

• Qualifications for courses of study after 2004

The minimum duration and the workload for courses earning a degree, as well as the names of degrees and titles, are regulated by the Higher Education Act. These correspond to the three levels, bachelor, master and doctorate, as defined in the NQ.FL-HS.

The following degrees are awarded for courses conducted since the coming into effect of the Higher Education Act on 25 November 2004:

Protected higher education qualifications in successive levels (since 2011)

Bachelor's degree:	<i>Bachelor of Arts in (+ field of study)</i> <i>Bachelor of Science in (+ field of study)</i>	BA BSc	180 ECTS At least 3 years (6 semesters)
Master's degree:	<i>Master of Arts in (+ field of study)</i> <i>Master of Science in (+ field of study)</i>	MA MSc	120 ECTS At least 2 years (4 semesters)
Doctorate:	<i>Doctor in /</i>	Dr.	At least 3 years (6 semesters)

• **Continuing education**

Protected university qualifications of postgraduate master’s courses

<p>Master’s level:</p>	<ul style="list-style-type: none"> • <i>Master of Advanced Studies in ... (+ field of study)</i> • <i>(Executive) Master of Laws in ... (field of study)</i> • <i>(Executive) Master of Business Administration in ... (+ field of study)</i> 	<p>MAS</p> <p>(Executive) LL.M.</p> <p>(E)MBA</p>	<p>Min. 60 ECTS</p>
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The higher education ordinance facilitates more courses of study within continuing education; however, these are not regulated, and these qualifications are not protected.

4.4.4. Profiles of courses of study

In principle, Liechtenstein’s higher education sector doesn’t differentiate between different types of higher education institutions. These institutions can, according to the relevant legal provisions, align themselves differently in relation to expanding their strengths in teaching and research. This may have the following different characteristics:

- a) provision of research and theory-oriented content;
- b) provision of application-oriented research and theory-based content.

Higher education institutions with different profiles are therefore in themselves different, but are classified equivalently. It is recommended that higher education institutions, during the process of determining their orientation, communicate both internally and externally in a transparent manner, and that their respective courses are categorized on the basis of their selected profile.

With respect to continuing education, the use of the following definitions of profiles is recommended:

- Relevant consolidation/specialization;
- Multidisciplinary extension addition;
- Development and change.

On the basis of these definitions, it is further recommended that higher education institutions categorize the profiles of continuing education courses not regulated by law, so as to facilitate a possible allocation or credit.

4.4.5. Credits (ECTS)

Credits points quantify the necessary level of academic performance required by a student and are based on the expected average workload for a module or qualification. The workload is calculated using the European Credit Transfer System (ECTS). In Liechtenstein, the workload for one credit point is legally specified at 30 hours³¹.

³¹ Law governing the higher education sector from 25 November, 2004, LGBl (Law Gazette) 2/2005, Art. 22 and 22a.

For degree courses, course performance as a scale of credit points is legislated nationally based on the Bologna guidelines. The model used in Liechtenstein provides for the following divisions:

- Min. 180 ECTS at level 1 (bachelor);
- Min. 120 ECTS at level 2 (master).

At doctoral level, credit points are not regulated per se; however, credit points can be awarded for curricular elements within the doctoral program.

For postgraduate master's courses, a minimum of 60 ECTS has been defined by law. With respect to other courses of study within continuing education, it falls to the higher education institutions themselves, on the basis of legal framework specifications, to define program workload, as well as program components.

The "Degree Supplement" discloses the credit points and learning outcomes for each module, thus allowing the transfer and comparability of qualifications or accomplishments.

4.5. Scope and jurisdiction

Based on the constitution, and on legal regulations relating to the higher education sector, the responsibility for and supervision of the higher education sector falls to the state. Therefore, accountability for the qualifications framework, including its implementation and development, primarily lies with the government. This task is to be performed in cooperation with subordinate bodies and higher education institutions.

By anchoring the qualifications framework in the Higher Education Act, and in the Higher Education Ordinance, both the relevant authorities, and all higher education institutions are obliged to orientate themselves using the qualifications framework. Implementation at the institutional level lies within the autonomy of the individual higher education institutions.

In collaboration with the Higher Education Association (Hochschulverbund), functioning as a common body, the government requires the regular evaluation of all aspects of the qualifications framework by higher education and other institutions in this area. Both government and the Higher Education Association can initiate any modifications or expansions.

The present qualifications framework is to be taken into account by accreditation agencies carrying out internal and external quality assurance processes.

The qualifications framework specifies the framework conditions and generic descriptors in the sense of a reference frame. Nevertheless, in order to create transparency and comparability in the implementation phase, it is up to the government and the relevant authorities, to take measures to obtain a consensus with all stakeholders.

4.6. Examination of the criteria and the procedural standards for the higher education sector

This section is taken from the report of the expert panel, convened to review the compatibility of the National Qualification Framework for Higher Education in Liechtenstein (NQ.FL-HS) with the qualifications framework for the EHEA, the so-called Bologna framework, will be specified. This report was approved by the government in June 2013. Any relevant changes taking place since this date will be explained within the respective sections.

In summary, the expert panel determined that the criteria for checking compliance with the overarching qualifications framework of the EHEA were fulfilled, and that the standards for self-certification had been complied with.

The self-certification report is based on the principles and criteria developed by the Bologna Working Group on Qualifications Frameworks. This includes seven criteria to verify the compatibility between a national qualifications framework and the EHEA framework, and six standards for the process of self-certification.

4.6.1. Review of criteria

The following review of individual criterion includes a discussion of the respective points, in the context of the particular features of the education system in Liechtenstein.

Criterion 1 The national framework for higher education qualifications and the body or bodies responsible for its development are designated by the national ministry with responsibility for higher education.

The responsibilities and the scope of NQ.FL-HS are clearly defined.

Based on the constitution and on the legal regulations pertaining to the higher education sector, responsibility for and the supervision of higher education falls to the state. Responsibility for the qualifications framework, including its implementation and development, is thus primarily a task of government. This task shall be performed in cooperation with the subordinate Office for Education.

In 2008, by order of the government, the development of a National Qualifications Framework for Higher Education in Liechtenstein was commissioned and placed under the supervision of the Office of Education.

A working group consisting of national Bologna experts and representatives of the Office of Education was assigned the task of drafting the NQ.FL-HS. National stakeholders including student representatives, educational institutions, and trade associations, were invited to a dialogue during the drafting phase. Results of these exchanges went into the development of the qualifications framework. After completion of the certification process, formal adoption of the NQ.FL-HS was carried out by the government of the Principality of Liechtenstein.

By anchoring the qualifications framework in the Higher Education Act and in the Higher Education Ordinance (Art.3-5), both the relevant authorities and all higher education institutions are obliged to orientate themselves using the qualifications framework. Implementation at the institutional level lies within the autonomy of the individual higher education institutions.

The Office of Education is the national reference point for the qualifications framework and maintains the register of national higher education institutions and qualifications. This task is performed by the Department of Upper Secondary and Higher Education Division.

In collaboration with the Higher Education Association, which functions as a common body, the government requires the regular evaluation of all aspects of the qualifications framework by higher education institutions and institutions alike. Both government and the Higher Education Association can initiate any modifications or expansions.

Criterion 1 is thus fulfilled. 

Criterion 2 There is a clear and demonstrable link between the qualifications in the national framework and the cycle qualification descriptors of the European framework.

Learning outcomes for the bachelor, master, and doctoral level of the NQ.FL-HS are described using the Dublin descriptors. These were developed by the Joint Quality Initiative (JQI) in 2004, and are recommended within the qualifications framework for the European Higher Education Area. As generic statements, they indicate which learning outcomes are typically achieved after the completion of each Bologna level.

According to the working group responsible for the development of the NQ.FL-HS, the Dublin descriptors constitute an adequate basis, which on the one hand provides a framework for orientation, and on the other hand still allows for maneuverability in terms of the development of program-specific descriptors in the various subject areas. Throughout the round of discussions, the University of Liechtenstein was significantly involved, and its past experience in dealing with the learning outcomes was taken into consideration.

Owing to complete adoption of the Dublin descriptors, a comparative analysis is unnecessary. The accordance can be confirmed.

Criterion 2 is thus fulfilled. 

Criterion 3 The national framework and its qualifications are demonstrably based on learning outcomes and the qualifications are linked to ECTS or ECTS compatible credits.

The expert panel makes clear that for all regular courses of study (bachelor, master), generic descriptors are defined for the specification of learning outcomes, and that the corresponding workload is defined both with ECTS, as with a regular study periods. These latter points have been regulated since 2004 by the Higher Education Act.

The expert panel further notes that for the doctoral level generic learning outcomes are defined. The doctoral study program is regulated by law with a minimum time period of three years; however, no ECTS are defined. Higher education institutions may however, award ECTS for curricular elements.

The Higher Education Act, the Higher Education Ordinance, as well as the NQ.FL-HS, make a further clear distinction between the tiered courses of study and continuing education. In the area of continuing education, the so-called postgraduate master courses are regulated by law. Besides the degrees and the admission, workload is set at a minimum of 60 ECTS.

Although admission requirements differ between these postgraduate master's courses and those courses subsumed under regular master's courses, the NQ.FL-HS arranges them according to the "best-fit" concept on the master's level. Based however on the large variance in design of these courses of study, no generic learning outcomes are defined for such postgraduate master's courses. The field of continuing education thus represents, until further notice, a special case. Corresponding qualifications are not listed in the register.

The NQ.FL-HS also makes a clear distinction between qualifications that were acquired before or after the legal implementation of the Bologna levels. Until further notice, previously acquired qualifications are listed in a separate register in the NQ.FL-HS. An allocation of these qualifications will be carried out as soon as the NQ.FL-HS receives official approval from the government.

The expert panel concludes that for tiered courses of study, criterion 3 is fulfilled. 

Criterion 4 The procedures for inclusion of qualifications in the national framework are transparent.

The inclusion of qualifications in the NQ.FL-HS occurs based on the accreditation of higher education institutions and their qualifications as part of the approval procedure.

The approval procedure, the concomitant accreditation, and the jurisdiction, are regulated by the Higher Education Act. Art. 6 of the Higher Education Act sets out the general approval requirement for all higher education institutions. This includes higher education institutions that offer distance learning from Liechtenstein. The approval process and the criteria to be met are defined in the Higher Education Act (HSG Art. 7 to 16a). The accreditation procedures required for approval, as well as the quality standards, are governed by the Higher Education Ordinance (HSV, Art. 9 to 14, and Appendix. 1 and 2).

The purpose of the NQ.FL-HS, its jurisdiction, and the liability for implementation are likewise stipulated in the Higher Education Act (Art. 2a and 2b), and in the Higher Education Ordinance (Art. 3-5).

The higher educational qualifications of tiered courses of study, as well as the postgraduate master's courses, are protected. Only approved higher education institutions have the right to award such qualifications, whereby the degrees and titles of these protected qualifications are specified.

Supervision of the higher education sector and thus competence to grant approval lies with the government. In collaboration with the Office of Education, the government is also responsible for the NQ.FL-HS, and decisions relating to the inclusion of a qualification in the NQ.FL-HS register.

As soon as the NQ.FL-HS is certified and receives official status, and following its adoption by the government, the verification of compatibility with the NQ.FL-HS in terms of quality assurance measures becomes mandatory (see criterion 5).

As a supervisory board, and as well as being the national center for recognition issues and for the NQ.FL-HS, the Office of Education provides information on accredited higher education institutions and study programs. The corresponding website for this purpose will be created upon completion of the certification report. Until then, this information is available on request.

Criterion 4 is thus fulfilled. 

Criterion 5 The national quality assurance system for higher education refers to the national framework of qualifications and are consistent with the Berlin Communiqué and any subsequent communiqué agreed by ministers in the Bologna Process.

Liechtenstein has multi-level quality assurance procedures, which determine on the one hand the general approval procedure, and on the other, include the obligation at an institutional level to maintain quality management.

Supervision of the higher education sector falls to the government. It is assisted in this task by the Office of Education. All higher education institutions including those offering distance learning from within Liechtenstein, now require approval. The multi-stage approval process and subsequent accreditation are specified in the Higher Education Act, and in the Higher Education Ordinance, and are publicly available.

A key element of quality assurance is represented in the accreditation and/or evaluation by means of a quality assurance agency. In the course of the accreditation, compliance with legal requirements is verified.

The objectives formulated in the Berlin Communiqué are thus fully met:

- A definition of the responsibilities of the participating bodies and institutions;
- An evaluation of programs or institutions including internal assessment, external review, participation of students, and publication of the results;
- A system of accreditation, certification or similar procedures;
- International participation, cooperation and networking.

A special feature for Liechtenstein lies in the fact that it has neither its own independent quality assurance agency, nor does an independent agency exist in Liechtenstein itself. It is therefore dependent on the services of foreign agencies.

However, by means of the legally established specification that all agencies to be admitted into the European register for quality assurance agencies for accreditation, must be approved, it is ensured that accreditations uphold the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

Following the official adoption of the NQ.FL-HS, the therein defined learning outcomes for qualification levels as defined in the Higher Education Ordinance, will be binding for all higher education institutions. Verification of compliance with these requirements will be demanded by the national authority (Office of Education) in the form of an accreditation, or through an evaluation. Thus it can be ensured that the authorities responsible for higher education institutions, the national supervisory bodies, and the external agencies, take into account the NQ.FL-HS whilst evaluating study programs in conjunction with internal and external quality assurance measures.

As part of internal quality assurance measures, higher education institutions have the duty to ensure that subject specific learning outcomes match the respective level descriptors.

The expert panel notes that the quality assurance system is clearly regulated. It includes on the one hand mandatory accreditation, and on the other, obliges all higher education institutions active in Liechtenstein to maintain an internal quality assurance management. The obligation to implement the NQ.FL-HS for all higher education institutions is regulated by law. Subsequent to approval of the NQ.FL-HS by the government, there will occur a corresponding amendment to the Higher Education Ordinance, which will stipulate the implementation of the NQ.FL-HS as an accreditation criterion.

Criterion 5 will be considered fulfilled once the NQ.FL-HS is specified in the legal tenets as a criterion for quality assurance. ✓

Criterion 6 The national framework, and any alignment with the European framework, is referenced in all diploma supplements.

The Higher Education Act requires all higher education institutions to issue free of charge, degree supplements (in German and English). Until now, no indication of the NQ-FL.HS or the Bologna framework was made therein. An adjustment of the diploma supplement will be undertaken subsequent to the approval of the NQ.FL-HS by the government. A reference to the NQ.FL-HS and to the present report will be included in the degree supplement. An appropriate template is to be found in the appendix.

Criterion 6 can be regarded as fulfilled as soon as reference to the NQ.FL-HS is listed in the degree supplement. ✓

The Office of Education will provide a template of the Diploma Supplement to the respective universities. According to the specifications laid out in the criteria, a reference to the NQFL-HS including the competent body has been inserted. Furthermore, a mandatory paragraph has been added, in which the classification of respective qualifications according to the NQFL-HS is to be specified — given that such a qualification is assigned within the NQFL-HS.

Criterion 7 The responsibilities of the domestic parties to the national framework are clearly determined and published.

The jurisdiction of stakeholders in relation to the qualifications framework and its implementation are described in law, and in the NQ.FL-HS (Chapter 3 'Jurisdiction')

Supervision of the higher education sector falls to the government. It is assisted in this task by the Office of Education. Changes to the NQ.FL-HS, as well as in the register, must be approved by the government.

All higher education institutions that operate in Liechtenstein, or operate from the territory of Liechtenstein, are subject to the Higher Education Act and to the approval requirements. The NQ.FL-HS by means of its legal anchoring is binding for all higher education institutions. As a common body of higher education institutions, the Higher Education Association has within the NQ.FL-HS, the ability to participate in the framework's further development (right of proposal). It is further stipulated in the NQ.FL-HS that in the event of any change, all stakeholders are to be consulted.

Also during the development of the qualifications framework, stakeholders were consulted and had the opportunity to contribute. This is demonstrated in the list of steps taken:

July 1, 2008 governmental decision to draft a national qualifications framework for higher education in the Principality of Liechtenstein (NQ.FL-HS). Led by a working group headed by the Office of Education (RA 2008 / 1599-4500 from 1 July 2008)

December 1, 2008 1st dialogue event with representatives of interest groups

July 2009 expert opinion from Prof. Volker Gehmlich, FH Osnabrück

November 18, 2009 2nd dialogue event

November 27, 2009 information meeting regarding the overall framework of the NQ.FL by the Agency for International Educational Affairs (the Copenhagen process and the NQF in Switzerland)

March 16, 2010 amendment to the Higher Education Act (HSG): new article (Art. 2b) for the NQ.FL-HS, which as its purpose, stipulated the responsibilities and liability for all higher education institutions.

8 June, 2010 interim report for the attention of the government (RA 2010 / 509-4500 June 8, 2010)

February 1, 2011 information regarding the NQ.FL-HS (version December 2010) and approval of project application regarding referencing and implementation (RA 2011 / 82-4500 dated 1 February 2011)

February 8, 2011 governmental decision to create a national qualifications framework for the complete education sector (NQ.FL-LLL), naming of a steering group under the leadership of the Agency for International Educational Affairs.

August 16, 2011 new ordinance for the higher education sector (Higher Education Ordinance, HSV) comes into force as supplementary provision to the NQ.FL-HS (Art. 3-5)

Criterion 7 is thus fulfilled. 

4.6.2. Review of procedural standards

The following will present whether, during the process of self-certification, the procedural standards confirming compatibility were complied with or not.

The expert panel summarizes in its conclusion that the procedures were performed according to the prescribed standards. A deviation exists with respect to the inclusion of a quality assurance agency, a matter which due to the special situation in Liechtenstein (see Chapter 3.4 and Criterion 5).

Standard 1 The competent national body/bodies shall certify the compatibility of the national framework with the European framework.

The Government of the Principality of Liechtenstein carries responsibility for the qualifications framework. In the performance of this task it is assisted by the Office of Education, which itself leads the entire process for the development of the NQ.FL-HS.

Regarding the process of self-certification, the government appointed an expert panel, which under the supervision of the Office of Education carried out a review of the compatibility of the national qualifications framework with the qualifications framework for the European Higher Education Area.

Based on the expert panel's report, the government is able to confirm compliance of the National Qualifications Framework (NQ.FL-HS) with the higher-level qualifications framework for the European Higher Education Area.

Standard 1 is thus met. 

On the basis of the favorable Self-Certification Report, the Government of the Principality of Liechtenstein approved the NQFL-HS with a resolution on 10 September, 2013. The NQFL-HS thus takes effect according to the Higher Education Act (HSG), Art. 2b, and the Higher Education Ordinance (HSV), Art. 3 to 5.

Standard 2 The self-certification process shall include the stated agreement of the quality assurance bodies in the country in question recognized through the Bologna Process.

Responsibility for the supervision of the higher education sector rests with the government of the Principality of Liechtenstein. In the performance of this task it is supported by its subordinate the Office of Education (Department of Secondary and Higher Education). Consequently, management of the drafting process of the NQ.FL-HS and of the process of self-certification fell to the Office of Education.

Owing to the fact that there are no quality assurance agencies in Liechtenstein, such an agreement is not possible through any other entity other than the government.

In consideration of this, and in recognition of the exceptional situation, this standard is regarded as fulfilled. ✓

Standard 3 The self-certification process shall involve international experts.

Including Lewis Purser of the Irish Universities Association, Elisabeth Frank from the Austrian Ministry for Science and Research, Sabine Felder of the Rectors' Conference of Swiss Universities (CRUS), and Achim Hopbach of the European Association for Quality Assurance (ENQA), there were four foreign experts involved in the process of self-certification.

Standard 3 has thus been met. ✓

Standard 4 The self-certification and the evidence supporting it shall be published and shall address separately each of the criteria set out.

Subject to approval by the government, the expert panel's present report will be published on the official website of the Office of Education (<http://www.sa.llv.li>). The Office of Education coordinates national information center measures and activities including its publications and implementation.

Standard 4 can be classified as fulfilled, subsequent to approval of the NQ.FL-HS by the government. ✓

Standard 5 The ENIC and NARIC networks shall maintain a public listing of States that have confirmed that they have completed the self-certification process [www.enic-naric.net].

Following adoption by the government, the Office of Education will itself publish the self-certification report, together with the NQ.FL-HS on its own website. The Office of Education will ensure that after approval by the government, the NQ.FL-HS and the report will be published on the website of ENIC / NARIC.

The tasks of the national information center for the qualifications framework, as well as the tasks of the information center for academic and professional recognition issues (NARIC Liechtenstein), will both be administered by the Department of Upper Secondary and Higher Education Division.

Standard 5 can be classified as fulfilled, subsequent to approval of the NQ.FL-HS by the government. ✓

Standard 6 The completion of the self-certification process shall be noted on subsequently issued diploma supplements, by showing the link between the national framework and the European framework.

After approval by the government, a reference to the qualifications framework and to the report on self-certification will be recorded in the degree supplement, along with references to the relevant authorities (see also criterion 6).

Standard 6 can be classified as fulfilled, subsequent to approval of the NQ.FL-HS by the government. ✓

5. Referencing Criteria

The procedures used to develop and implement the NQF VET are in accordance with the referencing criteria drawn up by the EQF Advisory Group³². In this chapter, this will be described in detail. This chapter will also outline the criteria for the VET sector, and where necessary, those pertaining to academic higher education.

Criterion 1

The responsibilities and/or legal jurisdiction of all relevant national bodies involved in the referencing process, including the National Coordination Point, are clearly defined and made publicly available by the competent public authorities.

The NQFL is supervised by the Ministry of Education, which is responsible for compulsory education, higher academic education as well as VET. Political and administrative decisions are made by the ministry along with those government offices under its supervision. The relevant government offices are the Office of Education, responsible for compulsory schools, as well as upper secondary schools and academic higher education, and the Office for Vocational Training and Career Counseling.

Since 2011, the National Agency for International Educational Affairs (AIBA) has been entrusted with the task of drafting the NQFL. In addition, in 2012, a National Coordination Point (NCP) was established in order to carry out administration and coordination tasks connected with the NQFL. AIBA is a legal entity and an independent institution subject to public law. It is also supervised by the Ministry of Education.

The referencing processes in VET are stipulated in the National Qualifications Framework for Liechtenstein - Vocational Education and Training Ordinance (NQFL-BBV). Classifications in the academic higher education sector occur primarily through approval procedures contained in the Higher Education Ordinance (HSV) and Higher Education Act (HSG). Furthermore, the most important facts pertaining to the NQFL can be obtained on a publicly accessible website³³. In a subsequent step, the relevant authorities from Switzerland and Liechtenstein will also be noted on the website, thus making publicly known, who performs the ranking and how this it is executed.

Criterion 2

There is a clear and demonstrable link between the qualifications levels in the national qualifications framework or system and the level descriptors of the European qualifications framework.

Starting point for development of the national qualifications framework were the levels and descriptors of the EQF. In terms of levels, the NQFL is very similar to the EQF. The descriptors are also strongly based on the EQF, although terminological adjustments have been made for the VET system in Switzerland and Liechtenstein.

³² In original form, the referencing criteria are composed only in English ("Criteria and procedures for referencing national qualifications levels to the EQF" http://ec.europa.eu/eqf/documentation_en.htm, retrieved on 22.05.2014). All German translations used in the present report were adopted from the Austrian Referencing Report (Austrian Federal Ministry of Education (BMUKK) and Federal Ministry of Science and Research (BWF), 2011). The relevant Austrian authorities have been informed.

³³ <https://www.nqfl.li>.

At an early stage of development, the strategy group decided that the NQFL should have the same number of levels as the EQF, so that through the similarity of both strands, direct comparisons would be made possible more easily. As a result, identical to the EQF, level 1 indicates the lowest level, and level 8 the highest. The Y-model allows the inclusion of the already existing descriptors for the higher education framework, and in parallel, the use of descriptors for VET.

In the higher education sector, the Dublin descriptors were adopted unchanged into the German version. Within the scope of the Higher Education Act 2004, the Bologna levels were introduced for all disciplines according to the Bologna guidelines.³⁴

A comparison between the NQFL and EQF descriptors for VET

A comparison of the NQFL and EQF descriptors yields the finding that they have quite similar structures. To further understanding, the two frameworks were compared by the SERI, and the results reported in the Swiss Referencing Report.

The NQF VPET uses only the term “or” rather than the phrase “and/or”. In that case, “or” can be taken to mean “either/or” as well as “and”.

It is assumed that a person who has reached level 1 in the NQF VPET has completed compulsory schooling and so has basic competences³⁵ (reading, writing, arithmetic). The descriptors used in the NQF VPET are more detailed than those in the EQF and contain specific descriptions for VPET, but equivalence is assured. This extension of requirements is logical because the NQF VPET is a qualifications framework which only deals with vocational and professional qualifications.

In the NQF VPET, the ‘understanding’ domain indicates the depth of intellectual understanding of correlations required at this level. It is assumed that individuals at level 1 understand basic general correlations.

The term “general education” is used as a synonym for general knowledge, as this term is more common in Switzerland.

As the NQF VPET uses the same categories as the EQF, they can be compared. Unlike the EQF, the NQF VPET has sub-categories. The Knowledge category is divided into knowledge and understanding, the Skills category into procedural and sensorimotor skills, and the competences category into professional and personal competences. These provide structure and are helpful in making comparisons.

The comparison between the EQF and the NQF VPET is conducted according to level. It starts at level 1 and ends at level 8.

³⁴ See Bologna referencing criteria pg. 40

³⁵ The basic competences are defined according to the national educational objectives of the EDK. See URL:<http://www.edk.ch/dyn/12930.php> (as of: 3.12.2014).

	Knowledge	Skills	Competences
Level 1	<p>Knowledge: Possess <i>basic knowledge</i> specific to the working or learning context and <i>a basic general education</i>.</p> <p>Understanding: Understand <i>basic, general correlations</i> within the working or learning context and able to explain these in one's own words.</p>	<p>Procedural skills: Able to recognise <i>basic standardised tasks</i> in a specific field to a certain extent.</p> <p>Sensorimotor skills: Able to use specific technical aids and instruments to solve <i>basic standardised tasks in a specific field</i> based on specific operational guidelines.</p>	<p>Professional competences: Possess <i>initial practical experience</i> within a business or similar setting from which further knowledge and skills may be developed. Work can be carried out according to instructions.</p> <p>Personal competences: Autonomy: able to apply the requisite knowledge and skills <i>under instruction or operational guidelines in clearly defined assigned tasks</i> within a business or similar setting and adhering to <i>mandatory guidelines</i>. Social competences: able to adapt one's own behaviour to the situation at hand and <i>interact appropriately with others, work within a team and convey information both verbally and in writing</i>.</p>
EQF	<i>Basic general knowledge</i>	<i>Basic skills</i> required to carry out <i>simple tasks</i>	Work or study <i>under direct supervision</i> in a <i>structured context</i>
Assessment	<p>The term “basic” appears in level 1 of both the EQF and the NQF VPET and is an important term in these descriptors.</p> <p>The NQF VPET requires a person at level 1 to have basic specific knowledge of the field of work or study in addition to general education.</p>	<p>As with knowledge, the term “basic” appears both in the EQF and the NQF VPET. The NQF VPET uses the term “standardised” rather than the phrase “simple tasks”. It also specifies how tools and instruments can be used once this level has been reached.</p>	<p>Work “under direction/under direct supervision/instruction” is referred to in level 1 in both qualifications frameworks. In the EQF it is assumed that this work or study takes place in a “structured context” and under supervision. In the NQF VPET this is described as being able to “adhere to mandatory guidelines” and apply competences in “clearly defined assigned tasks”.</p> <p>Certain forms of courtesy and behaviour are also described at this level. The NQF VPET requires initial practice experience within a business or similar setting.</p>
The various formulations in the EQF and the NQF VPET have the same degree of graduation.			

	Knowledge	Skills	Competences
Level 2	<p>Knowledge: Possess <i>basic knowledge specific</i> to the working or learning context and a <i>basic general education</i>.</p> <p>Understanding: <i>Understand the general correlations</i> within the specific working or learning context or branch and able to <i>explain</i> these in one's own words.</p>	<p>Procedural skills: Able to recognise and handle <i>standardised tasks</i> in a specific field to a certain extent based on <i>operational guidelines</i>.</p> <p>Sensorimotor skills: Able to use specific technical aids and instruments to solve <i>standardised tasks in very familiar situations in a specific field based on operational guidelines</i>.</p>	<p>Professional competences: Drawing from <i>initial work experience</i>, able to use the requisite knowledge and skills at this level to carry out <i>organised and planned work</i> within a business. <i>Work</i> can be carried out <i>according to instructions</i>.</p> <p>Personal competences: Autonomy: able to apply the requisite knowledge and skills to assigned tasks in a specific field partly on one's own. Able to assist in the planning of simple tasks within a specific field and carry out these tasks in accordance with mandatory guidelines. Social competences: able to adapt one's behaviour to the situation at hand and interact appropriately with others, work within a team and convey simple information from the specific field both verbally and in writing in a suitable form.</p>
EQF	<i>Basic factual knowledge</i> of a field of work or study	<i>Basic cognitive and practical skills</i> required to use relevant information in order to <i>carry out tasks and to solve routine problems using simple rules and tools</i>	Work or study <i>under supervision</i> with <i>some autonomy</i>
Assessment	<p>The key element in the EQF is the acquisition of basic factual knowledge. The NQF VPET splits factual knowledge into specialist knowledge and general education.</p> <p>It states that general correlations must be understood and that the individual will as a result be able to explain these correlations to himself or herself.</p>	<p>The term "standardised" is used in the context of skills in the NQF VPET instead of "basic". This refers to set work procedures which cannot be varied. It is therefore also important for the person to be able to act according to instructions given in the organisation.</p> <p>In the EQF, this is described as solving routine problems using simple rules and tools.</p>	<p>The change compared to the previous level in the EQF is that the individual is expected to have "some autonomy". At this level, the NQF VPET also expects the individual to be able to use his or her competences "on one's own" and to "assist in the planning of simple tasks".</p> <p>Furthermore, in addition to the courtesy and behaviour standards already required, it is emphasised that this should be done in an appropriate manner and that the individual should do this "according to mandatory guidelines". The NQF VPET requires initial work practical experience at this level.</p>
These different formulations have the same degree of graduation.			

	Knowledge	Skills	Competences
Level 3	<p>Knowledge: Possess <i>knowledge specific</i> to the working or learning context and <i>general education</i>.</p> <p>Understanding: Understand the <i>correlations</i> within the specific working or learning context or <i>branch</i> and able to <i>explain these in one's own words</i>.</p>	<p>Procedural skills: Able to <i>recognise tasks</i> in a specific field. Able to carry out tasks based on <i>operational guidelines</i> and <i>known problem-solving strategies</i>.</p> <p>Sensorimotor skills: Able to use specific technical aids and instruments to solve <i>standardised tasks</i> in familiar situations in a specific field <i>based on operational guidelines</i>.</p>	<p>Professional competences: Drawing from <i>work experience</i>, able to use the requisite knowledge and skills at this level to ensure the <i>successful application of working</i> techniques and <i>basic working processes within a business</i>. Work can <i>partly be carried out on one's own</i>.</p> <p>Personal competences: Autonomy: able to apply the requisite knowledge and skills in a specific field <i>partly on one's own</i>. Within the specific field, able to <i>share responsibility for simple tasks</i> and adhere to mandatory guidelines. Social competences: able to <i>adapt one's behaviour</i> to the situation <i>at hand and the needs of others</i>, work within a team and convey information from the specific field both verbally and in writing in a suitable form.</p>
EQF	<i>Knowledge of facts, principles, processes and general concepts in a field of work or study</i>	<i>A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information</i>	<p><i>Take responsibility for completion of tasks in work or study in solving problems</i></p> <p><i>Adapt own behaviour to circumstances</i></p>

<p>Assessment</p>	<p><i>Individuals at this level are no longer required only to have basic specific knowledge and general education, but a broader range of knowledge and education. In the EQF, this is reflected by the reference to “knowledge of facts, principles, processes and general concepts”. The range of specific and general knowledge expected has broadened, as has the level of detail of the knowledge required. The depth of understanding is not restricted to the concrete context alone, but broadened by an understanding of topics related to the sector in which the individual works.</i></p>	<p><i>At this level, the NQF VPET requires individuals to perform not only standardised tasks but all tasks. This assumes that the individual is able to apply known problem-solving strategies.</i></p> <p><i>The same idea is expressed in different terms in the EQF.</i></p>	<p><i>The change compared to the previous level in the EQF is that the individual is expected to accept “responsibility for completion of tasks”. At this level, the NQF VPET also expects the individual to be able to “help organise simple tasks”.</i></p> <p><i>Furthermore, in addition to the courtesy and behaviour standards already required, it is emphasised that this should be done in an appropriate manner and that behaviour should “be adapted to the needs of other people”. The NQF VPET requires professional practical experience at this level.</i></p>
<p><i>The various formulations in the EQF and the NQF VPET have the same degree of graduation.</i></p>			

	Knowledge	Skills	Competences
Level 4	<p>Knowledge: Possess <i>more in-depth knowledge specific</i> to the working or learning context and <i>general education</i>. Also able to acquire on one's own specific technical knowledge.</p> <p>Understanding: <i>Understand the correlations within the specific working or learning context or branch as well as from thematically related fields and able to explain these in one's own words.</i></p>	<p>Procedural skills: Able to recognise <i>tasks</i> in a specific field. Able to carry out tasks <i>based on operational guidelines</i> or through the <i>use of known problem-solving strategies</i>.</p> <p>Sensorimotor skills: Able to use specific technical aids and instruments to solve <i>particularly difficult tasks</i> in familiar situations in a specific field <i>based on operational guidelines or with the help of known methods or tools</i>. Able to use <i>basic means of communication</i>.</p>	<p>Professional competences: Drawing from <i>work experience</i>, able to use the requisite knowledge and skills at this level to ensure smooth operation of one's own working processes within a business. <i>Work can be performed on one's own</i>. Able to <i>supervise routine tasks of other persons</i>.</p> <p>Personal competences: <i>Autonomy:</i> able to apply the requisite knowledge and skills in a specific field <i>mostly on one's own</i>. Within the specific field, able to <i>take responsibility for clearly defined tasks</i> and <i>handle changing requirements</i>.</p> <p>Social competences: able to adapt one's behaviour to the situation at hand and the needs of others, work within a team and convey information from the specific field both verbally and in writing in a suitable form.</p> <p>Leadership competences: able to <i>show other workers how to perform a specific set of tasks within a given working context</i>.</p>
EQF	<i>Factual and theoretical knowledge in broad contexts within a field of work or study</i>	<i>A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study</i>	<p><i>Exercise self-management</i> within the guidelines of work or study contexts that are usually predictable, but are subject to change.</p> <p><i>Supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities</i></p>

<p>Assessment</p>	<p>The idea expressed by “factual and theoretical knowledge in broad contexts” in the EQF is referred to in the NQF VPET as more in-depth specific knowledge and general education. The NQF VPET also requires the individual to be able to expand his or her existing range of knowledge by self-directed study in the field in question (for example, by preparing independently for a tertiary level VPET qualification).</p> <p>The required depth of understanding is enlarged to encompass related fields.</p>	<p>Individuals at this level in the NQF VPET are required to recognise all tasks and work out solutions. This assumes that the individual is able to develop new problem-solving strategies.</p> <p>The same idea is expressed in different terms in the EQF.</p> <p>The ability to use basic communication tools is explicitly mentioned in level 4 of the NQF VPET. This means speech, writing and technical communication tools such as the computer or telephone.</p>	<p>The sub-category of leadership competences is a new addition to this level of the NQF VPET.</p> <p>The change compared to the previous level in the EQF is that the individual is expected to “supervise the routine work of others”. Individuals at this level in the NQF VPET are also expected to be able to supervise the “routine tasks of others” and “show other workers how to perform a specific set of tasks”. Work is done “on one’s own” and “responsibility for tasks” is accepted even if the requirements change.</p> <p>Individuals at this level of the NQF VPET are required to have professional practical experience so as to ensure that work processes are carried out without any difficulty</p>
<p>The various formulations in the EQF and the NQF VPET have the same degree of graduation.</p>			

	Knowledge	Skills	Competences
Level 5	<p>Knowledge: Possess <i>extensive specific knowledge</i> of important areas of work and a <i>more in-depth general education</i>. Also able to <i>acquire on one's own specific technical knowledge</i>.</p> <p>Understanding: <i>Understand the correlations within or outside the specific working context or branch and able to explain these in one's own words.</i></p>	<p>Procedural skills: Able to <i>recognise and analyse tasks</i> in a specific field. Able to carry out tasks <i>based on operational guidelines</i> or through the <i>use of known problem-solving strategies</i>.</p> <p>Sensorimotor skills: Able to suitably prepare and use specific technical aids and instruments to <i>solve fairly difficult tasks</i> in various situations in a <i>specific field based on operational guidelines</i> or with the help of known methods or tools. Able to <i>use basic means of communication</i> properly and <i>present information</i> from the specific field.</p>	<p>Professional competences: Drawing from <i>work experience</i>, able to use the requisite knowledge and skills at this level to ensure smooth operation of one's own working processes within a business. <i>Work can be performed in the form of independent and strategic activities</i>. Able to <i>supervise and guide routine tasks of other persons</i>.</p> <p>Personal competences: Autonomy: able to apply the requisite knowledge and skills in a specific field on one's own. Within the specific field, able to <i>take responsibility for tasks</i> and handle changing requirements. Social competences: able to <i>reflect on one's own role</i> and adapt one's behaviour to the situation at hand and the needs of others, work within a team and convey information from the specific field both verbally and in writing in a precise and suitable form. Leadership competences: able to <i>manage workers in several specific fields of activity within a given working context</i>.</p>
EQF	<i>Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge</i>	<i>A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems</i>	<p><i>Exercise management and supervision</i> in contexts of work or study activities where there is unpredictable change</p> <p><i>Review and develop performance of self and others</i></p>

<p>Assessment</p>	<p>Knowledge and understanding are “comprehensive” at this level. The individual develops these independently and undertakes self-directed further training.</p> <p>“Awareness of the boundaries of knowledge”, explicitly referred to in the EQF, is implicitly present in the NQF VPET. The fact that the individual recognises the boundaries which he or she encounters enables him or her to recognise the boundaries of knowledge as well and to engage in focused further training.</p>	<p>Individuals at this level in the NQF VPET are required to recognise and analyse all tasks and work out solutions to them. This assumes that the individual is able to develop new problem-solving strategies.</p> <p>The same idea is expressed in different terms in the EQF.</p> <p>The ability to use basic communication tools and the presentation of information are explicitly mentioned in the NQF VPET.</p>	<p>The change compared to the previous level in the EQF is that the individual is expected to have the competence to “manage and supervise” and “review and develop” his or her own as well as other people’s performance. Individuals at this level in the NQF VPET are also expected to be able to “supervise and guide routine tasks of other persons” and to “manage workers in several specific fields of activity within a given working context „</p> <p>Work is expected to be carried out independently at this level of the NQF VPET, and a strategic contribution is also required.</p> <p>Individuals at this level of the NQF VPET are also explicitly required to be able to reflect on their role.</p>
<p>The various formulations in the EQF and the NQF VPET have the same degree of graduation.</p>			

	Knowledge	Skills	Competences
Level 6	<p>Knowledge: Possess <i>advanced specific knowledge</i> in all important areas of work and <i>more in-depth general education</i>. Also able to <i>acquire on one's own specific technical and interdisciplinary knowledge</i>.</p> <p>Understanding: <i>Understand the correlations within or outside the specific working context or branch and able to see linkages with thematically related fields</i></p>	<p>Procedural skills: Able to <i>recognise, analyse and assess complex tasks</i> in a specific field. Able to carry out tasks based on operational guidelines or through the use of known problem-solving strategies.</p> <p>Sensorimotor skills: Able to suitably prepare and use <i>specific technical aids and instruments to solve difficult tasks</i> in various situations in specific fields based on <i>suitable and known methods or tools</i>. Able to <i>use basic means of communication properly and present information</i> from the specific field.</p>	<p>Professional competences: Drawing from <i>versatile work experience</i>, able to use the requisite knowledge and skills at this level to ensure smooth operation of one's own working processes and produce <i>strategic results</i> within a business. Work can be performed in the form of <i>independent and strategic activities</i> as well as in the form of consulting. Able to handle <i>complex technical activities and projects and take important decisions</i>.</p> <p>Personal competences: Autonomy: able to apply the requisite knowledge and skills in a specific field and thematically related fields on one's own. Within the entire specific field, able to <i>take responsibility for tasks and processes</i> and handle changing requirements. Social competences: able to reflect on one's own role and the role of others and conscientiously maintain these roles in dealings with others, work within a team and convey information from the specific field both verbally and in writing in a precise, understandable and suitable form. Leadership competences: able to manage <i>workers in several fields of activity within a given working context, partly assume responsibility for these workers and support them</i>.</p>
EQF	<i>Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles</i>	<i>Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study</i>	<i>Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts Take responsibility for managing professional development of individuals and groups</i>

<p>Assessment</p>	<p>At this level, both the EQF and NQF VPET refer to “advanced” knowledge.</p> <p>The NQF VPET covers only vocational training, which is why the emphasis here is on vocational knowledge. However, it can be assumed that the competences required are compatible with the EQF and so can be indirectly linked with the frameworks used in the university sector.</p>	<p>Individuals at this level in the NQF VPET are also required to recognise, analyse and evaluate complex tasks and work out solutions to them. This assumes that the individual is able to develop new problem-solving strategies.</p> <p>The same idea is expressed in different terms in the EQF. The ability to use communication tools and the presentation of information are explicitly mentioned in the NQF VPET.</p>	<p>At this level of the EQF, the emphasis is primarily on necessary leadership competences in addition to extensive professional practical experience. In the EQF, this is expressed as “taking responsibility for managing professional development of individuals and groups”, while in the NQF VPET it is described as the ability to “manage workers [...], partly assume responsibility [...] and support them”.</p> <p>The EQF also describes the responsibility which an individual at this level must be able to assume. In the EQF, this is described as “managing complex technical or professional activities or projects” and “taking responsibility for decision-making”, while in the NQF VPET it is described as taking “responsibility for task and processes”.</p> <p>Work is expected to be carried out independently at this level of the NQF VPET, and a strategic contribution and the competence to provide advice are also required.</p>
<p>The various formulations in the EQF and the NQF VPET have the same degree of graduation.</p>			

	Knowledge	Skills	Competences
Level 7	<p>Knowledge: Possess <i>advanced, solid and detailed specific knowledge</i> of all important areas of work and <i>extensive general education</i>. Also able to <i>acquire on one's own specific technical and interdisciplinary knowledge</i>.</p> <p>Understanding: <i>Understand the complex correlations within or outside the specific working context or the branch and able to see interdisciplinary linkages with thematically related or unrelated fields.</i></p>	<p>Procedural skills: Able to <i>recognise, analyse and assess complex tasks in a given interdisciplinary field</i>. Able to carry out tasks based on operational guidelines or through the <i>use of suitable, innovative problem-solving strategies</i>.</p> <p>Sensorimotor skills: Able to suitably prepare and use specific technical aids and instruments to <i>solve very difficult and challenging tasks</i> in every situation from thematically related fields based on suitable and at times <i>entirely novel methods or tools</i>. Able to make full use of the <i>possibilities of various means of communication and present complex information from the specific field</i>.</p>	<p>Professional competences: Drawing from <i>versatile work experience</i>, able to use the requisite knowledge and skills at this level to ensure smooth operation of one's own working processes and produce strategic results within a business. Work can be <i>performed in the form of managerial and consulting activities</i> as part of a complex working process and contribute to the further development of the business or improvement of working processes. Able to <i>plan and adopt new strategic approaches</i> to complex, unforeseen activities and projects.</p> <p>Personal competences: Autonomy: able to apply the requisite knowledge and skills in a <i>challenging field</i> and thematically related fields independently and conscientiously. Able to <i>take responsibility for increasingly complex tasks and processes</i> and handle changing requirements. Social competences: able to reflect on one's own role and the role of others, define these roles and conscientiously maintain them in dealings with others. Able to work within a team and to convey complex information from the specific field both verbally and in writing in a precise, understandable and suitable form, having the desired impact on and being tailored to the intended recipients. Leadership competences: able to <i>manage workers in a field of activity within a given working context, completely assume responsibility for these workers and support them in a targeted fashion</i>.</p>
EQF	<i>Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research. Critical awareness of knowledge issues in a field and at the interface between different fields</i>	<i>Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields</i>	<p><i>Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches</i></p> <p><i>Take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams</i></p>

<p>Assessment</p>	<p>The knowledge described in the EQF as “highly specialised knowledge” is referred to in the NQF VPET as “advanced, solid and detailed specific knowledge” and “extensive general education”.</p> <p>The modern world of work requires individuals at this level to constantly refresh their specialist knowledge and to learn about new technologies and innovations.</p> <p>The reference in the EQF to “critical awareness of knowledge issues” seems to be formulated in relation to an academic qualification rather than a vocational one.</p>	<p>Individuals at this level in the NQF VPET are also required to recognise, analyse and evaluate interdisciplinary complex tasks and work out solutions to them. This assumes that the individual is able to develop and apply new, innovative problem-solving strategies.</p> <p>Level 7 skills are described in a very academic manner in the EQF. Research problem-solving skills are not the focus for VPET; wide-ranging and specific knowledge of procedures within a profession are more important.</p> <p>The ability to make full use of the opportunities offered by various communication tools and the presentation of complex information are explicitly mentioned in the NQF VPET.</p>	<p>The leadership competences required at this level of the EQF are described as “taking responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams”, while the NQF VPET defines them as the ability “to lead employees [...], take full responsibility for them and motivate them in a targeted fashion”.</p> <p>The EQF also describes the responsibility which an individual at this level must be able to assume. This is described in the EQF as “managing and transforming work or study contexts that are complex, unpredictable and require new strategic approaches” and in the NQF VPET as “taking responsibility for increasingly complex tasks and processes” and directing and shaping “new strategic approaches to complex, unforeseen activities and projects”.</p> <p>At this level of the NQF VPET, leadership competences are required in addition to advisory activities. The activity takes place in a challenging work context.</p>
<p>The various formulations in the EQF and the NQF VPET have the same degree of graduation in some respects.</p>			

	Knowledge	Skills	Competences
Level 8	<p>Knowledge: Possess <i>advanced, solid, specialised, detailed and systematic specific knowledge</i> in all areas of work and <i>extensive general education</i>. Also able to <i>acquire on one's own specific technical and interdisciplinary knowledge</i>.</p> <p>Understanding: <i>Understand the complex correlations within or outside the specific working context or branch and able to see interdisciplinary linkages with complex thematically related or unrelated fields.</i></p>	<p>Procedural skills: Able to fully <i>recognise, analyse and assess complex and highly challenging tasks in a given interdisciplinary specific field</i>. Able to carry out tasks based on operational guidelines or through <i>suitable, innovative problem-solving strategies</i> and <i>make relevant prognoses or recommendations</i>.</p> <p>Sensorimotor skills: Able to suitably prepare and use specific technical aids and instruments to <i>solve novel, very difficult and highly challenging tasks</i> in every situation from thematically related fields based on <i>suitable and entirely novel or innovative methods or tools</i>. Able to make full use of the <i>possibilities of various means of communication and present complex and differentiated information</i> from the specific field.</p>	<p>Professional competences: Drawing from <i>extensive work experience</i>, able to use the requisite knowledge and skills at this level in a targeted fashion to ensure smooth operation of one's own working processes and produce strategic results within a business. Work can be performed in the form of managerial and consulting activities as part of one or more complex working processes and contribute to the <i>further development of the business or improvement of working processes</i>.</p> <p>Personal competence: Autonomy: able to fully and conscientiously apply the requisite knowledge and skills in a <i>specific highly challenging field</i> and thematically related fields on one's own. Able to <i>take responsibility for complex tasks and processes</i> and handle changing requirements within the entire highly challenging field. Social competences: able to reflect on and shape one's own role and the role of others, behave responsibly in dealings with others, work in a team and <i>strategically apply one's analytical skills within the working context</i>. Able to convey complex and differentiated information from the specific field both verbally and in writing in a precise, understandable, suitable and professional form, having the desired impact on and being tailored to the intended recipients. Leadership competences: able to <i>manage workers</i> in a highly challenging field of activity within a given working context, <i>completely assume responsibility for these workers and support them in a targeted fashion to take personal initiative</i>.</p>

EQF	<i>Knowledge at the most advanced frontier of a field of work or study and at the interface between fields</i>	<i>The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice</i>	<i>Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research</i>
Assessment	<p>What the EQF refers to as “knowledge at the most advanced frontier” is defined in the NQF VPET as “advanced, solid, specialised, detailed and systematic knowledge” and “extensive general education”.</p>	<p>Building on the previous level, the competence to produce forecasts and recommendations is also required here. This corresponds to the “synthesis and evaluation” ability required at this level in the EQF.</p> <p>Level 8 skills are described in a very academic manner in the EQF. Research problem-solving skills are not the focus for VPET; wide-ranging and specific knowledge of procedures within a profession are more important.</p> <p>The ability to make full use of the opportunities offered by various communication tools and the presentation of complex information are explicitly mentioned in the NQF VPET.</p>	<p>In conceptual terms, the NQF VPET builds on the previous level and so does not introduce any new concepts at this stage. The EQF does use some new key words to describe level 8 competences. Most of these terms can apply to VPET.</p> <p>The ideas referred to in the EQF by “authority”, “autonomy” and “integrity” are expressed in the NQF VPET by “responsibility”, “ability to reflect”, “leadership” and “support”.</p> <p>The terms “research” and “ability to innovate” are more closely related to academia, although the field of applied research certainly has some links to VPET.</p> <p>The NQF VPET emphasises that activities take place in a highly challenging work context.</p>
<i>The various formulations in the EQF and the NQF VPET have the same degree of graduation in some respects.</i>			

Criterion 3

The foundation and orientation of the national qualifications framework or system, and its qualifications, are learning outcomes. These are linked by regulations to the recognition of non-formal and informal learning, and also, so far they exist, credit systems.

Within VET in Liechtenstein, learning outcomes are described in educational planning in the form of vocational competences. These include all the required competences which graduates must have acquired by the end of the learning process in order to work in their respective vocations. Contained in these competences are both vocational competences, as well as related personal and social competences. Vocational competences are outlined as vocation-specific, as methodological, as personal and social competences, or as knowledge, skills and attitudes. To determine vocational competences, different validation methods are applied.

The vocational competences contained in each educational plan are elaborated by the “Professional Organizations” (Organisationen der Arbeitswelt (OdAs)) in Switzerland, in which associations from Liechtenstein have a direct seat. These vocational competences issued by the SERI were directly adopted by associations in Liechtenstein.

If the key documents concerning VET do not give an overview of the vocational competences, the responsible body has the possibility to either compile a separate table with an overview of the vocational competences, or to subject the qualification to a revision.

Recognition of non-formal and informal learning

In later life, professional competences can be also acquired and recognized in various ways. Adults have four paths to obtain a secondary vocational qualification (VET diploma (FZ) or VET certificate (BA)). The recognition is carried out by the ABB.

1 Qualification procedures without VET

The applicant has 5 years work experience (a part of which is in the relevant vocation) and the deficient theoretical and practical skills will be acquired by attending an appropriate educational course. As soon as enough preparation has occurred, the qualification process (final apprenticeship examination) can be taken. An apprenticeship contract is not required.

2 Validation of educational accomplishments

On the basis of a dossier it is demonstrated that the person already possesses competences in the occupation in question. Experts examine the dossier. Possible gaps are filled with supplementary courses. Once all the required competences have been documented, the specific certificate will be issued. For this path, no apprenticeship contract is signed.

3 Shortened basic VET

Adults can attend basic VET with an apprenticeship contract at a host company. Due to professional knowledge or a VET certificate/diploma, the duration of the apprenticeship can be shortened.

4 Regular VET

The entire time of training is completed as if the basic VET (apprenticeship) had been started directly after compulsory education. Depending on the profession and targeted certification, apprenticeship takes two years (VET certificate (BA)), or three or four years (VET diploma(FZ)) respectively.

Four ways, one goal – catching up on vocational qualifications

Basic vocational education and training (VET)

You complete a basic VET (apprenticeship), which depending on the vocation, takes 2 to 4 years

What do I need?

Completed Oberschule or Realschule

What has to be done?

Apprenticeship in a company / school attendance / external courses / final examination

Is it possible in my vocation?

Yes, in all vocations

How long does the training take?

Depending on the vocation, 2 to 4 years with apprenticeship contract

Shortened basic vocational education

You complete a shortened basic vocational education (apprenticeship)

What do I need?

Completed Oberschule or Realschule, 2 years vocational experience, at least 22 years old and/or have a completed general baccalaureate

What has to be done?

Apprenticeship in a company / school attendance / external courses / final examination

Is it possible in my vocation?

Health care workers, child and personal care workers, agriculture and some more

How long does the training take?

2 years full-time with apprenticeship contract

Further education for adults (Art. 46)

You prepare yourself independently for the VET certificate/diploma examination (Lehrabschlussprüfung) or attend a vocational school.

What do I need?

Completed Oberschule or Realschule, 5 years vocational experience, with 2 to 4 years in the aspired vocation

What has to be done?

Self-study or school attendance as required / external course as required / final examination

Is it possible in my vocation?

Yes, in all vocations

How long does the training take?

Alongside normal job, length of time depends on educational background and needs

Validation procedures

You verify in a dossier your vocational experience. Educational gaps must then be filled

What do I need?

Completed Oberschule or Realschule, 5 years vocational experience, with 2 to 4 years in the aspired vocation

What has to be done?

Verification of vocational skills in a Dossier. Catching up of missing educational components (courses, internships...)

Is it possible in my vocation?

Initially in a small number of vocations such as retail trade specialists, merchants, home economics, logistics specialists, health care workers

How long does the training take?

Alongside normal job, length of time depends on educational background and needs / personal objectives

The validation of non-formal and informal education shall be done at a later date, as in these two areas there is a close exchange with Switzerland and Austria. The developments will however be followed with interest and implementation will be started at the appropriate time.

Criterion 4

Both the procedure for the inclusion of qualifications in the national qualifications framework and that for describing the classification of qualifications within the national qualifications system are transparent.

Liechtenstein will adopt an Ordinance on the NQFL VET in October 2016, in which the procedure for inclusion of qualifications, and the description of the classification of qualifications, is regulated.

The consensus-oriented approach to the classification of qualifications is described in the guidelines of the SERI in detail. The guidelines will be publicly available on the website of NQFL as well.

Federal Institute for Vocational Education and Training

The consistency check carried out by the Federal Institute for Vocational Education and Training (SFIVET) as an external competence centre ensures the equal treatment of all vocational training qualifications, their correct assignment, and the consistency of these assignments in the overall VPET system.

The SFIVET conducts its check according to the methodology of the guidelines. It ascertains whether the competences match the descriptions in the basic reference documents and whether their assignment to a level in the NQF VPET is plausible. The first phase of the consistency check follows the same route as the self-assignment procedure undertaken by the awarding bodies: individual competences listed in the “overview of competences” are allocated by an inspector to an NQF level as described in the guidelines, and the overall level of the qualification is calculated. If the result of the assignment by the SFIVET matches that contained in the NQF level proposal by the awarding body, this concludes the consistency check.

If the result of this first consistency check does not match the requested level, a more detailed consistency check is conducted: the inspector consults all the basic reference documents relating to the qualification to ascertain why the awarding body would like to have individual competences assigned at a particular level. If the inspector can agree that the level requested is appropriate after taking this additional information into account, this concludes the consistency check.

If the inspector still believes that the qualification should be assigned at a different level, talks are held with the awarding body to reach a consensus. During these talks the inspector discloses the result of his or her consistency check to those present and explains why he or she has reached a different conclusion. The awarding body has the opportunity to present its arguments verbally, to give further information and to take a position on the explanation given by the competence centre. After the talks, the SERI is notified either that consensus has been reached or that there is still disagreement.

If a consensus has been reached, a written declaration to this effect is drawn up and signed by the signatories to the request.

If no agreement has been reached, the report indicating this sent from the SFIVET to the SERI is accompanied by a detailed description of the failed attempt to reach consensus and the main reasons.

The check is conducted by the NQF competence centre in the SFIVET. This competence centre has a member of staff who examines NQF level proposals. This individual has a working group at his or her disposal which acts as the quality review unit in the internal SFIVET process. This working group consists of three SFIVET employees who have held senior positions for a considerable time and one SFIVET administrator. The employees in senior positions are heads of departments responsible for the production of VPET basic reference documents (education ordinances, examination rules), for professional development and reviews in the craft professions, industry and health sectors. They also represent the various sections of basic and advanced VPET.

The working group does not examine every single assignment, but sporadically selects random NQF level proposals for review. The review is conducted according to the same principles set out above.

SERI

If the SFIVET is unable to reach a consensus, the SERI invites awarding bodies to talks. If this also fails to produce a consensus on the assignment of the qualification, the SERI rejects the NQF level proposal. Following consultation with the FCVPET, the SERI publishes the new assignments twice a year in an official ordinance (list).

Federal Commission for Vocational and Professional Education and Training

The FCVPET is consulted before a definite decision on the assignment of qualifications is reached. To this end, the SERI sends the FCVPET a list of assigned qualifications, including the NQF level, twice a year along with a statistical assessment of the breakdown of the NQF levels of qualifications assigned to date according to qualification type. The FCVPET can express an opinion on the assignment but has no decision-making authority. The SERI notes the opinion of the FCVPET.

Government of Principality of Liechtenstein

Once the classification of qualifications has been approved by all relevant authorities in Switzerland, the government receives a list of classifications for approval by the NCP. Once the classifications have taken note of by the government, the results will be published on the website of the NQFL. Certificate supplements are then ready to be downloaded.

Liechtenstein has two vocational pathways which are not offered in Switzerland; namely, the vocations of technical garment maker and material technician. If the associations offering these two VET programs require the classification of these vocations, the Swiss Federal Institute for Vocational Education and Training (SFIVET)) has indicated its preparedness to make a classification according to the Swiss criteria. In such a case, the levels according to SERI become no longer necessary, and the government decides on the classification. However, since very few young people choose these pathways, the expenses for these associations will be very high. In one classification, the financial support occurs through the NCP³⁶, which is equipped by the ministry with the necessary competences.

At the time of this report's presentation, no assigned qualifications are currently existent in Liechtenstein. However, as soon as the regulation is implemented by the government, it is to be expected that all professions that have already been assigned in Switzerland (and so long as they are offered in Liechtenstein) will be assigned a level. How expediently this process occurs, is from the Liechtenstein perspective not to say, owing to a strong dependence on developments in Switzerland.

Criterion 5

The national quality assurance systems for both general education and VET relate to the national qualifications framework, or to the national qualifications system, and are consistent with the relevant European principles and guidelines (as given in appendix 3 of the recommendation³⁷).

Quality assurance in the Liechtenstein vocational education and training system

Both in Switzerland and in Liechtenstein, quality assurance in VET and in other education sectors enjoys high priority. For the VET sector, quality assurance occurs at the state level through the Office for Vocational Training and Career Counseling (ABB), whereas for the compulsory education sectors, as well as for the higher academic education sector, responsibility falls to the Office of Education.

The Vocational Training Act and the Ordinance form the legal basis for the quality development of the VET system. At all levels and in all sectors of education, these legal foundations are ascribed great importance. Providers of VET guarantee this quality development. The state encourages the development of quality, establishes quality standards and monitors compliance.³⁸ With respect to the preparation of individual VET ordinances, the Swiss professional organizations (OdA's) are heavily involved. The VET ordinances represent the basis for learning outcomes in vocational and professional education and training, both in Switzerland, and in Liechtenstein. Supervision of basic VET includes the following tasks:

- Counseling and support of contracted parties and coordination between stakeholders;
- Supervision of the quality of work-based training, including inter-company courses and comparable third places of learning;
- Supervision of school-based education;
- Supervision of examination and other quality criteria;
- Supervision of compliance with the statutory provisions relating to the apprenticeship contract;
- Supervision of compliance of the apprenticeship contract for all contracted parties.³⁹

School-based classes at vocational colleges require competent teachers with a tertiary level A or B degree. In addition, they have to demonstrate six months work experience and 1,800 hours of training in VET pedagogy. VET trainers who are responsible for the education of trainees in host companies, and in other industry courses, must possess a relevant vocational qualification, along with an education in methodological and didactic training. Companies involved in training learners have a duty to meet certain standards in order to obtain the required training approval from the Office for Vocational Training and Career Counseling.

³⁷ [http://eur-lex.europa.eu/legal-content/DE/ALL/;jsessionid=tPKvTgvdHjLkL3G8cwmcJNy7VLy9kh85CpkcJY1hBv2JtTnTnRDQrl-2103262933?uri=CELEX:32008H0506\(01\)](http://eur-lex.europa.eu/legal-content/DE/ALL/;jsessionid=tPKvTgvdHjLkL3G8cwmcJNy7VLy9kh85CpkcJY1hBv2JtTnTnRDQrl-2103262933?uri=CELEX:32008H0506(01)) (requested on 22.05.2014).

³⁸ BBG, Art.6.

³⁹ BBG, Art.37.

Supervision of basic VET falls to the state via the Office for Vocational Training and Career Counseling. This includes counseling and support for learners, and those responsible for their training, as well as coordination between all stakeholders in basic VET. Supervisory areas are:

- the quality of work-based training
- the quality of school-based training;
- examinations and other qualification procedures;
- compliance with the statutory provisions relating to the apprenticeship contract;
- compliance of the apprenticeship contract for all contracted parties.

The Office performs its supervisory role through visits, positions on committees, training and continuing-education courses, conferences, as well as written and oral information.

Criterion 6

The allocation process involves the explicit approval of the relevant quality assurance bodies.

The Office for Vocational Education and Career Counseling was and is involved at every point in the allocation process in Switzerland. This is ensured through participation on various supranational meetings, and through close exchange with colleagues from Switzerland.

Furthermore, the official head of the Office for Vocational Education and Career Counseling is a member of the country network group for the NQFL, and can follow from here, developments in Switzerland, and draw attention to any possible problems.

The referencing report will be approved by the government.

Criterion 7

International experts are involved in the allocation process.

Selection of international experts

In the allocation process in Liechtenstein, the following experts are involved:

- Sabine Schueller, Germany, an expert from the Federal Ministry of Education and Research – Department for perspectives of the knowledge society, Coordinator for the Qualifications Framework Germany and the German EQF mapping process, as well as a member of the EQF Advisory Group;
- Eduard Staudecker, Austria, an expert of the Federal Ministry for Education and Women – Department of strategy development in VET, Coordinator of the Qualifications Framework Austria and the Austrian EQF mapping process, a member of the EQF Advisory Group.

The selection was made primarily on the basis of a profound knowledge of VET in German-speaking countries. Furthermore, these experts are also familiar with the realities of the Principality and its close ties with Switzerland, owing to their close exchange with German-speaking countries and their involvements, since 2012, in the national network group, D-A-CH-L-L. Their experience in the development of a qualifications framework and the allocations to the EQF also played a role, as did their involvement in the Advisory Group.

Collaboration

Cooperation with international experts commenced at the beginning of the referencing process and comprised the following stages:

1. September 2015: Expert meeting regarding drafting of NQFL, as well as a meeting with the steering committee regarding the NQFL in Liechtenstein
2. February 2016: Sending of the corrected version of the referencing report
3. March 2016: Meeting to discuss the revised report with experts and steering group
4. June 2016: Presentation of the state-of-play in the Advisory Group
5. October 2016: Presentation of referencing report in the Advisory Group
6. December 2016: Approval of the report and the regulation by the government

As per January 1, 2015, the mutual exchange of information with Switzerland, regarding classifications in the respective national qualifications frameworks, was laid down in an agreement between the Swiss Federal Council and the Government of Liechtenstein. The agreement sets down the mutual recognition of certificates of competency and vocational certificates in basic vocational training.⁴⁰

Sabine Schüller

The referencing report is very clear and well structured. The specific situation of a small country like Liechtenstein is very well explained. It is easy for a foreign reader to understand the education system of Liechtenstein as well as the referencing process. Also, the specific role of vocational education and training (VET) as a backbone of the education system in Liechtenstein has been described very clear and easy to understand.

The development of the NQFL as well as the referencing has been done in close cooperation with Switzerland as the education systems of both countries are closely interlinked. As a consequence, the allocation of VET-qualifications is not done by Liechtenstein but by Switzerland and taken on by Liechtenstein. However, Liechtenstein decided to develop a framework which takes into account the specific national context of Liechtenstein. Therefore, it was strategically decided to develop a framework which is not limited to VET like in Switzerland but also includes higher education. This national approach is supported by national NQFL-legislation. The inclusion of the self-certification report of referencing the NQ.FL-HS to the QF-EHEA into the referencing report underlines the overarching character of the NQFL.

General education has not been included in the NQFL but the possibility to do that at a later stage depending on the developments in the neighboring countries with similar systems is explicitly stated. So, the referencing report mirrors the current situation but the whole process can be seen as work in progress in the positive sense of being open and adaptable for future developments. The general approach of developing an overarching framework should be evaluated positively.

A strength of the development process of the NQFL is the ongoing involvement of relevant stakeholders including the social partners which is a crucial basis for acceptance and support of the NQFL across different sub-sectors of the education system as well as the labor market.

⁴⁰ Agreement between the Swiss Federal Council and the government of the Principality of Liechtenstein regarding mutual recognition of certificates of competency and vocational certificates in basic VET: <http://www.admin.ch/opc/de/official-compilation/2015/53.pdf>, 20.01.2015.

The referencing report describes in a transparent manner what was done during the process and why and thus fosters trust. The international experts were integrated into the referencing process which has been always open to their critical opinion.

Eduard Staudecker

The referencing of the NQFL to the EQF was conducted on the basis of previous fundamental strategic decisions. On the one hand the close connection of the Liechtenstein qualifications system to the education and training system of Switzerland (CH) needed to be respected. Additionally, the considerable labour market mobility in the region was a main driver for the creation of an NQFL. Thus the construction of the NQFL mirrored very realistic the legal and governmental situation of the qualification system in FL. In addition the referencing process was carried out in a widely open manner adopting the pragmatic approach that changes in other NQFs (especially the one in CH) might potentially impact on the situation in Liechtenstein.

The system in FL is widespread and VET plays an important role. The report has a strong USP giving an excellent comprehensive insight into the qualifications system of the country, where VET qualifications plays a much more important role compared to other European countries. It is a visible (also financial) priority of the state and the social partners that highest qualified citizens have many possibilities for their further professional lives and that no borders exist between the neighbour countries.

Level comparisons between the NQFL and EQF descriptors were done in analogy to the Swiss Framework, which displays a very high level of quality. This is explicitly stated in the report and FL builds on a high level bilateral agreement between FL and CH in this context. In the same report also the referencing to the QF-EHEA was done. This process started already in 2012 and was finish with this document. For this referencing exercise other international experts were involved.

FL has chosen a sectoral approach, with the higher levels of the Framework being split into two strands. Since Austria has introduced the same concept this is evaluated as positive and realistic. This solution further respects the different competences in the administration and fulfils the needs of HE institutions. Nevertheless, given that CH has set up a QF exclusively for the field of VET, FL needs to closely observe the CH developments in this context.

The high dependence from decisions in CH was mentioned already. In the construction of decision making within the NQFL the FL authorities have the final word, which is to be evaluated positive.

Two meetings with international experts were organised in FL and were reassuring in that social partners played an important role in qualification politics. They - and of course all other administrative units - were involved in the discussions and strategic decisions concerning the NQFL. It became apparent that stakeholders in FL see the EQF as a strong tool for education and labour market mobility. The fact that FL has put a lot of effort into implementing the EQF idea is even more acknowledgeable since FL is an EFTA country. Nevertheless, as mentioned above for the citizens of FL labour market and education mobility is of high value and thus high expectations are put into the NQFL.

Criterion 8

The relevant national body or bodies certify the classification of the national qualifications framework or system, according to the EQF. A comprehensive report explaining the classification process and the underlying evidence, will be published by the competent national institutions, including the National Coordination Point. This report will refer separately to each of the here mentioned criteria, 1 to 8.

The responsible body for the present report is the Government of Liechtenstein. Leadership of the project was taken over by the Agency for International Educational Affairs. For the drafting of the ordinance and report, a strategy group was appointed, which was composed of key players in the education sector: Werner Kranz (Office for Professional Education and Vocational Guidance), Stefan Sohler (Agency Director AIBA), Brigitte Haas (Liechtenstein Chamber of Commerce) Ivan Schurte (Commerce), Trudi Ackermann (University of Liechtenstein), Eva-Maria Schädler (Office of Education). The strategy group met regularly for the development of the NQFL.

The report refers to the current state of development of the NQFL. The referencing report will be published on the website of NQFL after presentation in the EQF Advisory Group and approval by the government. With respect to classifications, the SFIVET and SERI in Switzerland are responsible.

Criterion 9

The official EQF platform contains a public list of Member States that have confirmed the completion of the referencing process, as well as links to the completed reports on the allocation process.

Following the approval of the referencing report by the EQF Advisory Group, it will be published on all relevant platforms.

Criterion 10

Upon completion of the referencing process and according to the schedule contained in the recommendation, all new qualification certificates, degrees and Euro Pass documents issued by the competent authorities, will, by means of the national qualifications system, contain a clear reference to the appropriate level of the European Qualifications Framework.

Certificate supplements and degree supplements

In the steering group, it was decided for the issuance of certificate explanations depicting the levels and logos of the NQFL and the EQF in the VET certificate and VET diploma supplement. The certificate supplements and degree supplements will be designed according to Euro Pass templates.⁴¹ Currently, no social partners have indicated a need for levels to be displayed on certificates. However, should a need develop in the future, this is provided for in the ordinance. At the present moment, logos and levels will only be printed on the certificate supplement.

Liechtenstein currently only mandates qualifications for basic VET. The Office for Vocational Training and Career Counseling is however uniform in its agreement to design a degree supplement for higher vocational education. The degree supplement is a standardized document and is identical in all respects to the Swiss one. This is for practical reasons, as the qualifications in Switzerland and Liechtenstein are identical. The basic VET degree supplement can be retrieved and printed on the website of the NQFL. Supplements will be available in English and German.

6. List of Abbreviations

ABB Office for Vocational Training and Career Counseling

AIBA National Agency for International Educational Affairs

BAVET Certificate

BBG Vocational Training Act

BBV Vocational Education and Training Ordinance

EBBK Federal Vocational Education and Training Commission of Switzerland

SFIVET Swiss Federal Institute for Vocational Education and Training

EQF European Qualifications Framework

HF College of professional education and training /PET college

HSG Higher Education Act

FH Universities of applied sciences

FZVET diploma

NQFL National Qualifications Framework

NQFL-BBV National Qualifications Framework for Liechtenstein – Vocational Education and Training Ordinance

NQ.FL-HS National Qualifications Framework for Higher Education

NQR-BB-CH National Qualifications Framework Switzerland for VET

RA Government request

SA Office of Education

SERI State Secretariat for Education, Research and Innovation