



R1 INVESTIGATION RESEARCH

Micro-Credentials in VET - Needs,
Demands and Quality Assurance

MICRO QUEST: Innovative Quality Evaluation Strategy for Micro-credentials in non-formal VET in Europe. Project N° 2021-1-AT01-KA220-VET-000025399



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1. INTRODUCTION

This document is the first project result of the Erasmus+ project “Micro Quest”, which aims at supporting an innovative quality evaluation strategy for micro-credentials in non-formal vocational education and training in Europe. In this investigation report, the project partnership from Austria, Germany, Ireland, Slovenia and Spain lays the foundation for the three further project results addressing European VET providers: a guideline on how to adopt and use micro-credentials, a training programme and an online network platform.

The concept of micro-credentials is extremely new and dynamic, and as of the publication of this document, the definition and detailed understanding of what a micro-credential is and entails, is still not completely settled. The most current, official information about European micro-credentials is collected in a [brochure](#) (December 2021).

Since 2020, the European Union officially pursues the integration of micro-credentials in the education systems of its member states. They are first mentioned in the “European Skills Agenda” (2020) and are part of the “[Commission Communication on achieving the European Education Area by 2025](#)” (2020) and the “[European Pillar of Social Rights Action Plan](#)” (2021).

In June 2022, the Council of the European Union (EU) adopted a “[Recommendation on a European approach to micro-credentials for lifelong learning and employability](#)”, which “seeks to support the development, implementation and recognition of micro-credentials across institutions, businesses, sectors and borders.” ([European Commission 2022](#)).

To gain further understanding of the nature of micro-credentials and how they are perceived by the target group of VET providers as well as by higher education representatives, policy makers and learners, a focus group survey was implemented in the Micro Quest partner countries in April and May 2022. Additionally, a desk research on quality assurance methodologies that may be suitable for the quality assessment of micro-credentials was implemented and the results were summarised in a utility analysis.

On the following pages, the methodology of the field and desk research are presented as well as their results. At the end, a conclusion and summary deduct the most relevant take-aways for the further developments in the Micro Quest project.

2. FIELD RESEARCH

2.1 Methodology

The field research phase was implemented using the focus group method. A focus group is an organised discussion with a pre-selected group of individuals with the aim to gain information about their opinions and experiences of a certain topic. Focus group interviewing is well suited for collecting multiple perspectives about a particular topic and follows a more formal research practice than ordinary group discussions. A focus group usually involves 8-10 participants at a time.

In each partner country, two sessions were organised by the project partners and they invited participants of different backgrounds: VET providers, WBL providers, higher education representatives, VET/WBL learners and policy makers.

In preparation, the partners received a guideline document on how to implement the focus groups as well as a PowerPoint presentation that was translated into the national languages. To report the results, a common template was used.

In a focus group, it is essential to engage the participants in active discussions and enable fruitful exchange to a pre-defined set of questions that should be stimulating, but not overwhelming. To assure this, eight questions were defined, each with multiple prompts to keep the discussion going and to make sure the participants stay on topic. These questions and prompts were grouped into four clusters:

CLUSTER 1: Previous Knowledge

1. What prior experiences do you have with the following:

- Recognition of prior learning
- Digital degrees or credentials
- European transparency instruments such as ECVET, EQF, Europass
- Testing prior learning and competences of applicants
- Quality assurance approaches in crediting and recognising formal and non-formal learning between VET and HE institutions

CLUSTER 2: Needs & Demands for Micro-Credentials Application

2. Making EMCs work in real life... What would you need?

- What basic information would you need to compare & recognise competences?
- How detailed should the EMCs describe the learning outcomes etc?
- Show the proposed EU standard (Dec. 2021)
- Should the EMCs state only the existence of an ability or also the scope of the ability? (for example basic – intermediary – advanced)
- Should EMCs express basic or highly specific competences?

3. Allocation of EMCs to training contents... What would you need?

- How would you allocate EMCs to existing training offers?
- Is it possible to split training programmes in EMC suitable bits?
- How would this be done?
- What would be needed for that?

4. Quality Assurance for Micro-Credentials: assessing the achievement of learning outcomes... What would you need?

- Which types of assessments would be needed and accepted?
- Who would/should implement the assessments?
- Should the grades/performance be stated in the EMCs?

5. Structural demands & preconditions... What would you need?

- What (additional) resources would be needed to switch to EMCs and to offer them in the future?
- What would be the process of awarding and recognising EMCs in your organisation?
- Are there any requirements for the digital technological application?
 - E.g. Security: GDPR compliant, unique access (cyber security)
 - Anything else?

CLUSTER 3: Recognition & Mutual Trust

6. Do you see any particular challenges with crediting and recognising formal and non-formal learning between VET and HE institutions?

- Is there a difference when the issuing organisation is not from the same country/region?
- Are there language barriers or special terms/jargon?

7. What would you need to successfully recognise prior learning from another VET or HE institution?

- *(this question links to the needs and demands. If it has been answered earlier, no answers are needed here)*
- What communication channels would be necessary?

CLUSTER 4: Summary SWOT Analysis of Micro-credentials

8. SWOT Analysis as written reflection on the whole topic in a brief Google Form:

- Where do you see the strengths of EMCs?
- Where do you see the weaknesses of EMCs?
- Where do you see the opportunities of EMCs?
- Where do you see the threats of EMCs?

2.2 Organisation

The focus groups were implemented in Austria, Germany, Ireland, Slovenia, and Spain from April to May 2022. In each country, 2 sessions were organised and some partners additionally reached out to influential stakeholders to interview them using the questionnaire provided by the focus group method.

2.3 Sample group / target group

The focus groups were implemented with representatives of all target groups: VET providers, VET trainers, VET learners, VET/HEI policy makers, Higher Education Institutions (HEI), and other stakeholders.

In total, 89 participants discussed the focus group questions and shared their opinions and insights.

2.4 Field Research Results

On the following pages, the results of the national focus groups are summarised to allow further deductions. As mentioned above, the questionnaire was structured in 4 main clusters and featured 8 guiding questions.

CLUSTER 1: Prior Knowledge

In this cluster, the prior knowledge of the target group about the recognition of prior learning, European Transparency Instruments, digital degrees or credentials was estimated.

In general, the higher education institutions report more experience in the recognition process on a structural level. In the VET and especially WBL sector, they are used to rely on assessments upon onboarding to evaluate the prior knowledge of workers or learners. In this sense, there is a significant difference between the two sectors.

In the higher education institutions, the knowledge and practical appliance of transparency instruments such as ECTS or digital credentials is more visible and in use than in the VET sector. One reason for this is that HEIs are more used to this system since the Bologna Declaration in 1998 and rely on the comparability of university courses via ECTS.

Nonetheless, there are strategies in place in all partner countries to measure and assess prior knowledge and competences of learners (and employees). However, the quality assurance approaches are not highly developed and differ a lot depending on sectors and resources available. For example, an SME has less resources available than an international enterprise, and the same is valid for a small private adult education provider in comparison to a huge university.

In summary, HEI and VET are not on the same page when it comes to the recognition of prior learning and use very different strategies to assess the competences of the learners (or potential employees/trainees).

The focus group participants in Germany and Slovenia voiced the idea to maybe use Blockchain technology to verify credentials – in Germany there is even a pilot project that works with this approach.

CLUSTER 2: Needs & Demands for Micro-Credentials Application

The focus group participants were asked what they would need to make Micro-Credentials work in their professional life.

At the top of the list, all participants want **more detailed information** about what exactly a Micro-Credential is. More information is desperately needed to foster the understanding and – consequently – future application. The focus group participants want to know how MCs are going to be awarded, recognised and cumulated.

In general, the participants see MCs as a **chance for lifelong learning** as well as continued vocational education, so not only for initial vocational education. Single or cumulated seminars could be attended and credited with MCs.

The idea of **temporary certificates/credentials** came up. MCs would be a great opportunity to communicate and document such competences that need **regular renewals** such as welding certificates, fire brigade training or first aid. To utilise this, the MC has to state how long it is valid or the date/year when it expires.

It was very clearly expressed that the MCs need to state concrete information about the competences acquired as well. The participants agree that **learning outcomes** have to be used in the MCs. While some participants wish for concise wording, others

wish for many details up until a molecular description of knowledge, skills and competences. Realistically, the more details are necessary, the more effort is needed by the accreditation body and the recognising body. Logically thinking, the more specialised and advanced an MC is, the more details are needed to describe the specialised and diverse competences acquired.

To make MCs easier to grasp and understand, an idea was to communicate some information only visually. This would foster transparency and transnational understanding, because when using an **intuitive, visual representation**, no meaning can get lost in translation. A potential field of application would be a visualisation of the competence level of the MC in question.

Another important factor to facilitate broad understanding and transparency is to **correlate MCs to existing reference frameworks**. In particular, the EQF and NQF were named, because many representatives already have experience in working with these frameworks. The EQF level could serve as a reliable and transparent point of reference to estimate the competence level of the person holding the MC. In essence, the MC has to be able to express basic and specific competences – the key aspect is to link them to an external competence level that allows transparent comparison and embedment in a bigger picture.

To fully trust the MC, the recognising body needs to know the **quality approach behind the accreditation** of the credential. All participants agree that they must be able to rely and trust that all other bodies use a **common, reliable and measurable method** of accreditation. The assessment of learning outcome achievement must be standardised (or at least clearly communicated). All agree that simply participating in an educational programme is not enough to earn an MC. Therefore, the scope of the ability credited with the MC is important to them.

At the moment of creation of this report, the official information about MCs is still scarce. Concerning the quality management system, the European Commission and working groups simply state that it must be fitting for the respective sector. We hope that upon the official adaptation of MCs, more detailed information will be available.

In the meantime, the participants propose a similar approach to the body certifying persons against specific requirements with ISO17024. The main precondition would be that the organisations who supply the training are not the ones who assess the

achievement of learning outcomes. This responsibility would lie with an external awarding or accreditation body. The **separation of power** would hence be a crucial aspect of quality assurance. It would also be crucial that this accreditation body is trustworthy. Participants name especially ministries or governmental bodies as potential bodies, but also peer reviews among HE/VET institutions are mentioned.

Upon evaluating the national focus groups reports, it was visible not only between the lines that all participants are a bit **reluctant** in regards to Micro-Credentials. They approach the topic with **caution** and – in some cases – with defiance. Since it is not yet completely clear what MCs entail, it has been expressed that they may aim to replace or compete with existing degrees and competence systems. Even though all official papers by the European Commission and entrusted working groups show high efforts to communicate that this is not at all the aim of MCs, the upcoming adoption and integration in the existing system is perceived cautiously.

For this reason, it is of utmost importance to launch **broad and clear informational campaigns across Europe**. Future users must be informed about the **positive and economic potentials and added values** that come with adopting MCs in their system. It is immensely important to promote MCs from the very beginning. Participants name the ECVET system as an example, where there were a lot of efforts to promote the system, however, it never really took off and is now no longer pursued. To avoid that MCs share the **ultimate destiny of ECVET**, the economic and financial added value must be promoted clearly and significantly to make up for the necessary investments and efforts to realise the infrastructure and implementation.

To really ensure longterm success of MCs, the **needs of the institutions have to be met** from their point of view. One idea would be to show HEIs that they could make MCs work with existing offers, for example for accomplishing fragments of existing studies or a cumulation of various (meaningful!) seminars to gain a specific competence/skill set. By offering these smaller (than bachelor degrees) credentials, representatives from all sectors and the **public might benefit from these upskilling opportunities**.

On the downside, this may mean that **HEI become competitive with private further education institutions** – or they form mutually beneficial partnerships. This would ultimately lead to more cooperation, transparency and recognition across sectors and countries.

The **third guiding question** asked participants what they would need to allocate MCs to existing training programmes. At the time when the question was prepared, it was not yet clear what a MC exactly is. It was written with the background and idea of ECVET credits in mind. It has now become clearer that it is something completely different. Thus, an MC cannot be “allocated” to an existing training, but more realistically an existing training can gain the status of an MC.

The term “micro” leads to the presumption that it means something very small and tiny – hence the first interpretation settled closed to ECTS and ECVET credits. In the newest, official documents, it is now communicated that an MC can be accredited for an educational programme smaller in content, competence and scope than a bachelor study programme. For this reason, **the term “micro” is misleading the target audiences** of learners, accreditation and recognising bodies. In some cases, it may even lessen the achieved accomplishments of learners, because “micro” is usually only positively associated when it comes to micro-chip technology, not when it comes to showing achievements and competences.

On the **more practical side**, participants propose that parts of existing educational programmes could be offered as **stand-alone MCs or could be cumulated** with other cross-sector programmes to specialised MCs.

A concrete example would be that a certifying body **defines a highly specialised job profile** and suggests how and where the necessary competences could be acquired. This body then assesses if the needed competences are achieved and accredits the corresponding MC.

While trying to further investigate the nature of the MC, participants conclude that the MC itself is static, but the fragments of educational programmes fit and compile into the described competence profile. Clearer information and added value have to be evident.

The **fourth guiding question** asked the focus group participants about the quality assurance for MCs.

In summary, **all kinds of assessments** (theoretical, practical, interview, project-based) would be suitable – depending on size/scope, topic and sector and relevance in practice of the MC.

All state that there should be a **formal assessment**. It is not enough to only state that a course/programme has been participated in. There needs to be an assessment if learning outcomes have been reached to a satisfying extent.

All state that the **body assessing and awarding the MC should be external** from the body offering the programme. Participants of the FG suggest that these **awarding bodies** should be official and for example standardised on national level. Examples could be public bodies, employment offices, ministries etc. The main factor is that the body must be **trustworthy** and all bodies must **comply to standardised criteria/guidelines**.

A very interesting point was raised in Spain: MCs should feature an **ante and post assessment**. This allows us to assess and measure the individual learning progress more closely. A low level of prior learning may result in suggesting the learner to invest more learning efforts in order to be able to reach the learning outcomes of the MC successfully. This would support the learner to better estimate if the MC is achievable in a certain time and with an expected effort. Examples are sometimes already applied in Austria and some FG participants had similar insights.

Concerning **stating the grades**, all FG agree that is it not sufficient to only state if the learner has just participated in a course. However, as soon as an MC is awarded, it must mean that the learner has reached the learning outcomes to a satisfying extent and without a doubt. As an rewarding and recognising body, there must be complete and **100% trust** that the learning outcome (LO) stated in the MC are internalised and achieved by the learner. In essence, it does not matter how “well” the LO was achieved as long as the learner is able to do what is promised by the MC. Stating grades could only lead to more transparency difficulties and more text in the MC.

Question 5 asked about necessary **structural demands and preconditions**. Three main key words have come up in all focus groups:

TRUST – SECURITY – TRANSPARENCY

It again is mentioned that an external, independent awarding body might be the best choice. Also, the fear that MCs might undermine existing educational programmes is voiced. MCs must not be in competition for higher qualifications.

Blockchain technology is suggested as digital certificates must guarantee security, uniqueness as well as clear and non-fungible information.

Necessary additional resources would be an opportunity to easily match job descriptions and competences between all European countries. Preferably, this would be a digital tool or database.

CLUSTER 3: Recognition & Mutual Trust

There must be a **common style in phrasing, style and structure of the text elements**.

Partners agree that MCs should be **accredited in the national language and English** to ensure transparency. It would be crucial to **standardise the English terms** with **native** speakers and assure that all terms used are clear, appreciative and appropriate.

Examples are using existing methodologies such as **EQF levels and Blooms Taxonomy**.

Transparency in **common terminology and text structure** is an important quality assurance element, because it supports mutual understanding and comparativeness.

In order to allow an appropriate recognition between VET and HEI, it is crucial that the **language** used in the MC is **clear and easy to understand between sectors and across borders**. This means statements and LOs have to be free from jargon and specific terms – if they are used, they have to be briefly explained. The reason for this is that the focus must be on where the MC is aimed at, which is the labour market (or across sectors & VET/HEI).

In the official texts by the EU, there is mention of an **MC ecosystem**. New target groups are addressed with MCs, which is extremely exciting and interesting as it opens up new opportunities for learners and education providers.

To follow-up on this thought, **R4** could become a platform for the community to sign the memorandum of understanding (MoU) and agree to use a common vocabulary in the MC accreditation.

Question 7 asked the participants what they would need to successfully recognise prior learning from another VET or HE institution. Again, they stated **trust and transparency** as main preconditions. They highlight the importance of a clear and external structure such as the EQF.

Even though all member states were obliged to develop their models to recognise competences in VET and HEI, not all followed the call. **Conservative and traditional education systems** have more difficulties to recognise and understand competences/certificates from other regions and sectors (e.g. Austria, Germany,

Spain). The current system in Ireland is already very flexible and closer to the objectives of MCs, which is why everyone looks to their system for guidance.

The **European Commission and the national authorities have a crucial key role** in providing mandatory regulations and rules how to accredit MCs.

Otherwise, MCs will share the destiny of ECVET, because there was too much room for individualisation which undermined the efforts of transparency in the long run and made them less successful due to a limited adoption.

MCs are not a European invention, but come from the United States of America. What about the recognition of international MCs?

CLUSTER 4: Summary SWOT Analysis of Micro-credentials

Strengths



Weaknesses



Opportunities



Threats



3. DESK RESEARCH

3.1 Methodology

To gain more insights about existing quality assurance models that may serve as role models or basis of a successful quality evaluation strategy for micro-credentials, the partnership implemented a desk research phase and investigated the following six models:

- EQAVET
- EQF
- ECVET
- ISO17024
- ISO9001
- TQM

For each of the models, a brief profile has been developed, which presents what it is, who established it, since when it is in use, in what context it is used and how it works.

Additionally, each of the models has been assessed in regards to nine quality criteria that were summarised in a utility analysis. The nine quality criteria now describe if the investigated quality assurance model is:

- | | |
|------------------------------|---|
| • cost effective | • current & up-to-date |
| • time effective | • relevant for the education sectors |
| • human resource effective | • relevant for the national qualification framework |
| • internationally recognised | |
| • transparent | |
| • trusted | |

To make these quality criteria comparable, points were given for each QM model through a rating matrix in which partner estimated if the quality criterion applies “not at all” (0 points), “a little bit” (1 point), “mediocre” (2 points), “rather yes” (3 points) or “absolutely” (4 points).

The criteria have been weighed considering their importance for the Micro Quest approach as presented in the table below:

Quality Criteria	Importance		Maximum Points (100%)
cost-effective	!!!	score calculated *3	12
time effective	!!	score calculated *2	8
human resource effective	!	score calculated *1	4
internationally recognised	!!	score calculated *2	8
transparent	!!!	score calculated *3	12
trusted	!!!	score calculated *3	12
current & up-to-date	!!	score calculated *2	8
relevant for education sector	!!!	score calculated *3	12
relevant for national qualification framework	!	score calculated *1	4
Maximum Points in total per approach			80

The results are presented on the following pages.

3.2 Description of Quality Assurance Models

3.2.1 EQAVET

<i>What is it in a nutshell? (1-2 sentences)</i>	<p>The European Quality Assurance Reference Framework for Vocational Education in Training was developed to support the quality assurance within Vocational Education & Training across Europe.</p> <p>EQAVET is based on a quality assurance and improvement cycle that covers planning, implementation, evaluation/assessment, and review/revision.</p>
<i>Who established it?</i>	The EQAVET Framework developed from recommendation from the European Parliament and of the Council of 18 June 2009 that there was a need to establish a European Wide Framework for Quality Assurance.
<i>Since when is it in use?</i>	EQAVET Framework was developed by Member States in cooperation with the European Commission in 2009.
<i>In what context is it used?</i>	The EQAVET Framework is used within Vocational Education and Training across Europe to maximise the strength of QA systems in place. The overall aim is to promote better vocational education and training by providing authorities and VET providers with common tools for quality management in VET. The framework seeks to ensure transparency, consistency and portability between the many streams of policy and practices to increase mutual trust and mobility of learners.
<i>How does it work?</i>	<p>The EQAVET Framework supports educators and training providers across the European Union to document, develop, monitor, evaluate and improve the quality of VET.</p> <p>The EQAVET framework is broken down into four main stages; (1) planning; (2) implementation; (3) evaluation; and (4) review. Within each stage, there are quality indicators and descriptors which must be followed to monitor quality throughout.</p> <p>The framework is adaptable and can support national and regional education framework, to promote sustainable cooperation at a regional, national and European level. Its aim is to increase the employability of learners by ensuring that their education meets the basic quality guidelines.</p>

	<p>EQAVET can be applied in school based as well as work-based learning and all learning types such as digital, face-to-face or blended.</p> <p>The international approach of the EQAVET framework empowers mobility of learners at a local, national and European level, and support them to further their study at educational institutions in another European country. The EQAVET framework also supports lifelong learning approaches, through ensuring that the educational courses on offer meet the industrial demands of a highly skilled workforce.</p>
Source & further information:	<ul style="list-style-type: none"> • European Commission (2022) <i>EQAVET - European Quality Assurance in Vocational Education and Training</i> Available from: https://ec.europa.eu/social/main.jsp?catId=1536&langId=en • Feerick, S. (2016) <i>The EQAVET Framework and approaches to self evaluation by VET Providers</i> Available from: https://www.qqi.ie/sites/default/files/media/file-uploads/Sean%20Feerick%20Powerpoint%20Pres.pdf • European Commission (2022) <i>EQAVET governance and work programme</i> Available from: https://ec.europa.eu/social/main.jsp?catId=1566&langId=en • European Quality Assurance for VET (2012) <i>Quality assuring work-based learning</i> Available from: http://www.euroapprenticeship.eu/UserFiles/File/quality-process/eqavet-quality-assuring-work-based-learning.pdf • European Commission (2019) <i>Study on EU VET instruments (EQAVET and ECVET)</i> Available from: https://op.europa.eu/en/publication-detail/-/publication/205aa0ac-460d-11e9-a8ed-01aa75ed71a1/language-en

<p>COST-EFFECTIVE</p> <p><i>How much budget/financial resources are needed to use and implement the QM approach?</i></p>	<p>3 / 4 points</p>
<p>EQAVET serves as a basis for many other VET tools as it improves the quality of learning.</p> <p>Therefore, it is considered relevant for the implementation of the EQF/NQF, international mobility and standardised study programmes, and supports other national and European policies in the field of education.</p>	
<p>TIME EFFECTIVE</p> <p><i>How much time is needed for training the responsible persons and for implementing the QM approach?</i></p>	<p>3 / 4 points</p>
<p>The better the current quality assurance is aligned with EU standards, the easier it is to implement EQAVET. National Reference Points (NRPs) serve as point of contact.</p>	
<p>HUMAN RESOURCE EFFECTIVE</p> <p><i>How much staff is needed? Can it be done by internal persons or are external experts needed? Is specific onboarding necessary?</i></p>	<p>2 / 4 points</p>
<p>The Quality Assurance National Reference Points (NRPs) across Europe play an important role in supporting the implementation of the EQAVET reference framework. RQB is an NRP part of the Network and located in Austria.</p> <p>The EQUAVET network not only provides case studies and guidance on different ways to develop and improve the quality assurance of VET, but also offers meetings for those interested in the quality assurance of VET at the European level.</p> <div data-bbox="549 1487 1003 1939"> <pre> graph TD MS[Member States] --> EQN[EQAVET Network] SP[Social Partners] --> EQN EC[European Commission DG EMPL] --> EQN VET[VET Providers] --> EQN SP2[Social Partners] --> EQN CEF[Cedefop] --> EQN ETF[ETF] --> EQN EQN --- SSC[EQAVET Steering Committee] SSC --- S1[EQAVET Secretariat] SSC --- S2[EQAVET Secretariat] SSC --- S3[EQAVET Secretariat] </pre> </div> <p>Source: https://ec.europa.eu/social/main.jsp?catId=1566&langId=en</p>	

The European Commission chairs the EQAVET Network and is currently supported by the EQAVET Secretariat.	
INTERNATIONALLY RECOGNISED <i>How internationally recognised is the model? Is it known across Europe and/or even beyond? Who uses it at the moment?</i>	4 / 4 points
Yes, the framework is known to educational institutions across Europe and beyond.	
TRANSPARENT <i>Is it easy to understand? Is it clear how it is applied and how results are achieved?</i>	4 / 4 points
The framework is transparent as it promotes European wide cooperation within the VET sector. It provides for policy context within the Education and Training sector, provides a wide range of tools which can support regional and national education providers, and is based on a series of common principles, reference criteria and instruments (Feerick, 2016).	
TRUSTED <i>If this QM approach is stated, does it need a second opinion? Can users rely on it and its validity?</i>	4 / 4 points
Yes, the EQAVET Framework is trusted as a measure of quality within Vocational Education and Training. It is a European wide framework which developed from the 2009 recommendation from the European Parliament and Council for the need of a QA Framework across Europe in the VET sector (European Commission, 2022).	
CURRENT & UP-TO-DATE <i>Is it still in use today? Does it need updates and if so, is it updated regularly?</i>	4 / 4 points
Yes, the framework is updated regularly through feedback received by the EQAVET Steering Committee which includes Cedefop, VET Providers and the European Commission.	
RELEVANT FOR EDUCATION SECTOR <i>Can this QM approach be used in the education sector? Fully or partly? Which elements are suitable? Which elements are not at all suitable and</i>	4 / 4 points

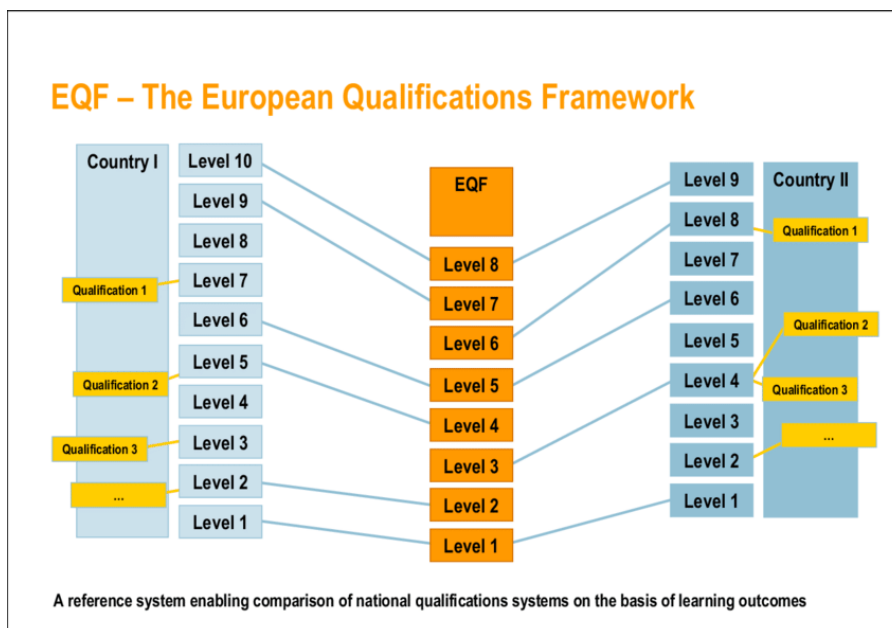
<p><i>should be avoided? Does the language fit the education sector or are adaptations needed?</i></p>	
<p>Yes, this framework has been specifically developed for the education sector.</p>	
<p>RELEVANT FOR NATIONAL QUALIFICATION FRAMEWORK</p> <p><i>Does this QM approach work in alignment with governmental policies and/or objectives? If not by default, can it be transferred fully or partly to become relevant?</i></p>	<p>4 / 4 points</p>
<p>The EQAVET framework complements the work of EQF and ECVET (Feerick, 2016), and thus can work in alignment with governmental policies and objectives.</p> <p>EQAVET is generally seen as the foundation for all other VET tools, as it aims to improve the quality of learning, which in turn improves learner outcomes and progression. As such, it is considered relevant for the implementation of the EQF/NQF, international mobility, standardised study programmes and for supporting general national and the European Commission to improve access to higher qualifications and permeability between higher education and vocational education and training (European Commission, 2019).</p> <div data-bbox="443 1254 1102 1608"> <p>Levels and qualifications based on learning outcomes (EQF)</p> <p>Flexibility of provision and pathways (ECVET, Validation of NFIL)</p> <p>Documentation (Europass)</p> <p>Quality assurance (EQAVET)</p> </div> <p>(European Commission, 2019)</p>	

3.2.2 EQF

<p><i>What is it in a nutshell?</i> (1-2 sentences)</p>	<p><i>The EQF is a common reference framework (with eight levels and based on learning outcomes), created by the European Union and which relates the qualification systems of European countries to each other.</i></p> <p><i>It aims to promote cross-border mobility of students and workers, as well as promote lifelong learning and professional development throughout Europe.</i></p>
<p><i>Who has established it?</i></p>	<p><i>The development of the EQF started in response to requests from Member States, social partners and other stakeholders for a common reference to increase the transparency of qualifications.</i></p> <p><i>The Commission, with the support of the EQF Expert Group, carried out the design of the model.</i></p>
<p><i>Since when is it in use?</i></p>	<p><i>The EQF officially came into force on April 23, 2008.</i></p>
<p><i>In what context is it used?</i></p>	<p><i>A qualifications framework classifies qualifications according to a set of criteria for specified levels of learning achieved. It aims to integrate and coordinate qualifications, as well as improve the transparency, accessibility and quality of qualifications in relation to the labour market, the education and training system, and civil society. The full range of formal, non-formal and informal learning is covered.</i></p> <p><i>The EQF is defined by eight learning outcomes-based levels. Accompanying level descriptors show how expectations of knowledge, skills, autonomy and responsibility increase as learners progress from level 1 to level 8. These levels, along with the descriptors, function as a translation grid and make it possible to compare qualifications from different countries and institutions.</i></p>

How does it work?

In practice, it works as a translator of the level of qualifications between countries. If you live in country A, where you have obtained a level 9 qualification (according to the national qualification framework of country A) and you want to study or work in country B, your qualification corresponds to a level 8 of the European qualification framework. qualifications (EQF) and with a level 6 of the national qualifications framework of country B.



Source & further information:

- In the [Council Recommendation, of November 26, 2018](#), regarding the promotion of automatic mutual recognition of higher education and post-compulsory secondary education qualifications, and of the results of learning periods abroad, mentions the MEC as an instrument to foster transparency and build trust between national education and training systems.
- Directive 2005/36/EC deals with the [recognition of professional qualifications in the EU](#), which allows professionals to move across borders and practice their profession or offer services abroad.
- [The Lisbon Convention on the Recognition of Qualifications](#) is an international agreement administered by UNESCO and the Council of Europe that allows for the recognition of academic qualifications in Europe and beyond its borders.

COST-EFFECTIVE <i>How much budget/financial resources are needed to use and implement the QM approach?</i>	3 / 4 points
None/ very little budget is needed.	
TIME EFFECTIVE <i>How much time is needed for training the responsible persons and for implementing the QM approach?</i>	3 / 4 points
A little time is needed.	
HUMAN RESOURCE EFFECTIVE <i>How much staff is needed? Can it be done by internal persons or are external experts needed? Is specific onboarding necessary?</i>	2 / 4 points
Only the person involved (no external expert is needed)	
INTERNATIONALLY RECOGNISED <i>How internationally recognised is the model? Is it known across Europe and/or even beyond? Who uses it at the moment?</i>	4 / 4 points
Well known in Europe. The 8 levels, along with the descriptors, function as a translation grid and make it possible to compare qualifications from different EU countries and institutions.	
TRANSPARENT <i>Is it easy to understand? Is it clear how it is applied and how results are achieved?</i>	4 / 4 points
<p>Yes. The EQF Recommendation invites Member States to reference their NQFs or systems to the EQF, in order to establish a clear and transparent relationship between their national qualification levels and the eight EQF levels.</p> <p>The referencing criteria should ensure that NQFs are referenced to the EQF in a coherent and transparent way.</p>	

<p>TRUSTED</p> <p><i>If this QM approach is stated, does it need a second opinion? Can users rely on it and its validity?</i></p>	<p>4 / 4 points</p>
<p>It is trusted; the users can rely on it. The EQF Advisory Group was set up in 2008 to ensure overall coherence and promote transparency and trust in the process of referencing.</p> <p>Trust in the quality and level of qualifications with an EQF level is essential in order to support mobility across sectoral and geographical borders, making quality assurance essential.</p>	
<p>CURRENT & UP-TO-DATE</p> <p><i>Is it still in use today? Does it need updates and if so, is it updated regularly?</i></p>	<p>3 / 4 points</p>
<p>It is updated. The establishment of the EQF kicked off the process of making qualifications in Europe more easily comparable. In 2017, the EQF Recommendation – reflecting strong support from all Member States – was revised to include new elements that will help the framework to adapt to the challenges of today and the future.</p> <p>EQF referencing reports represent a ‘snapshot’ in time and will eventually become outdated as NQFs and systems evolve. This is why the revised EQF Recommendation invites Member States to review and update their referencing report when relevant. Information included in the referencing reports should be accurate and transparent, as this directly influences the extent to which the NQF is trusted. In this way, the translation of national qualification levels into EQF levels will remain relevant and in line with national qualification systems. This also determines to what extent the EQF is able to facilitate the comparability and portability of qualifications.</p>	
<p>RELEVANT FOR EDUCATION SECTOR</p> <p><i>Can this QM approach be used in the education sector? Fully or partly? Which elements are suitable? Which elements are not at all suitable and should be avoided? Does the language fit the education sector or are adaptations needed?</i></p>	<p>3 / 4 points</p>
<p>It can be used in the education sector. The EQF is designed to cover all types and levels of qualifications including those from higher education, Vocational Education and Training</p>	

(VET) and general education, as well as qualifications awarded by the private sector or international organisations.

The EQF promotes a common language between education and training and the labour market. By promoting the shift to learning outcomes, the EQF can also facilitate dialogue on the needs of the labour market and the provisions of the education and training systems. Structured dialogue using learning outcomes as a common language helps to strengthen the relevance and increase the attractiveness of qualifications.

RELEVANT FOR NATIONAL QUALIFICATION FRAMEWORK

Does this QM approach work in alignment with governmental policies and/or objectives? If not by default, can it be transferred fully or partly to become relevant?

**4 / 4
points**

Yes. By using the learning outcomes approach, the EQF and NQFs should better support individuals when they are moving (i) between various levels of education and training, (ii) within and between sectors of education and training, (iii) between education and training and the labour market, and (iv) within and across borders.

3.2.3 ECTS

<p><i>What is it in a nutshell?</i> (1-2 sentences)</p>	<p>The European Credit Transfer and Accumulation System (ECTS) is a tool which has been created to support transparency amongst higher education providers across Europe. As a result, it improves the overall quality of education across European countries.</p> <p>The tool supports learners to transfer the learning that they completed in a higher educational provider in their home country, to another educational provider in a different European country.</p>
<p><i>Who established it?</i></p>	<p>The ECTS was developed by the European Higher Education Area in 2000.</p>
<p><i>Since when is it in use?</i></p>	<p>During the 1999 Meeting of Educational Ministers in Bologna, Italy, European Ministers agreed that a collective and transparent tool was required to support students to transfer their educational achievement across Europe.</p>
<p><i>In what context is it used?</i></p>	<p>ECTS are used within higher education across Europe and provides for the mobility of learners and educators on a European level. ECTS allow for the development of well structured programmes at European level, through which learners can easily identify their academic achievements to date.</p> <p>Through completing academic modules, learners can build up their ECTS to be awarded a full academic title, which supports the introduction of micro-credentials across Europe.</p>
<p><i>How does it work?</i></p>	<p>Academic years are broken down into a series of credits, or smaller bite-sized modules. Each module is weighted or scored, such as 5-or 10-ECTS, with 5-credits being the minimum amount of credits awarded to a module of study. One full academic year is equal to 60 ECTS. Approximately, 25-30 hours of student work is required in order to obtain 1 credit, with a 5-credit module requiring approximately 150-hours of learning time.</p> <p>The 'first cycle' degree, which is equivalent to a bachelors degree on the European Qualifications Framework Level 6, normally consists of 180-or 240-ECTS, depending on whether the programme of study equalled three or four years in duration. The 'second cycle' degree, equivalent to a masters</p>

	<p>programme at EQF Level 7 typically equals 90- or 120-ECTS. The ‘third-cycle’ degree, equivalent to a doctoral programme, varies in terms of the ECTS credits that are associated.</p> <p>ECTS are therefore targeted towards the learning outcomes that are required in order for a learner to successfully complete their studies.</p> <p>The ECTS User Guide supports academics to align their teaching resources effectively to the ECTS requirements. Academics can also better understand the learning that was achieved by the learner during their course of study. Students can also understand what is expected and required of them during the academic modules.</p> <p>ECTS are calculated based on the estimated time and effort (the workload) which students will need on average to complete individual courses, modules, etc.</p>
<p>Source & further information:</p>	<ul style="list-style-type: none"> • European Commission (2022) <i>What is the European Credit Transfer and Accumulation System?</i> Available from: https://education.ec.europa.eu/education-levels/higher-education/inclusive-and-connected-higher-education/european-credit-transfer-and-accumulation-system • Publications Office of the European Union (2017) <i>ECTS users' guide 2015</i> Available from: https://op.europa.eu/en/publication-detail/-/publication/da7467e6-8450-11e5-b8b7-01aa75ed71a1 • Quality and Qualifications Ireland (2022) <i>Including awards on the NFQ</i> https://www.qqi.ie/what-we-do/the-qualifications-system/listed-awarding-bodies • European Commission (2015) <i>ECTS users'guide 2015</i> Available from: https://op.europa.eu/en/publication-detail/-/publication/da7467e6-8450-11e5-b8b7-01aa75ed71a1

COST-EFFECTIVE <i>How much budget/financial resources are needed to use and implement the QM approach?</i>	2 / 4 points
<p>ECTS credits are provided through designated awarding bodies. In Ireland for example, Quality and Qualifications Ireland (QQI) is the state agency which promotes integrity and quality assurance within higher education. The main responsibility of the national awarding body is to set out guidelines which universities align to when creating new educational courses.</p>	
TIME EFFECTIVE <i>How much time is needed for training the responsible persons and for implementing the QM approach?</i>	2 / 4 points
<p>ECTS credits are devised through the national designated awarding bodies. National authorities are required to define which institutions may award ECTS credits.</p>	
HUMAN RESOURCE EFFECTIVE <i>How much staff is needed? Can it be done by internal persons or are external experts needed? Is specific onboarding necessary?</i>	3 / 4 points
<p>External experts, often within the National Designated Awarding Body, identify the ECTS. In March 2003, The National Qualifications Authority of Ireland devised a strategy through which there would be a national approach to ECTS.</p>	
INTERNATIONALLY RECOGNISED <i>How internationally recognised is the model? Is it known across Europe and/or even beyond? Who uses it at the moment?</i>	4 / 4 points
<p>All courses that are available throughout the EU at higher level have an ECTS credit attached. This results in the system being known worldwide, by learners and academics who partake in education within the EU.</p> <p>The ENCI-NARIC website has been developed to support students from more than 55 countries to gain information on the educational system across Europe, and provides additional support for learners who wish to map their foreign qualifications to a national framework.</p>	

<p>TRANSPARENT</p> <p><i>Is it easy to understand? Is it clear how it is applied and how results are achieved?</i></p>	<p>4 / 4 points</p>
<p>The ECTS credit system is easy and clear to understand. Each academic module is weighted with an ECTS credit, and upon successful completion of the module through examination or equivalent, a learner is awarded the relevant amount of ECTS credits. Partaking in a module alone does not qualify the learner to receive the ECTS credits; they must be assessed on the learning outcomes that are prescribed in a module descriptor.</p> <p>Therefore, one achieved, the ECTS show that a learner has specific knowledge, skills and competences in a core academic area, such as project management, human resource management or English Language module.</p> <p>Over time, ECTS have become increasingly important as a tool for quality and transparency in the education sector.</p>	
<p>TRUSTED</p> <p><i>If this QM approach is stated, does it need a second opinion? Can users rely on it and its validity?</i></p>	<p>4 / 4 points</p>
<p>As of 2022, more than 48 countries of the European Higher Education Area currently use ECTS, from Portugal in the West to Russia and Kazakhstan in the East, as it promotes quality assurance and transparency within education across Europe.</p> <p>In Austria, the application of ECTS for the higher education institutions are embodied in the university law.</p> <p>The application of ECTS credits is supported by supporting forms (Course Catalogue, Learning Agreement, performance overview and internship certificate) and the quality is improved. ECTS also contributes to greater transparency in other documents, for example the Diploma Supplement.</p>	
<p>CURRENT & UP-TO-DATE</p> <p><i>Is it still in use today? Does it need updates and if so, is it updated regularly?</i></p>	<p>4 / 4 points</p>
<p>Member States across Europe are encouraged, through the Bologna Process of 1999, to review and update their courses so that they align with the European Framework of Qualifications.</p>	

<p>This requires continuous updating of modules and programmes so that, if changes are made to the course content, that these changes are reflected in the EQF.</p> <p>The ECTS is now widely used throughout higher education institutions as it facilitates student mobility within Europe and the comparison of study programs and courses.</p>	
<p>RELEVANT FOR EDUCATION SECTOR</p> <p><i>Can this QM approach be used in the education sector? Fully or partly? Which elements are suitable? Which elements are not at all suitable and should be avoided? Does the language fit the education sector or are adaptations needed?</i></p>	<p>4 / 4 points</p>
<p>This QM approach is specific for the higher education sector across Europe. The language that is used is appropriate for the sector.</p>	
<p>RELEVANT FOR NATIONAL QUALIFICATION FRAMEWORK</p> <p><i>Does this QM approach work in alignment with governmental policies and/or objectives? If not by default, can it be transferred fully or partly to become relevant?</i></p>	<p>4 / 4 points</p>
<p>The ECTS system firstly aligns to the European Framework of Qualification, and secondly to the National Framework of Qualification within a country. By using both of these frameworks, learners across Europe can compare their course of study with equivalent courses across Europe.</p> <p>The tools are transparent and accessible for learners, and supports deeper understanding of the studies that were undertaken.</p>	

3.2.4 ISO17024

<i>What is it in a nutshell? (1-2 sentences)</i>	ISO 17024 defines an international standard for organisations offering the certification of persons. It contains a set of internationally agreed requirements and preconditions to ensure the quality of the certification of a person ensuring that the competences of the single person meets the requirements of the certification scheme (qualification).
<i>Who has established it?</i>	International Organization for Standardization and International Electrotechnical Commission
<i>Since when is it in use?</i>	2003
<i>In what context is it used?</i>	It is used in all contexts where the quality of the procedures and regulations of certification of a single person are concerned, it has no limits to specific sectors, branches, countries, organisations etc. It is offered as a general standard for organisations offering certifications who obey the defined requirements and standards which are internationally agreed and accepted. Its main aim is to facilitate the acceptance of certificates of persons on national and international level.
<i>How does it work?</i>	<p>The document “conformity assessment – General requirements for bodies operating certification of persons” defines standardized and agreed criteria for offering a qualitative certification of persons. The standards cover all crucial elements of a quality certification process such as: legal matters, structural requirements, resource requirements (personnel requirements, personnel involved in the certification activities, outsourcing, other resources), records and information requirements (records of applicants candidates and certified persons, public information, confidentiality, security), certification schemes, certification process requirements (application process, assessment process, examination process, decision on certification, suspending withdrawing or reducing the scope of certification, recertification process, use of certificates, logos and marks, appeals against decisions on certification, complaint), management system requirements).</p> <p>For all these elements and considerations, the standard document gives clear regulations and criteria which an institution offering the certification of persons needs to follow and ensure.</p>

	Organisations who want to offer a ISO17024 based certification scheme would need to define all these elements above for their certification process ensuring that all these quality criteria are met. On this basis the national authority (in most countries the ministry for education or economy) issues the ISO17024 award for certifying bodies which ensures that only those certification organisations are allowed to issue an ISO17024 based person certificate.
Source & further information:	ISO/IEC17024 – <i>Conformity assessment – General requirements for bodies operating certification of persons</i> , Geneva 2012

COST-EFFECTIVE	
<i>How much budget/financial resources are needed to use and implement the QM approach?</i>	3 / 4 points
<p>For the training centre / VET centre or education institution actually no budget or financial resources are needed when working with an external certifying body. The costs for the certification of the offered micro credential from a training institution are simply added to the costs of the training programme, the service of certification and accreditation based on ISO17024 will then be offered by the external organisation.</p> <p>If the certification of micro credentials offered shall be done internally through a different department or unit of the training organisation (which shall be the exemption due to quality assurance reasons), there will be considerable costs attached to the unique accreditation of the organisation as certifying body according to ISO17024 which will need internal human resources for the organisational and management establishments, the training of the examiners, definition of the certification schemes offered (= micro credentials offered), development of assessment programmes (written, oral, observations etc.)</p>	
TIME EFFECTIVE	
<i>How much time is needed for training the responsible persons and for implementing the QM approach?</i>	4 / 4 points
<p>If offered externally there will be no time needed for training assessors or evaluators, nevertheless there should be at least one person in the training company who is also trained as evaluator / assessor to be able to organise the training in a way that the assessment finally will be successful for the candidate. This may require about 8-10 working days overall for one person.</p>	

HUMAN RESOURCE EFFECTIVE <i>How much staff is needed? Can it be done by internal persons or are external experts needed? Is specific onboarding necessary?</i>	4 / 4 points
<p>With ISO17024 it is strongly advised and in fact one of the core quality assurance criteria that the organisation which offers the training programme, learning opportunities etc. is not doing the assessment of competences and certification of a micro credential. The organisational division between training organisation and assessment organisation is in fact the most important quality element of ISO17024. For this reason, in regular cases the certification will be offered externally, however 1-2 persons in the training organisation should of course be aware of the certification process, the administration of the whole process steps to be able to guide participants and learners also through their certification and awarding process of the micro credential.</p>	
INTERNATIONALLY RECOGNISED <i>How internationally recognised is the model? Is it known across Europe and/or even beyond? Who uses it at the moment?</i>	4 / 4 points
<p>It is in fact one of the greatest advantages of ISO17024 that it is an internationally recognised standard for ensuring quality in certification of persons. It is used mainly in vocational education and training in practically all countries in the world, however, one must not forget that not every organisation is allowed to offer ISO17024 coherent certification of persons. These organisations need a national recognition of their IOS17024 conformity and do also need to re-qualify for this recognition after a certain time (normally 5 years). Nevertheless, the method of quality assurance and conformity in processes for bodies operating the certification of persons based on an internationally recognised standard and certificates awarded on the basis of this standard are issued under the same quality criteria and process conformity.</p>	
TRANSPARENT <i>Is it easy to understand? Is it clear how it is applied and how results are achieved?</i>	4 / 4 points
<p>ISO17024 is a very easy to understand quality assurance framework for the certification of persons. The core document “Conformity assessment – General requirements for bodies operating certification of persons” contains a full, clear but comprehensive description of all the different elements of quality through a certification process and allows for the preparation within the certification organisation. It falls very clear that the origin of ISO is</p>	

<p>an industrial standard which builds on quick and easy but high-quality solutions, this is also visible in the description and whole philosophy of ISO17024 which is very positive and relates well to the needs and requirements especially in the vocational education sector.</p>	
<p>TRUSTED</p> <p><i>If this QM approach is stated, does it need a second opinion? Can users rely on it and its validity?</i></p>	<p>4 / 4 points</p>
<p>Another crucial advantage of ISO17024 is that it is internationally trusted. The separation between the organisation offering the training and qualification programme for a micro credential and the organisation or body offering the assessment and certification / awarding of the micro credential is the most crucial issue for quality assurance. Users, employers etc. may fully rely that the process applied for the certification and awarding of the micro credential is built and implemented on this international quality standard and that the competences and skills which come with the awarded micro credential are existing and can be applied by the learner (holder of the micro credential). No second opinion is needed for this.</p>	
<p>CURRENT & UP-TO-DATE</p> <p><i>Is it still in use today? Does it need updates and if so, is it updated regularly?</i></p>	<p>4 / 4 points</p>
<p>ISO17024 is well in use today in practically all countries worldwide, however as mentioned before only a few organisations in each country are accredited so far to offer an ISO17024 based certification scheme. ISO17024 with all its quality criteria and parameters is regularly monitored and updated, however, the last update was issued in 2012. Nevertheless, one can be sure that the ISO/IEC committee is permanently monitoring the quality standard and may issue an updated version once deemed necessary.</p>	
<p>RELEVANT FOR EDUCATION SECTOR</p> <p><i>Can this QM approach be used in the education sector? Fully or partly? Which elements are suitable? Which elements are not at all suitable and should be avoided? Does the language fit the education sector or are adaptations needed?</i></p>	<p>4 / 4 points</p>
<p>ISO17024 has the highest relevance for the education sector in general as it is directly built for the certification of persons who achieved competences and skills through educational and learning processes. The advantage of the quality standard of ISO is that it is not considering the way, how knowledge, skills or competences are gained (formal, non-</p>	

formal or informal) which makes it a very flexible and usable instrument for the broad sector of education and learning. When assessing the standards, approaches, criteria, language used etc. in more detail it seems that the whole setup is perfectly well suited for the vocational education and training sector where it offers an excellent, ready made and well working approach for quality assurance during the awarding of micro credentials. For the level of general adult education and a more general learning purpose it may probably not be the best approach from now as the whole setup, language used, processes defined etc. are very much labour market, qualification and industry oriented which might probably not be the best for general adult education and learning. However, especially also for the higher education sector ISO17024 is very well suited, it may be the perfect offer for training programmes offered on higher education level which are then certified and awarded by an external organisation based on this international quality standard.

RELEVANT FOR NATIONAL QUALIFICATION FRAMEWORK

Does this QM approach work in alignment with governmental policies and/or objectives? If not by default, can it be transferred fully or partly to become relevant?

**4 / 4
points**

ISO 17024 is an international standard which operates on a macro level beyond national qualification frameworks. However, it is also not a big problem to attach NQF descriptors to the certification scheme which means that an allocation of the single award / certificate issued for a micro credential to an NQF level will be possible. ISO17024 operates in alignment with national, European and international policies, it is a flexible approach which is able to bridge differences and gaps between national qualification systems and frameworks.

3.2.5 ISO 9001

<p><i>What is it in a nutshell?</i> (1-2 sentences)</p>	<p><i>A standard for quality management systems, which is recognized internationally and describes processes/functions in QMS in organizations. It is focused on continual process improvement and preventive actions to improve product quality.</i></p>
<p><i>Who has established it?</i></p>	<p><i>International Organization for Standardization (ISO)</i></p>
<p><i>Since when is it in use?</i></p>	<p><i>1987; newest revision from 2015</i></p>
<p><i>In what context is it used?</i></p>	<p><i>Due to its generalized nature, ISO 9001 can be applied in various industries and contexts. It describes quality management systems which ensure that products/services meet desired quality standards.</i></p>
<p><i>How does it work?</i></p>	<p><i>ISO 9001 provides a set of generic requirements for quality management systems and defines their relationships. These can be independently verified by third parties. The standard incorporates continual improvement, which allows for adaptation to changes outside of its scope and makes it usable even without regular updates to the norm itself. It incorporates the P-D-C-A cycle in its clauses and all of them must be included in certification. *It is based on the TQM framework.</i></p>
<p><i>Source & further information:</i></p>	<p><i>ISO 9001:2015. A Pocket Guide. Steve Watkins, Nick Orchiston</i></p> <p><i>Quality at a glance, ISO 9001:2015 Guidance, TÜV SÜD</i></p>

COST-EFFECTIVE <i>How much budget/financial resources are needed to use and implement the QM approach?</i>	3 / 4 points
Certification cost scales with organization size. External consultants are optional, but often recommended. The standard can be implemented entirely in-house, if desired.	
TIME EFFECTIVE <i>How much time is needed for training the responsible persons and for implementing the QM approach?</i>	3/ 4 points
Certification can be achieved in 6-12 months (depending on organization size). This includes training and implementation.	
HUMAN RESOURCE EFFECTIVE <i>How much staff is needed? Can it be done by internal persons or are external experts needed? Is specific onboarding necessary?</i>	3/ 4 points
Consultant expertise can significantly simplify the process of implementation, though it is not strictly necessary.	
INTERNATIONALLY RECOGNISED <i>How internationally recognised is the model? Is it known across Europe and/or even beyond? Who uses it at the moment?</i>	4 / 4 points
It is by far the most widely adopted ISO management system standard, with 1,138,155 certifications worldwide as of 2014. It is most popular across Europe, Japan, and BRIC nations.	
TRANSPARENT <i>Is it easy to understand? Is it clear how it is applied and how results are achieved?</i>	3 / 4 points
The process approach of this QM approach ensures a high level of transparency.	
TRUSTED <i>If this QM approach is stated, does it need a second opinion? Can users rely on it and its validity?</i>	4 / 4 points

A second opinion is not required. Since the standard can be independently verified, it has high reliability.	
CURRENT & UP-TO-DATE <i>Is it still in use today? Does it need updates and if so, is it updated regularly?</i>	3 / 4 points
The most recent update has been in 2015, but the norm is designed to not need updating for years/decades. Its implementation does not rely on continual updates. Certification, if desired, is a yearly occurrence.	
RELEVANT FOR EDUCATION SECTOR <i>Can this QM approach be used in the education sector? Fully or partly? Which elements are suitable? Which elements are not at all suitable and should be avoided? Does the language fit the education sector or are adaptations needed?</i>	3 / 4 points
The standard is not specifically designed for use in the education sector. It would require adaptation, though its generalised nature provides broad applicability outside of business use.	
RELEVANT FOR NATIONAL QUALIFICATION FRAMEWORK <i>Does this QM approach work in alignment with governmental policies and/or objectives? If not by default, can it be transferred fully or partly to become relevant?</i>	3 / 4 points
The approach can be transferred when Micro Credentials are newly introduced.	

3.2.6 TQM

<i>What is it in a nutshell? (1-2 sentences)</i>	A core definition of total quality management (TQM) describes a management approach (framework) to long-term success through customer satisfaction. The focus is to improve the quality of an organisation's outputs, including goods and services, through the continual improvement of internal practices.
<i>Who has established it?</i>	TQM, in the form of statistical quality control, was invented by Walter A. Shewhart. TQM was demonstrated on a grand scale by Japanese industry through the intervention of W. Edwards Deming.
<i>Since when is it in use?</i>	The Navy branded the effort "Total Quality Management" in 1985 . TQM spread throughout the US Federal Government, resulting in the creation of the Malcolm Baldrige National Quality Award in August 1987 .
<i>In what context is it used?</i>	It is used as a strategy, approach. TQM is a management framework based on the belief that an organisation can build long-term success by having all its members, from low-level workers to its highest-ranking executives, focus on improving quality and, thus, delivering customer satisfaction.
<i>How does it work?</i>	<p>TQM is a strategy which must be instituted at all levels of a business to have the desired effect. Everyone, from the management to every single employee, must be aware of the total quality system and how they fit into it. TQM puts a focus not only on the quality of products and services, but on a commitment to continuous improvement of processes, products and services.</p> <p>3 popular TQM processes:</p> <ul style="list-style-type: none"> • ISO 9000: Focuses on people. • Lean manufacturing: Focuses on waste. • Six Sigma: Focuses on process.
<i>Source & further information:</i>	<ul style="list-style-type: none"> ▪ https://blog.capterra.com/what-is-total-quality-management/ ▪ https://bizfluent.com/info-7746359-characteristics-tqm.html ▪ https://www.inc.com/encyclopedia/total-quality-management-tqm.html#:~:text=TQM%2C%20in%20the%20form%20of,through%20the%20intervention%20of%20W. ▪ https://www.inartifexyou.com/Types-of-Total-Quality-Management.html ▪ https://journals.aom.org/doi/abs/10.5465/AMR.1994.9412271807

	<ul style="list-style-type: none"> ▪ https://books.google.hr/books?hl=sl&lr=&id=feXkDwAAQBAJ&oi=fnd&pg=PP1&dq=TOTAL+QUALITY+MANAGEMENT&ots=x_WZxjdg4m&sig=YyT7j69HbcEjv-fsg_vJDx5d4EU&redir_esc=y#v=onepage&q=TOTAL%20QUALITY%20MANAGEMENT&f=false ▪ https://asq.org/training/catalog/topics/total-quality-management ▪ https://www.sciencedirect.com/topics/computer-science/total-quality-management
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COST-EFFECTIVE <i>How much budget/financial resources are needed to use and implement the QM approach?</i>	2 / 4 points
<p>As the TQM is the framework which includes all employees it is beneficial for the company to educate managers in the TQM approach and to develop culture and processes that support TQM.</p> <p>(Example of the course: Certified Manager of Quality/Organisational Excellence Certification Preparation = \$824; ASQ's Quality 101 = \$1,729 □ https://asq.org/training/catalog/topics/total-quality-management)</p> <p>However, there is no certification for the TQM, but rather certification for one of its processes (ISO, Lean or Six Sigma).</p>	
TIME EFFECTIVE <i>How much time is needed for training the responsible persons and for implementing the QM approach?</i>	0 / 4 points
<p>Education of the employees can be achieved, however changing culture toward TQM demands more time depending on the current state of the organization.</p>	
HUMAN RESOURCE EFFECTIVE <i>How much staff is needed? Can it be done by internal persons or are external experts needed? Is specific onboarding necessary?</i>	0 / 4 points

Successful implementation of TQM requires a committed leadership and empowerment and involvement of staff. Consultants could significantly contribute to the implementation of the TQM approach throughout the organisation.	
INTERNATIONALLY RECOGNISED <i>How internationally recognised is the model? Is it known across Europe and/or even beyond? Who uses it at the moment?</i>	3 / 4 points
The framework is widely recognised as it represents the foundation for ISO and other QM models.	
TRANSPARENT <i>Is it easy to understand? Is it clear how it is applied and how results are achieved?</i>	3 / 4 points
TQM is identified as one of the organisation's strategies. The organisation assesses current culture, customer satisfaction, and quality management systems. Top management identifies core values and principles to be used and communicates them.	
TRUSTED <i>If this QM approach is stated, does it need a second opinion? Can users rely on it and its validity?</i>	3 / 4 points
The framework is trusted.	
CURRENT & UP-TO-DATE <i>Is it still in use today? Does it need updates and if so, is it updated regularly?</i>	3 / 4 points
The framework is still in use today.	
RELEVANT FOR EDUCATION SECTOR <i>Can this QM approach be used in the education sector? Fully or partly? Which elements are suitable? Which elements are not at all suitable and should be avoided? Does the language fit the education sector or are adaptations needed?</i>	3 / 4 points

It is relevant for the education sector. As TQM is a framework it could be used for any other organization with implementing minor changes as described in the book Total Quality Management in Education by Marmar Mukhopadhyay.

RELEVANT FOR NATIONAL QUALIFICATION FRAMEWORK

Does this QM approach work in alignment with governmental policies and/or objectives? If not by default, can it be transferred fully or partly to become relevant?

**3 / 4
points**

The framework could be transferred when Micro Credentials are introduced.

3.3 Utility Analysis Results

To estimate which quality management approach may be best suited to be applied in the micro-credential's quality evaluation strategy, a utility analysis has been implemented.

Each quality management approach has been described generally and along nine defined quality criteria. In the utility analysis, partners rated each QM approach from 0-4 points to estimate if the descriptor is not at all (0), a little bit (1), mediocre (2), rather yes (3) or absolutely (4) accurate. In the next step, the ratings were automatically weighed to the agreed importance of each criterion (see methodology section above).

The results are now presented in the two tables below. The first shows the summary of all QM approaches and the weighted scores. The second shows the scores in percent. The yellow rows show the total sum of scores.

Weighted scores per QM approach in points

	EQAVET	EQF	ECTS	ISO17024	ISO9001	TQM
cost-effective	9	9	6	9	9	6
time effective	6	6	4	8	6	0
human resource effective	2	2	3	4	3	0
internationally recognised	8	8	8	8	8	6
transparent	12	12	12	12	9	9
trusted	12	12	12	12	12	9
current & up-to-date	8	6	8	8	6	6
relevant for education sector	12	9	12	12	9	9
relevant for national qualification framework	4	4	4	4	3	3
	73	68	69	77	65	48

Weighted score per QM in percent

	EQAVET	EQF	ECTS	ISO17024	ISO9001	TQM
cost-effective	75%	75%	50%	75%	75%	50%
time effective	75%	75%	50%	100%	75%	0%
human resource effective	50%	50%	75%	100%	75%	0%
internationally recognised	100%	100%	100%	100%	100%	75%
transparent	100%	100%	100%	100%	75%	75%
trusted	100%	100%	100%	100%	100%	75%
current & up-to-date	100%	75%	100%	100%	75%	75%
relevant for education sector	100%	75%	100%	100%	75%	75%
relevant for national qualification framework	100%	100%	100%	100%	75%	75%
	91%	85%	86%	96%	81%	60%

4. CONCLUSION & RECOMMENDATIONS

This document has investigated the current state of quality assurance in micro-credentials as well as the opinions of representatives in the VET and HE sector as well as VET learners and policy makers in five partner countries.

As of the first half in 2022, these target groups are rather sceptical towards the adoption of micro-credentials. Contributing to this uncertainty is that there is no or just little official information about what micro-credentials are and how an institution can offer, recognise and validate them.

Micro-credentials should enable individuals to obtain skills, knowledge and competences and have them recognised by another educational body or employer. The aim is that these micro-credentials can be obtained through VET paths as well as through HE. However, at the moment, it seems that HEI are more equipped and more considered in the general approach.

A highly important factor, with which the MICRO QUEST project is engaged, is how the quality assurance of micro-credentials can be done professionally and reliably in practice – especially in the field of non-formal VET.

By analysing six quality management approaches, we identified that ISO17024 seems to be the most suitable role model. From our point of view ISO17024 is exactly what is needed for quality assurance in micro-credential certification, it is an internationally accepted standard where structures, documents, organisations and political acceptance are already given and therefore its application should be clearly considered. Also, in front of the fact that the European Commission intends to make micro credentials usable and transparent on an international level beyond European borders (as the whole approach of micro credentials is clearly originated from North America) an international standard for quality assurance which is situated beyond Europe but on an international level should be the ideal solution.

In our further work, we will look to the role model ISO17024 and design a guided approach to micro-credentials in our follow-up project result: The Guideline for VET providers.

At the same time, the discourse about micro-credentials will continue on a European level and we will strive to include all new recommendations from the European Commission in our further work.

M!CRO QUEST

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