Note EQF AG 55-5
Developing high quality validation methodologies[1]

1. The key challenges facing validation methodologies

Validation methodologies seek to make visible the outcomes of individual learning experiences, irrespective of where or when these took place. To accomplish this, several challenges have to be addressed that relate to the validity, reliability, scalability and cost of the methodologies:

- First, to achieve validity, methodologies need to
    - capture unique, individual learning experiences. Methodologies should consider everyone's specific circumstances, experiences, needs and barriers;
    - capture a wide diversity of knowledge, skills and competences: factual knowledge, technical skills but also transversal skills;
    - make visible "taken for granted" and 'invisible' learning (to the candidates themselves and relevant stakeholders).
- Second, validation methodologies must be *reliable* and stay stable across sectors and contexts of implementation. While the knowledge, skills and competences mapped will differ according to individual experiences, the methodology itself must be as transparent, predictable and repeatable as possible, the fairness of the approach must be trusted.
- Third, it must be possible to repeat the approach for other candidates: the methodology needs to be *scalable* and usable in different contexts and levels, while maintaining its validity and reliability.
- Fourth, measures need to be objective in terms of providing consistent results from different evaluators
- Fifth, each of these different elements will need to be considered against their *cost*. Validity, reliability and scalability cannot be seen in isolation but need to be judged in relation to the costs, in time and money, for the candidates and the validation providers.

For every validation approach developed and implemented there will be a need for finding a balance across these elements. Instruments offering high degree of validity can be costly and not-scalable and also be lacking in terms of reliability. Other instruments can be scalable but be lacking in validity and ability to capture individual learning experiences. To address these challenges in depth, and as a basis for the further development of the European Guidelines, this note discusses the following:
- Which methodologies are currently commonly used for validation and which are their main characteristics?
- Which are the key considerations to be made when developing and using methodologies for validation?
- Which are the key considerations to be made when applying standards and reference points for validation?

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[1] This text is adapted from the note: European Commission and Cedefop (2021). Developing high quality validation methodologies. Note EQF AG 55-5, 55th EQF Advisory Group Meeting, 23-24 February 2021

While technical and conceptual in nature, the discussions addressed in the note are important for the overall quality of and trust in validation. Whatever methodology is used, it is important to communicate and make transparent the way the validation was carried out and how certification has been obtained. This transparency is important for the individual candidates and for potential users of validation outcomes in education and training or the labour market.

2. Commonly used validation methodologies and their characteristics

Most of the countries, as illustrated by the European inventory, make use of a wide range and combination of tools for obtaining evidence on individuals' knowledge, skills and competences. According to the European Inventory on validation (www.cedefop.europa.eu/vaidation/inventory), 'tests and examinations' are the single most frequently used methodology, followed by 'portfolios' and 'interviews, debates and dialogues'. Countries often apply standardised tools (ICT-based and non-ICT based) as these are considered more reliable and cost efficient. Table 1 below provides an overview of few methodologies and tools used for validation and their main characteristics.

Figure 1.   Validation methodologies and their main characteristics regarding reliability, validity, scalability and cost

Types	Reliability and validity	Scalability and cost	Main relevance to stages of validation (I, D, A, C)*
Self-assessment	Limited validity and reliability	High scalability and low cost	I
Fixed response/multiple choice	Support standardisation and reliability but limited room for contextual information	High scalability and low cost	A, C
Written tests, including essay	Support reliability and standardisation some room for adaptation and contextual adaptation	Medium scalability and cost intensive	A, C
Dialogue based/interviews	Supports validity and capturing of contextually dependent/tacit skills and competences; reliability a possibility but not a given	Limited scalability, cost intensive(time and money)	I, A
Simulation and controlled	Supports validity and capturing of contextually dependent/tacit skills and competences. Potentially strong reliability	Potentially scalable, increased initial cost, potentially reduced long-term cost	D, A
Authentic demonstration	Supports validity and capturing of contextually dependent/tacit skills and competences. Reliability a possibility but not a given	Limited scalability, cost intensive	D, A, C
Portfolio of evidence	Flexible about what type of evidence canto be included; allows for combinations of evidence to strengthen both validity and reliability	Supplementary and scalable methodology for identification and documentation; need combination with other methods to support formal assessment and certification	I, D, A, C

*Note: I=Identification, D=Documentation, A=Assessment, C=Certification.

Further exploration of the efficiency and effectiveness of the combination of methodologies as well as their cost is necessary. In addition to the intrinsic characteristics of methodologies, external

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characteristics will also play a major role in the quality of the approaches. Methodologies will always be embedded in institutional, legal and procedural contexts. These contexts, and their credibility, obviously influence whether validation is trusted or not, as well as influence the quality of methodologies and procedures. Well-trained professionals who are qualified to use these tools are also important. This will not be part of this note but it is an aspect to consider careful and that interlinks to the quality of methodologies.

3. Validation methodologies fit for purpose?

Strengthening the quality of validation is closely related to the overall purpose and function of the validation approach in question. It is critical to select and apply methodologies fit for purpose. The four stages of validation (identification, documentation, assessment and certification) will require different approaches, in the same way as validation in enterprises will differ from validation related to the education and training system. The following dimension will influence the choice of methodology:

Validation for formative or summative purposes

The distinction between *formative vs. summative* is critical when selecting a validation methodology. The main aim of formative approaches is to provide feedback to the individual, providing a basis for further learning and for personal development. The emphasis is thus on the identification and, to some extent, the documentation of acquired knowledge, skills and competences. Summative processes provide proof of achieved learning and 'measures' whether objectives have been met, sometimes combined with a 'grading' of the candidate's performance. While some methodologies can be used for both formative and summative purposes, certain approaches lend themselves more easily to one purpose than another. When validation is used for the award of a partial or full qualification, initial steps may involve the use of formative approaches (dialogue based) while the final assessment and certification stages will involve standardised written or practical tests. As demonstrated by Cedefop (2014:), an important part of validation in enterprises can be understood as formative and focussing on identification and documentation of skills.

Extracting vs. documenting

The 2015 European guidelines distinguish between tools for *extracting evidence* (tests and examinations, conversational methods, declarative methods, observations, simulations, evidence extracted from work) and the tools for *documenting and presenting evidence* (such as 'live evidence', CVs, third party declarations and portfolios). Although this differentiation is not always clear-cut (the production of a portfolio may be considered proof of certain competences in itself), it captures the key validation functions of making visible and valuing learning. Methodologies not only need to capture the unique knowledge, skills and competences acquired by the candidate, they need to do this in a way which generates trust and ensures that validation can be exchanged into future employment or learning.

Individual tailoring vs. standardisation

Validation methodologies need to be fit for purpose and adapted to the individual circumstances and objectives, but they also require certain degree of standardization and scalability, so outcomes can be transferred from one context to another. Methodologies will furthermore need to be free of bias and assure fairness. Some methodologies will be better suited for standardisation and scaling up than others. These will potentially be less suited for capturing (potential) unique individual learning experiences. This balancing is closely related to cost, which need to be taken into consideration by the validation provider and the candidate.

Use of ICT

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In validation, ICT can play an important role in balancing and scaling up of methodologies while at the same time considering the need for individual tailoring. Innovation and new developments in ICT are creating unprecedented possibilities for assessing and documenting skills and competences. As digitalisation increases, more interactive approaches to assessment where questions/challenges evolve in response to the answers of the candidate as well as virtual or augmented reality technologies, can be used to revolutionise assessment. Further to computer-adaptive assessments, advances in statistics, psychometrics, artificial intelligence and big data analytics have also tremendous potential to change the way assessments are carried out.

Self-assessment vs. external testing

The increased use of ICT has also exacerbated the proliferation of ICT self-assessment tools. Self-assessment might be useful tools for the identification of skills and as a first step into the validation process. Their reliability and validity may be questioned, and level of trust will vary. Generally, self-assessment tools need to be combined with other methodologies in which trained assessors judge the individual's competences. Self-assessments may thus be used to feed into a broader portfolio of evidence. Deciding who is the person that uses the methodology to identify, document, assessand certify competences has important implications for the quality of validation methodologies. New forms of assessment that rely on peers judgements or networking capacity are putting into question traditional ways of competence identification and assessment.

4. Validation standards and reference points

Validation methodologies must relate to and interact with some form of reference point or standard. These reference points will vary in terms of content and formal status but will eventually be of critical importance for the outcome of the validation process. The standard will influence what the assessors are looking for and including when judging a candidate. When linked to the award of formal qualifications, methodologies will normally refer to the relevant education or qualification standard. When used outside formal education and training, and for other purposes than the award of a qualification, a wide range of standards will be used (Cedefop, 2014, op.cit). It can be argued that the quality of validation depends on this interaction between methodologies and standards. The way standards are defined and described thus influences the quality of validation and the increasing use of learning outcomes (or competence based) standards and reference points (Cedefop 2016, https://www.cedefop.europa.eu/files/3074_en.pdf), is of importance. The following sections seeks to explore some of the challenges involved in selecting, developing and applying standards for validation.

The importance of outcome- and-/or competence-oriented standards

The shift towards learning outcomes-based qualifications in many European education and training systems is of crucial importance to the implementation of validation. Instead of focussing on the inputs to learning - when, where and how it took place - the learning outcome approach draws attention to what an individual knows, can do and understand following a sequence of learning. This signals that a qualification can be achieved in different ways, not only through formal education and training but also through learning at work, in leisure time, etc. Introducing learning outcomes-based qualification standards is thus of critical importance for validation as it allows the same standard to be used for different purposes; for assessing class-room learning as assessing non-formal and informal learning. As underlined in the 2017 Cedefop learning outcomes handbook (https://www.cedefop.europa.eu/en/publications-and-resources/publications/4156), the way

learning outcomes are defined and written significantly influences their quality and relevance. Learning outcomes standards can potentially be defined in ways which open up to a diversity of outcomes, in other cases significantly reduce the scope of the learning addressed.

Criteria and constructs

Validation methodologies face many of the same challenges as assessment methodologies used for formal education and training. A significant distinction made for traditional assessment is the one between norm- and criterion referenced assessment. While norm referencing is done in relation to a sample group (a class, a cohort etc.) and distributes results according to this (the ' bell-shaped' curve), validation will normally be categorised as criterion referencing. Criterion referencing means that assessment relates to a given performance measured against a criterion, for example articulated in the form of an expected learning outcome. Experiences from criterion referenced assessment and validation points to the important distinction between <u>content</u> and <u>construct</u> validity. While <u>content validity refers to a phenomenon (for example tasks or skills) which <u>can be directly and unambiguously observed, construct validity measures performance indirectly and in relation to a theoretically constructed reference</u>. A good example of this is 'intelligence' but also 'basic' and 'transversal skills' like communication, cooperation, creativity and learning to learn. The issues involved in relation to construct validity may appear as technical but will directly influence the ability of validation methodologies to capture complex individual learning experiences. Overlooking this distinction may create a bias towards the easily observable tasks and skills, and away from the more complex (and sometimes more important) underpinning competences.

Domains

The quality of the standard or reference point very much depends on a clear definition of the domain of knowledge, skills and competence addressed. Irrespective of where a standard or reference is to be used, the boundaries of an area must be identified, defined and agreed. Definitions of domains can be supported in various ways; for example, by referring to occupational or educational classifications and standards. We can also observe that more generic reference points are used (for example Blooms taxonomy) and a wide range of classifications of transversal skills and competences. Terminological tools and initiatives alike O*NET and ESCO also points in this direction, providing a basis for defining borderlines and identifying domains. In the same way as stated above for learning outcomes and criterion referencing, the definition of domain will directly influence the validity of the validation exercise and will depend on the purpose of the validation.

Performance indicators

When used for summative purposes, the design of the standard or reference point need also to clarify whether a grading of performance is to be applied or whether a simpler compliance/non-compliance is to be used. The use of grading will require even further detailed definitions of domains and criteria.

Review and renewal – obsolescence

Standards need to be evaluated in terms of how current and relevant they are. For education and qualification standards, notably those closely related to the labour market, the feed-back loop between education providers and labour market users is of importance. While a shared language referring to learning outcomes and competences supports this dialogue, any breaks in this continuous dialogue can affect quality.

5. The current guidelines

The current Guidelines address the issue of methodology mainly in chapter 5. The discussion in the current guidelines centers around the issue of extracting vs. presenting evidence. While this distinction is relevant, this note shows the complexity and large range of issues to consider when designing and choosing validation methodologies for different purposes. The workshop participants will have the

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opportunity to expand on the issues presented in this note during the discussion.

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