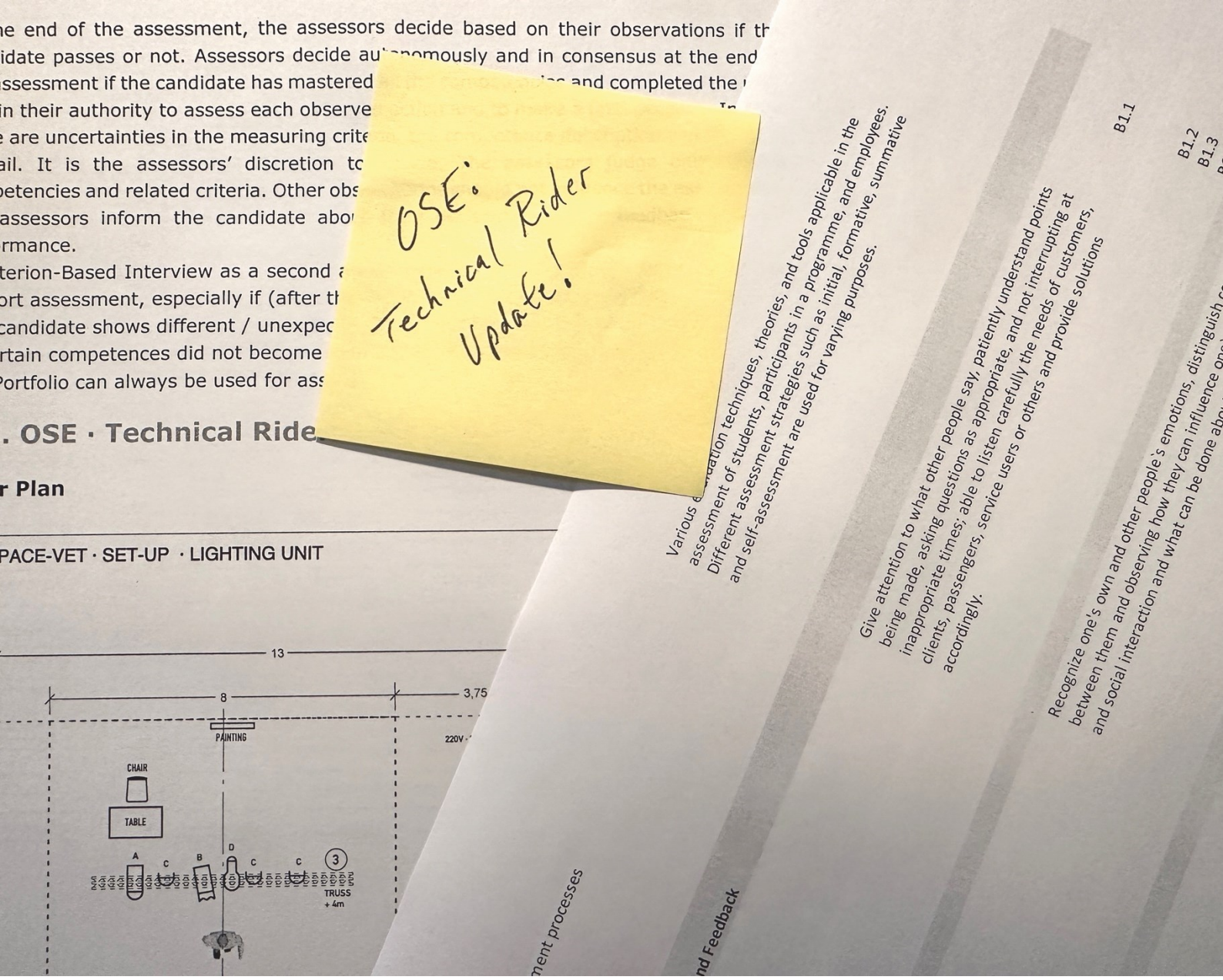

Development of Micro-Credentials "Lighting & Sound" and Assessor Training

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WP 4.3: Preparation of Assessment Process

Co-funded by the European Union

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1 Inhalt

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2 Assessment Preparation

2.1 Preface

The learning outcomes to be assessed for the assessors had generally been discussed and determined in the Erasmus+ Project TeBeVAT. The microcredential units for "Lighting" and "Sound" were finalised in the content bundling process (WP 4.2). Once the partners had agreed on the updated detailed layer of skills, knowledge blocks and transversal skills (autonomy/attitude), the learning content for the assessors could be further developed and the assessment process could be prepared.

2.2 Feasibility and Venue

In working group meetings, the project partners discussed the feasibility of assessing the assessors and the microcredential units "Lighting" and "Sound" in two separate procedures. This was rejected for the following reasons:

- Mastering the assessment method "Observation in a Simulated Environment" is an essential skill for assessors in PACE-VET. These skills could only be trained and validated by conducting an assessment procedure "Observation in a Simulated Environment" for one of the microcredential units. The setup for this assessment method is extensive.
- This meant that the venue would have to offer at least full two days on two different occasions for assessment of both assessors and candidates. This proved extremely difficult to schedule.
- Funding for Learning, Teaching, Training, and Travel was very limited.

It was decided to combine the assessor validation with the candidate validation processes in order to cover both target groups in one two-day procedure.

The proposed assessment venue in the application, MBO in Hilversum, was no longer available. OSAT provided a more than adequate replacement, the VET educational institution for live stage and event technicians and shared working space "Curio" in Bergen op Zoom in The Netherlands. The venue was available for a transnational meeting in February of 2023 and for the assessment procedures in May of 2024.

2.2.1 Preliminary Assessment Procedures · February 2023

The partners agreed to use the facilities at "Curio" during the planned transnational meeting in February 2023. This offered the opportunity to try out the "observation in a simulated environment" method with some representatives of technical service providers from the event technology industry in The Netherlands.

Several Health & Safety and Lighting competences were bundled and tested in the simulated environment. There was very good feedback from the two labour market participants that took part in the assessment process as candidates. Their feedback for reviewing and updating the assessment procedures and documents. The major points were:

- Time for preparation is important for the assessors
- There needs to be more information about the role of the silent assessor
- Simulated Environments: all equipment must be fully "in place"
- Assessment weakness: equipment can be different / candidates must have time to get acquainted with the setting
- Good assessors are more important than the physical assessment centres
- The competences and scoring are based more on a theatre setting than an "event environment"
- Assessment at companies should be possible = assessors sent from an assessment centre
- The wording on the scoring sheets should be reviewed
- There needs to be clear definitions of some terminology used
- Equipment List / Rider should be more detailed
- Lighting instruments: positions should be marked with tape

It was suggested that it would be feasible to assess two persons at one time. Although this can be an important aspect in regard to the cost of an assessment, it was agreed that the quality of the validity of the assessment would be compromised.

Figure 1: Preliminary Assessment Procedures in Bergen op Zoom, February 2023

During the meeting, there was also a presentation of an ESF-funded project from BSF for ETTE. The group discussed the practicability of using a similar portal for PACE-VET. The

quality of the material and implementation is very good. During the discussion, it was seen that the course reflected more the EQF-Level 3. A similar platform with similar content could, however, be used for the assessor and mentor training. The available resources limited the possibilities for developing and using a similar professional platform and media. The project partners discussed the possibility of implementing several of the proposed assessment methods inherent to the PACE-VET process into the assessor training and validation in May of 2024. In the end, it was agreed that the assessment processes should only include the assessment methods:

- Observation in a Simulated Environment
- Criterion-Based Interview
- Structured Portfolio

The decision was based on the availability of resources, since the accessibility of the assessor trainees would surely be limited, and also on the premise, that the OSE assessment method would be the least familiar to them.

2.2.2 Assessment Preparation · May 2024

In working group meetings, the partners discussed and finalized the assessment procedures to be conducted on May 22nd and 23rd of 2024 in Bergen op Zoom. The tremendous amount of course material and the extensive setup requirements for the assessment method "observation in a simulated environment"1 were evaluated and infrastructure and time limits reconsidered. This led to realigning the goals for the assessment. It was decided that the microcredential unit "Lighting" should be the exemplary unit for the assessment training and the candidate assessment. This allowed for a high level of realism2 in the simulation and did not unnecessarily complicate the assessor training by adding new sets of competences to the process. Once the assessment method is mastered, the assessment of other units is easily replicated and can be used in different contexts while maintaining validity and reliability. The detailed overview of the skills, competences, knowledge blocks, transversal skills (autonomy/attitude), the provided attention points for assessment, and the harmonised structure of the assessment process facilitate a swift understanding of unit validation processes.

The details of the assessment and processes were documented and illustrated in version 1.0 of the assessor handbook.

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[1] Cedefop (2023). European guidelines for validating non-formal and informal learning. Luxembourg: Publications Office. Cedefop reference series; No 124. http://dx.doi.org/10.2801/389827, Page 55. (accessed October 15th, 2024)

[2] Cedefop (2023). Page 55.

3 The Assessor Handbook · Version 1.0

3.1 The Erasmus+ Projects PACE-VET and TeBeVAT

The event technology and live-performance sectors offer a world of diverse opportunities in various occupational fields in varied working environments. From the classical stage to rock & roll or corporate events, technicians are key to making the "show go on". In most cases, their expertise is essential to create successful artistic productions and business presentations.

Although a few countries in the EU have VET-programmes with certifications of qualifications for specific competencies in the sector, a great majority of technicians working on a stage or on a trade show floor learn by doing. How can they validate their learning outcomes and have continuous access to job and further educational opportunities? How can this validation be of such a quality that it is accepted in the industry? How could technicians keep a structured portfolio, get professional feedback and access validation processes simply by using their mobile device?

The Erasmus+ Projects PACE-VET and TeBeVAT aim at solving the modern challenges of an ever-changing-workplace and the demographics of the EU. Jobseekers, employers, educators and their institutions as well as validating bodies and institutions involved in vocational educational training desperately need a European solution. The speed of change in the work environment and digitalization as well as the quick evolution of technologies requires that workers in the event technology sector must be life-long learners to master diverse competencies at many intervals throughout their careers.

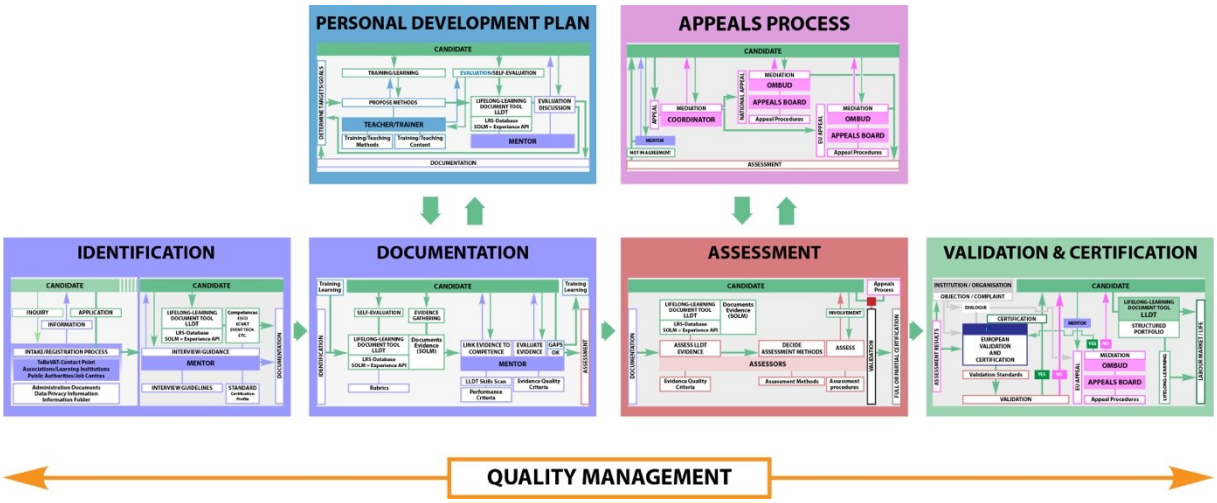
In alignment with the European Skills Agenda, both projects strengthen vocational education and training for sustainable competition, while ensuring social fairness and building resilience. They also make existing competencies more visible and transparent. When implemented, the assessment process and the PACE-VET application increase the availability of qualified personnel by making use of a partial certification approach and mobile device accessibility to a structured portfolio and learning record store.

Partial certification allows both lateral entrants and new employees to assess their competencies in relation to ESCO occupational profiles in the live performance and event technology sectors. This fulfils the workforce needs of small and medium-sized enterprises (SME), which make up the bigger part of the companies and cultural institutions in the international market. With the help of the PACE-VET application, occupational profiles and a corresponding curriculum, it can be determined which competencies a learner has mastered. The process makes it easy to identify which competencies are still missing. This makes it easier for employers to make informed judgments about those who have applied for a job and to select employees.

The process and application will be made available to social partners, VET-providers and educational institutions, allowing for the developments of courses and training opportunities which are based on local demand, while providing transparency by following standardised content. Learning-outcomes are clear and standardised across European sectors and borders.

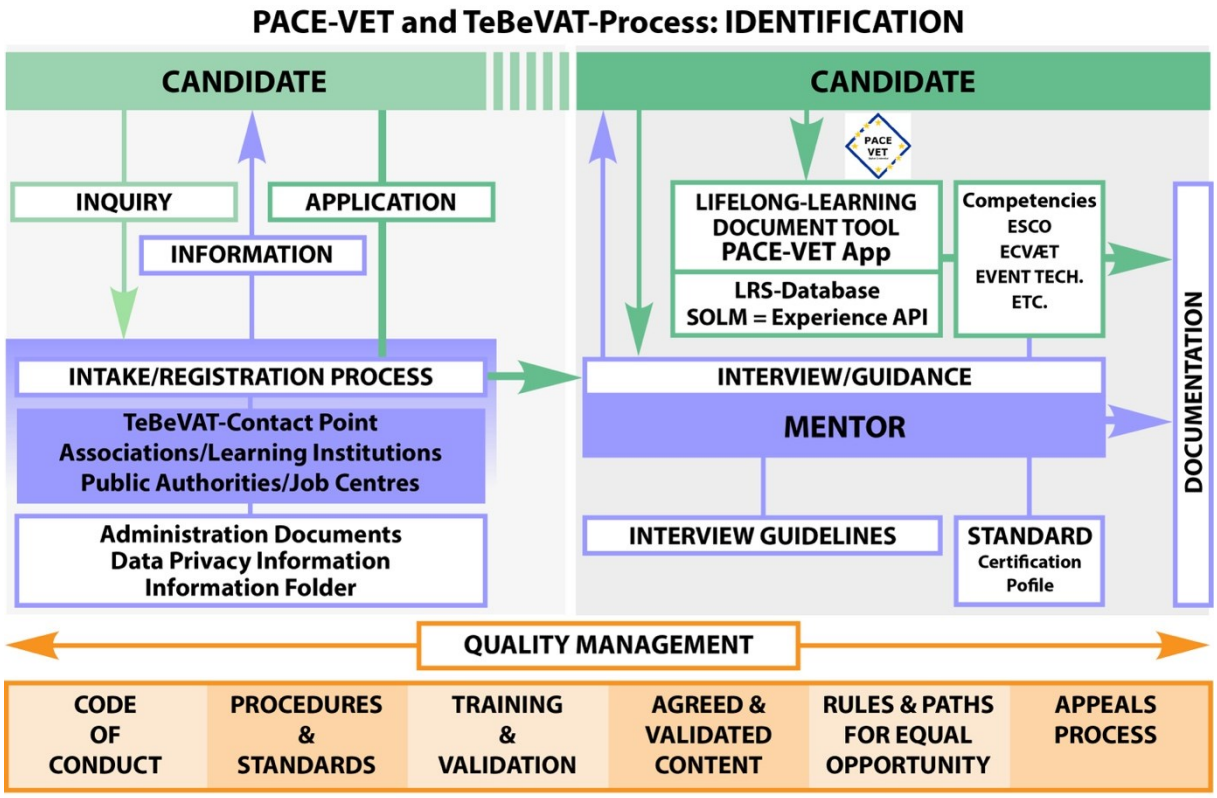
3.2 The Process

The objective of the assessment process is to validate competencies of candidates working as technicians in the field of live-performance and event technology. Candidates will be assessed and certified according to an assessment system that can be recognized at a European level and correlates with ESCO – the multilingual classification of European Skills, Competencies, Qualifications and Occupations.



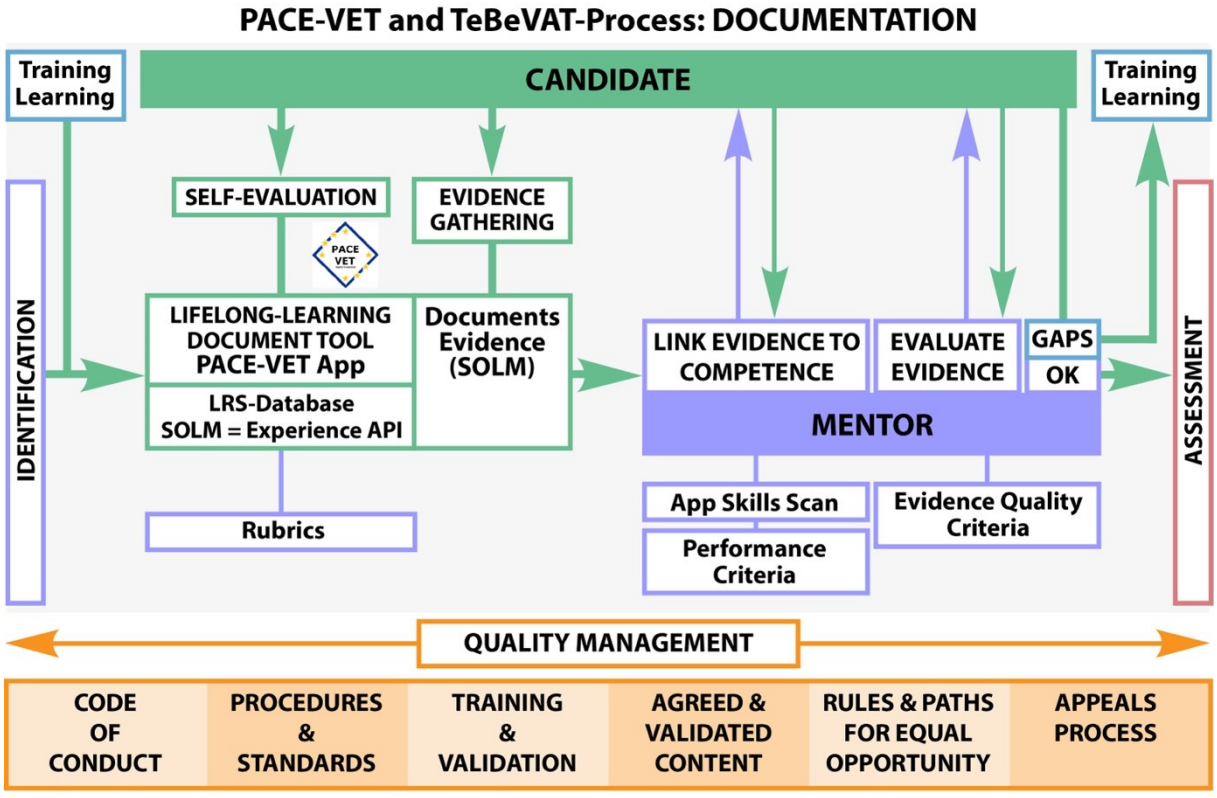
3.3 Identification

In the identification phase, the candidate (the person seeking certification) can obtain information about the process and make an application. In the registration process, administrative documents, data privacy information and folders with information about the process and application will be delivered. In an initial interview, the candidate gets to know the mentor. The mentor has a central role and supports the candidate throughout the process. The mentor is responsible for the proper documentation of the assessment process. This begins with an orientation phase with the candidate regarding the purpose of the assessment, and the analysis of existing competencies to be assessed.



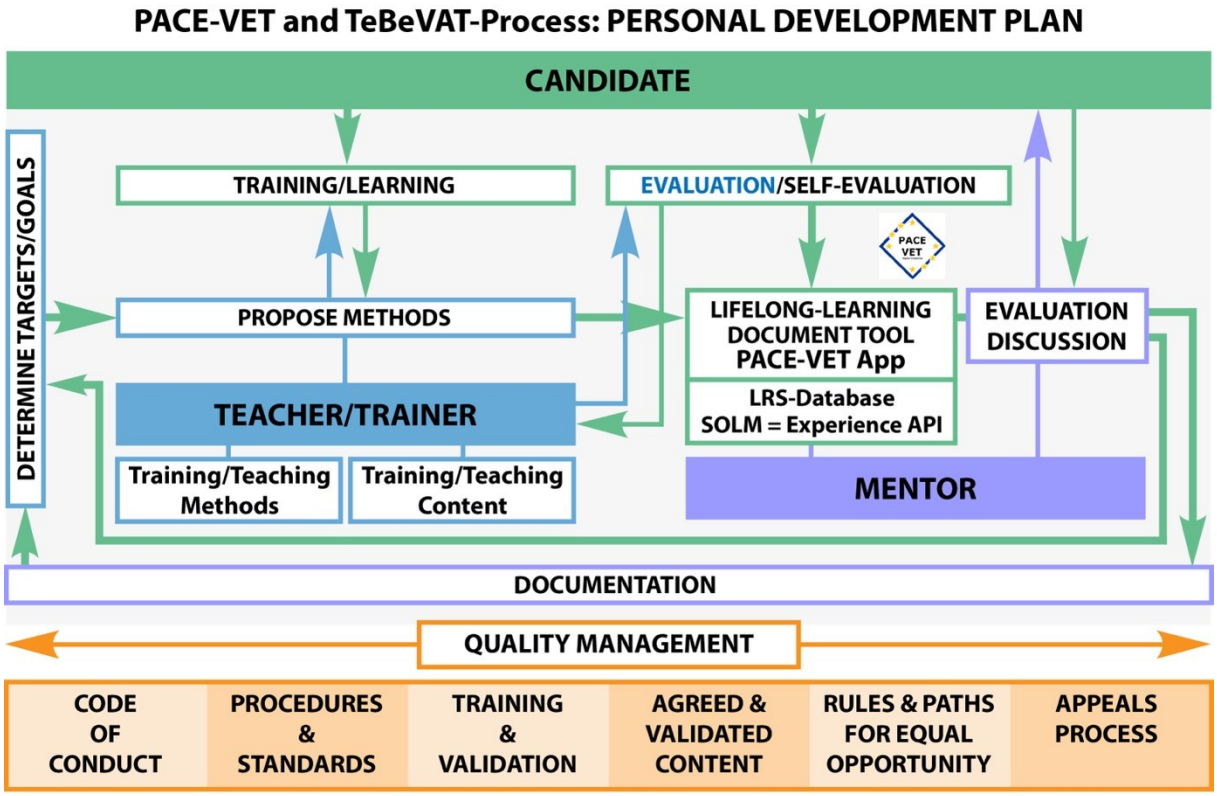
3.4 Documentation

Through evaluation and self-evaluation, information about existing competencies is collected and stored in the PACE-VET application in the candidate's portfolio. The mentor proposes which competencies are ready to be assessed. Based on a final discussion, a specific set of competencies will be identified for assessment.



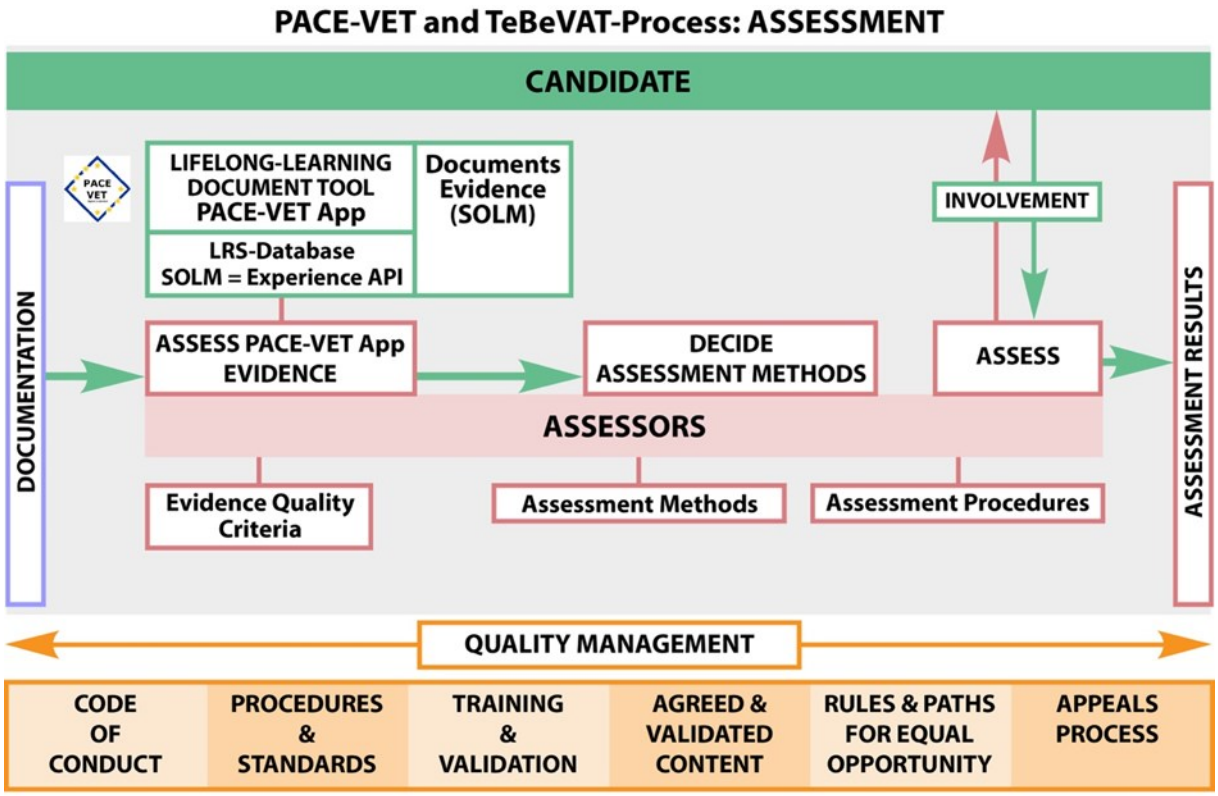
3.5 Personal Development Plan

If necessary, the mentor supports the candidate to identify competence gaps that need to be closed before assessment begins. Training and learning opportunities are discussed, and the candidates decide what they need before assessment.



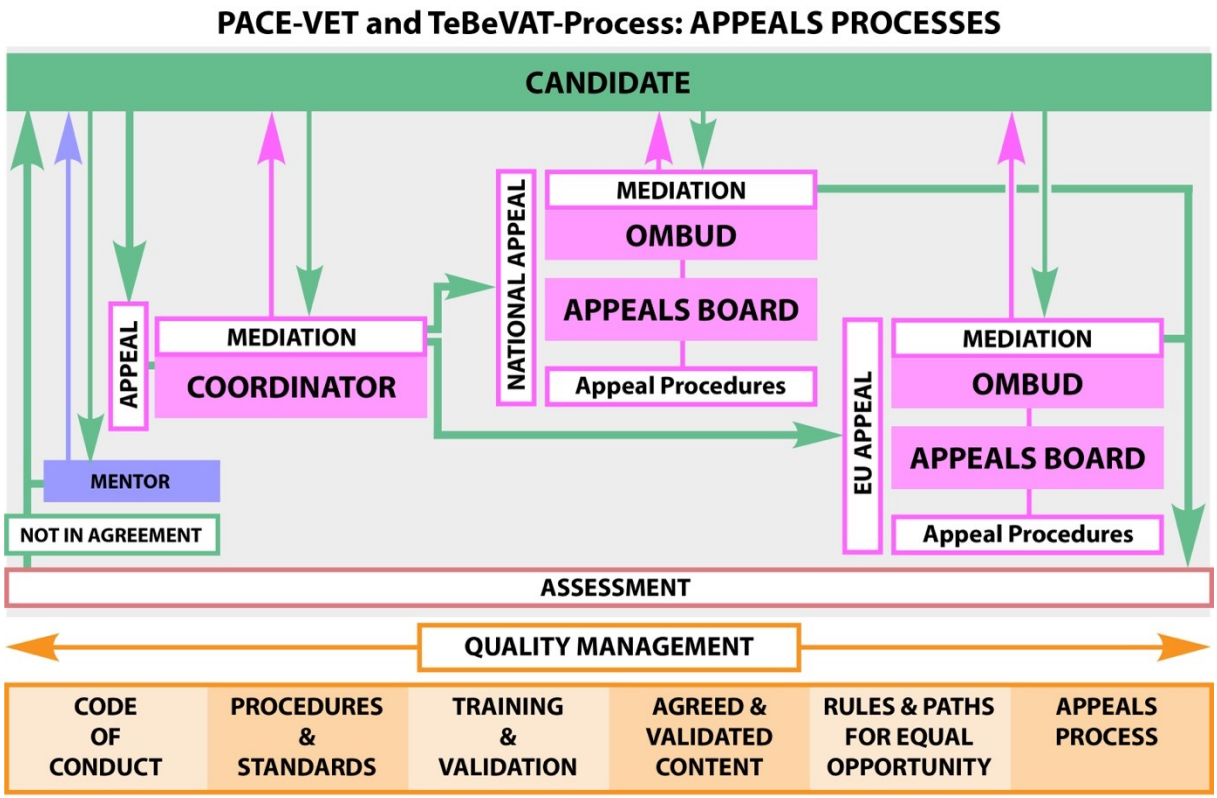
3.6 Assessment

In the assessment phase, assessors are introduced to the process. The assessors provide a fair, just, and unbiased assessment of the candidates' competencies, following predefined standards and procedures. If the assessors deem the result of the assessment sufficient, it leads to validation and certification. The use of three assessment methods (triangulation) to validate learning outcomes ensures a high degree of validation quality.



3.7 Appeals Process

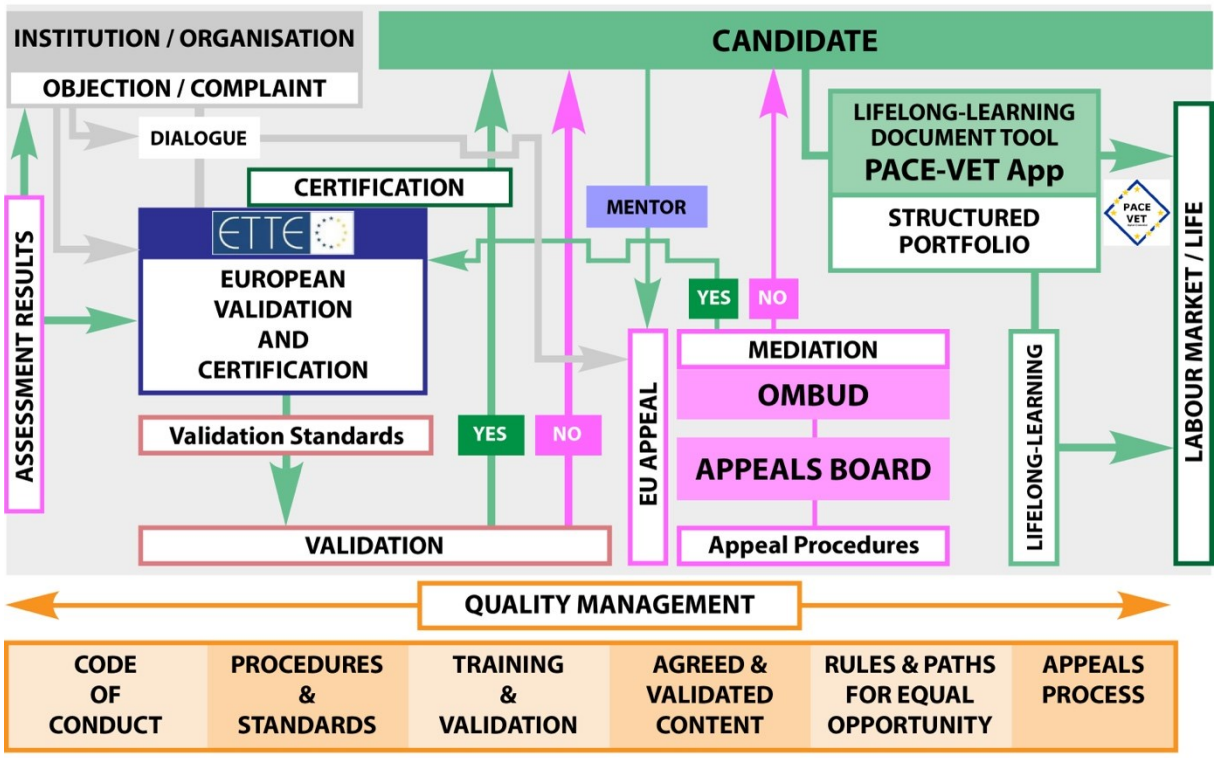
Should candidates not agree with the assessment results, they can appeal them in a national or in a European mediation process. Candidates can consult the mentor about the process and their assessment results.



3.8 Validation and Certification

There are few existing tools for competence transparency and mobility provided by Member States. In the event and live-performance industry it is essential to develop a process for the unique situations in the labour market with very specific skills demands. The project partners propose to entrust the European Council for Qualification and Certification of Stage and Event Technicians (ETTEC) with the responsibility to centrally control and manage certifications in the EU. This would involve certifying assessment centres that conduct assessments respecting the needs of vocational learners and the sector. Organizations within the EU can trust ETTEC to organize fair and just assessments. Many member states are currently not able to provide recognition processes as laid out and suggested in this document. Firms, chambers of commerce, employers' associations and social partners can opt into recognizing the credentials issued by ETTEC, upon ensuring that the quality standards according to equivalent Member State requirements are being met. The assessment and appeals processes adhere to the EN ISO IEC Standard 17024:2012-11.

PACE-VET and TeBeVAT-Process: VALIDATION & CERTIFICATION



3.9 Ownership of the Process

The process respects not only the quality of the assessment, but it is also attributed to the individual, i.e. unique learning biographies, unique competence sets and unique personalities. Everything in the process belongs to the candidate.

4 PACE-VET Application

Enabling opportunities for learner-centred documentation

4.1 Description

The PACE-VET App is an innovative application that aims to allow technicians working in the live-performance and event industries to document and validate their acquired competencies in a transparent way. The Application facilitates lifelong learning and careers. Users can document, identify, recognise, validate and certify their skills, knowledge and their ability to apply these autonomously and with responsibility.

All competencies are linked to ESCO: the European multilingual classification of Skills, Competencies and Occupations. These are grouped into Units that reflect occupational profiles in the sector:

- Lighting
- Mechanical Equipment (planned)
- Power Distribution (planned)
- Sound (planned)
- Stage Environment (planned)
- Video and Media Integration (planned)
- Work Organisation Unit (planned)

Currently, not all competencies, occupational profiles, and dialogue functions are available. All units correspond to the EQF-Level 4: Factual and theoretical knowledge in broad contexts within a field of work. The app allows for documentation of work, learning, and life experiences. Certifications of qualifications can be uploaded. Information to prospective employers can be released by the candidates at their discretion. The PACE-VET App is accessible on any screen; is cloud based and provides security and privacy by design. Tools and accessibility are defined by the different user roles.

4.2 User Roles

4.2.1 Live-Performance/Event Technician = "Candidate"

Technicians are called "candidates" in the PACE-VET process, since evidence and competencies can – if desired – be assessed, recognised, validated, and certified. The candidate owns the process and any access to it.

Candidates can:

- Upload personal contact information and implement dual-factor identification,
- Upload and update information/evidence documents on own learning or experience,
- Give specific access to mentors, assessors, or employers,
- Request mentor support,
- Create a personal development plan with mentor,
- Search and request assessment opportunities,

- Allow third parties access to their data and information, and
- Join in user groups (in planning).

Should an assessment be requested by the candidate, they are informed about the combination of assessment methods that will be used.

In planning:

The candidate can access detailed information about the assessment and scoring procedures through the ETTEC-website under the PACE-VET Menu. The certification of Units (microcredentials) is overseen by ETTEC – The European Council for Qualification and Certification of Stage and Event Technicians.

4.2.2 Mentor

A mentor provides guidance and advice to prepare a candidate for the assessment process and recognition of prior learning. They help set clear objectives for their personal development and advise on further training, learning or job market access.

Mentors can:

- Upload personal contact information and implement dual-factor identification,
- See the candidate profile,
- See evidence linked to the candidate,
- Mentor candidates, send feedback and write evaluation reports,
- Suggest assessment opportunities, and
- Support candidates in the process.

4.2.3 Assessor

An assessor measures the existing competencies = skills, and knowledge of a candidate according to a pre-defined standard or procedure, and judges objectively if the candidate reaches the corresponding performance criteria.

Assessors can:

- Check if a candidate has the competencies required by a profile or set of competencies according to standardised procedures,
- Assess candidates, and
- Validate evidence or assessment results.

4.2.4 Employers

Employers that have received access to candidate's profiles can look for technicians with the proper competencies to do a job or fill an open position.

Employers can:

- Upload personal contact information and implement dual-factor identification,
- Search for technicians based on:
- Competencies,
- Region, and
- Language.

4.2.5 Certifying Bodies | Assessment Centres

PACE-VET requires a central authority on the European level for the recognition of certifying bodies and assessment centres.

Certifying bodies | Assessment Centres can:

- Provide certification of assessment results, and
- Provide digital credentials (e.g. European Digital Credential {EDC} – Europass).
- Certifying bodies | Assessment Centres must:
- Adhere to the quality standards as defined by ETTEC,
- Provide digital credentials as evidence of assessment in the required PACE-VET format, and
- Provide information about and schedules for assessment opportunities.

4.3 Considerations

4.3.1 Limitations

Due to the finite resources in the project, the application and the Learning Record Store (LRS) are currently limited to basic functions. However, in the future, the goal of the project is to create a true semantic open learner model that facilitates all self-regulated learning processes.

Presently, the App should provide:

- A lifelong-learning document tool that includes a structured portfolio and a candidate profile with a CV / and related documents regarding the candidate's ability to apply skills and knowledge autonomously and with responsibility,
- Information regarding current competencies and occupational profiles in the sector,
- Information about respective Units of competencies that are grouped in micro-credentials that can be assessed.

Contact to:

- Mentors
- Assessment Centres
- Information about possible validation and certification processes.

Options to allow access to information:

- Mentors,
- Assessment Centres and Assessors, and
- Employers.

In the future, the LRS should provide:

- Expansion of data gathering possibilities to document all learning experiences: Quantifiable, sharable, and trackable activities related to learning outcomes,
- Generation of a Personal Development Plan based on the candidate's learning outcomes and goals,
- Access to information about training and learning opportunities,

- Opportunities for Self-Assessment,
- Information about new essential and optional skills and qualifications in the sector,
- Automatic translation of content into all 24 official languages of the EU, starting with the three "procedural" languages – English, French and German,
- Constantly updated job opportunities that fit the candidate's profile,
- Further expansion of links to job opportunities and employment possibilities, and
- Access to user groups.

4.4 Data Security | Governance | Ownership

All information received from the candidate is confidential and belongs to the candidate. No information will be accessible to any party without the explicit consent of the candidate. The candidate must be informed in depth about the reason the information is given to other parties and must verify the release of any information or data.

5 ASSESSMENT METHODS

5.1 Structured Portfolio (POR)

In a structured portfolio, the results of different assessment methods and evidence of learning experiences are linked to one another to document the individual skills of the candidate in an objective way. One definition of a "*Structured Portfolio*" is: "a representative collection of different pieces of evidence of a candidate's skills, knowledge and understanding which indicate that they have met the requirements of a qualification"[3]. Candidates can prepare a portfolio, adapted to the skills or the occupational profile they want to get validated, and the portfolio can be assessed.

Portfolios are used in the assessment to gain quantifiable and comprehensive insight into the achievements of the candidates. When creating portfolios, the candidates can also learn to assess themselves and their qualities.

The PACE-VET Application is a digital form of a portfolio for live-performance and event technicians.

5.2 Quality Concepts

5.2.1 Validity

In the assessment process, at least two assessors are involved to increase validity and to ensure equality and fairness in the validation process. Validity, reliability, and authenticity are increased by using a variety of methods for authentication. Even if these methods are time-consuming for the candidate, they can present evidence of skill capabilities in many different ways.

[3] SQA (2019): Guide to Assessment. Online: https://www.sqa.org.uk/files_ccc/Guide_To_Assessment.pdf ; page 25; (last checked: 31.07.2023)

5.2.2 Reliability

Reliability is increased by using several sources and documents of the portfolio to evaluate a competence. Due to the virtually unlimited capabilities of AI, it is of upmost importance that the evidence is not only based on one source and that the sources can be verified by the assessors.

5.3 Forms of Evidence

5.3.1 Artefact/Product:

Where competencies and skills require candidates to produce an artefact or physical product, the artefact or product must be provided to the assessors.

Candidate evidence must include:

- Details of the tasks set for candidates to complete. These must be mapped against the assessment criteria of the units addressed,
- A declaration that all work produced is their own,
- Summative candidate generated assessment evidence - teaching materials must not be included.

5.3.2 Recorded Activity/Practical Ability:

Evidence must be provided of the candidate individually and actively completing tasks that demonstrate achievement of the assessment criteria. Evidence may be assessed by direct observation of performance and must consist of at least two of the following:

- Annotated images
- Detailed witness statements
- Video (with narration or written log)
- Learner log/evaluation
- Peer observation report

Where photographs/videos are used, each individual candidate must clearly be identifiable.

5.3.3 Assessment Certification:

It is essential that evidence of assessment is identified individually. Awarding bodies and centres offering these assessments must also satisfy the assessment and quality assurance requirements of the TeBeVAT and PACE-VET-Processes or meet the criteria of the European Digital Credential – which are signed with a unique e-seal that make them authentic and easily verifiable.

It is important that the three levels of quality assurance regarding certification quality: Input/Process/Output, are taken into consideration when trying to assess and validate certifications provided. Qualifications should be checked with cedefop's (European Centre for the Development of Vocational Training) definition[4] of "certification of learning

[4] Cedefop, European Centre for the Development of Vocational Training, Terminology of European education and training policy, "certification", https://www.cedefop.europa.eu/en/tools/vet-glossary/glossary?letter=C , last checked on November 23rd, 2023

outcomes" which refers to a "process of issuing a certificate, diploma or title formally attesting that a set of learning outcomes (knowledge, know-how, information, values, skills and competencies) acquired by an individual have been assessed by a competent body against a predefined standard". Thus, learning outcomes-based standards should be a key element in the certification process.

Learning outcomes[5] are: "Knowledge, know-how, information, values, skills and competencies an individual has acquired and/or is able to demonstrate after completion of a learning process, either formal, non-formal or informal".

5.3.4 Witness Statement/Peer Evaluation:

In accrediting prior learning, the assessor might not necessarily be able to observe the candidate carrying out certain aspects of their job. If this happens, it might be appropriate for another person to comment on their performance by completing a statement called a "witness testimony". Witness statements should be used only to support other forms of evidence such as a product. It should:

- Be provided by a person who is not related to the candidate and is in a position to make a valid comment about their performance, e.g. a supervisor, line manager, a client or customer.
- Contain comments that relate specifically to the performance criteria.
- Be authenticated by the inclusion of the witnesses' signature, role, address, telephone number and the date.

Contracts and Work Sheets:

- Proof needs to be of recent date. How long ago is this evidence delivered and what does this say about the mastering of the process now?
- Is the evidence verifiable?

5.3.5 Requirements for Forms of Evidence

- Authentic: it must be clear that the evidence was truly executed or accomplished by the candidate or is related to the candidate. The experiences must be gained from activities that were carried out independently, or in groups where the candidate's own substantive contributions have been significant for the results.
  Digital certificates and qualifications should be verified through portable digital documents that use open standards such as the "European Digital Credentials"[6] to easily authenticate, validate and recognise credentials of any size, shape or form.
- Once again, Artificial Intelligence programs make the verification of all forms of documentation a challenge.

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[5] Cedefop, European Centre for the Development of Vocational Training, Terminology of European education and training policy, "learning outcomes", https://www.cedefop.europa.eu/en/tools/vet-glossary/glossary?letter=L , last checked on November 23rd, 2023

[6] Europass, European Commission, European Digital Credentials for learning, https://europa.eu/europass/en/europass-alati/european-digital-credentials , last checked on November 23rd, 2023

- Relevant: the evidence must be related to the competence being assessed. The experiences must have been gained in relevance to the occupational profile function. Candidates must indicate which tasks and activities have been executed and what results these activities have yielded. They must also indicate why they are relevant to the activities performed.
- Of a sufficient level: the evidence must reflect the competence level expected for the qualification or certificate.
- Up to date: the evidence must still have value in the current working environment
- Quantitative: the evidence must be of sufficient volume, supported by sufficient experience. How much time was needed to achieve the learning outcome?
- Varied: the evidence must make the breadth and scope of the experience concrete. Preferably, the candidate presents evidence from different "angles" and not "one-sided".

5.3.6 Limitations

Implicit knowledge can only be shown with difficulty by using this method. Practical competencies and communication skills can only be expressed indirectly through the portfolio. A direct interaction with the assessors is missing.

The assessment can prove to be time-consuming, as each candidate presents different types of evidence.

5.4 Considerations:

5.4.1 Tips

The structure for the portfolio should be presented to the candidate in advance. It should be clear which data, facts, and evidence are relevant. A mentor can help to focus on the essential elements when candidates create a portfolio.

5.4.2 Challenges

Because of the diversity of evidence, special attention must be paid to reliability. Even if the external design of the portfolio says something about organisational competencies, the focus of the assessment should be on the content and evidence.

To prevent attempts at fraud, officially certified copies of certificates can be requested. If the candidate gives permission, certificates of employment can be checked in case of doubt. Without this permission, there will be issues with data protection regulations.

5.4.3 Scoring Tools - Criteria

A checklist based on the sectoral layer of the relevant competencies ensures the reliability and validity of the assessment.

5.4.4 Scoring Tools - Triangulation

Triangulation is a process by which assessors collect evidence from three different assessment methods to ensure validity in the assessment. In PACE-VET, learning outcomes should be validated by the results of at least three assessment methods.

The portfolio should always be a part of the assessment process.

The portfolio evaluation and the assessment of competencies require assessors to be able to evaluate documents in terms of their relevant value. Expertise and experience in the field of live-performance and event technology are a prerequisite.

5.4.5 Scoring Tools – Example Lighting Unit

The competencies to be assessed in the corresponding unit can be found in the list provided to the assessors. In this example, the Lighting Unit and the competence "Install Lighting". The ESCO description of each competence is included in the list, as well as the required skills, knowledge, and autonomy /attitude. The acceptable assessment methods for each competence are listed as well. The portfolio can always be assessed to support the validation of competencies.

Candidates might provide light plots as work examples from performances they participated in. If these are reliable evidence, then they can support the validation of the skill "read the light plot and documentation" and the knowledge block "understands drawings, symbols and scales". This portfolio evidence could also be used by assessors in other assessment methods such as the Criterion-Based Interview to ensure the validation of those competencies is correct.

5.5 Implementation:

5.5.1 Standards

The portfolio should be structured in such a way that it can be measured against the established standard in terms of the units.

5.5.2 Development

The content of the portfolio is created using a checklist and listed in an index. This enables an objective assessment by the assessors.

A portfolio can be divided into two parts. In the first part, the learning and development process of the candidate is presented. The acquired competencies are expressed in facts and figures (e.g. personal data, previous activities, self-assessment, future prospects). In the second part, an overview of the current status of the qualification is given on the basis of formal and non-formal evidence.

The portfolio can include a curriculum vitae, reflections on informally acquired skills, working documents and learning diaries.

5.6 Needs/Set-Up

Since the candidate submits a complete compiled portfolio, no further set-up is required.

5.6.1 Requirements for Assessors

The Portfolio evaluation and assessment of competencies requires assessors to be able to evaluate documents in terms of their relevant value. Expertise and experience in the field of live-performance and event technology are a prerequisite.

A Structured Portfolio can theoretically prove competencies in all Units through various valid evidence (e.g. certificates of further education, CV, job reference) without any further assessment.

5.6.2 Interaction with other Methods

In the case that submitted evidence of learning outcomes needs to be verified for its relevance to the respective competencies, it should be backed up by complementary oral and practical assessment methods.

Preferred matching methods:

Criterion-Based Interview

Observation in a Simulated Environment

Oral Test

Role Play

5.7 References/Notes

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6 Observation in a Simulated Environment (OSE)

The simulated environment reflects a real-life situation but is standardised. This makes it possible to build in incentives for certain behaviour or choices. While the assessment situation is a formalized "reproduction" of a real-life situation, it also incorporates role play

to observe behaviour skills. The candidate is observed in this simulated environment under structured authentic conditions.

The method is used for practical, observable skills that can be demonstrated in the workspace. The assessment method allows to test very specific competencies, as the environment is controlled.

6.1 Quality Concepts:

6.1.1 Validity

Since all factors are under control, the internal validity of this method is high. The method excludes unpredictability of situation and environment which makes it easier to ensure safety. Very specific competencies can be tested. However, since the behaviour of people can change as a result of the observation situation (Hawthorne Effect[7]), internal validity may be threatened. Since it not truly a real-life situation, the external validity (transferability) of the observed behaviour is lower. A good assessment will reflect real-life situations in a controlled environment as much as possible.

6.1.2 Reliability

The quality of simulated environment observation depends on the accuracy and repeatability of the assessment set-up. Simulated environments guarantee equal treatment of candidates, the quality of the results should be identical, wherever and by whatever assessors the assessments are conducted. Every candidate is assessed in an identical simulation. Prerequisites for reliability are well trained assessors, specific guidelines for the simulation and a well-balanced scoring system. This prevents that the assessment could be biased by the assessors or influenced by previous tests or by looking outside the competencies that are not occupation related behaviour. The reliability is increased by developing exact observable criteria.

6.1.3 Limitations

Development of an assessment set-up is time consuming and requires a great deal of resources including a specific technical rider for the simulated environment for each group of competencies to be assessed. The necessary equipment and space must be available to create the predetermined simulated environment.

6.2 Considerations

6.2.1 Tips

Organise the assessment in a way that the candidate feels at ease. If it is a tradition to have a cup of coffee or tea at the start of a working day, include this in the warm-up of the assessment. Candidates should have time to explore and comprehend the simulated

[7] "The Hawthorne Effect is a type of human behavior reactivity in which individuals modify an aspect of their behavior in response to their awareness of being observed."; Wikipedia, https://en.wikipedia.org/wiki/Hawthorne_effect, last checked on October 24th, 2023, see also: interpretation and criticism

environment. Do not built in traps or tricky situations that hardly ever occur in real life. Be clear and open about the role and activities of the assessors.

Assessors should only stop the assessment in case of safety concerns or if it exceeds the established time limits.

6.2.2 Challenges

If the candidate needs support, the active assessor must be trained to limit the intervention to what the candidate requires and not to take over the decision-making process or be proactive (as we would do in reality). Assessors must also be aware that there are different methods to perform a specific task and should be open to accept more than one preferred method, if the competence is observed.

6.2.3 Scoring Tools - Criteria

Scoring is accomplished by working through the list of observable criteria to be assessed. The criteria are derived from the sectoral layer skills and are a concretisation of the visible, observable result of the skill in the simulated environment. As the environment is standardised, the scoring tools can be very specific and leave little room for interpretation. There are prepared forms for each set of competencies to be assessed. These include:

a. Assessment specifications (example: PACE-VET_assess_overview_lighting), and an
b. Overview of the competences to be assessed including a criteria scoring matrix. (example: PACE-VET_lighting_overview_skills_know_AA).

The final decision is made based on the link of the criteria with the competence and by comparing the observations of the assessors.

6.2.4 Scoring Tools – Example Lighting Unit

The competences to be assessed in the corresponding unit can be found in the list provided to the assessors. In this example, the Lighting Unit and the competence "Install Lighting". The ESCO description of each competence is included in the list, as well as the required skills, knowledge, and autonomy / attitude. The acceptable assessment methods for each competence are listed as well. Observation in a Simulated Environment can be used as a core assessment method for this unit. A majority of the competences can be validated with this method.

6.2.5 Scoring Tools - Triangulation

Triangulation is a process by which assessors collect evidence from three different assessment methods to ensure validity in the assessment. In PACE-VET, learning outcomes should be validated by the results of at least three assessment methods.

The portfolio should always be a part of the assessment process.

6.3 Implementation

6.3.1 Standards

The assessment standard must describe the specific situations, incentives and expected complexity of the skills to be assessed.

6.3.2 Development

The development of an observation in a simulated environment starts with the analysis of the skills that need to be evaluated. Since not every skill can be tested in all variations, representative situations are chosen to reflect the mastery of the general skill. The skills are built into a well-chosen scenario that reflects a real-life experience, but also integrates behavioural incentives and choices. The candidate is asked to perform a task, but the environment limits or alters the way the task is performed. In this way, the candidates must make their own decisions. The activities should reflect different contexts. Often a skill or behaviour is built in twice to improve reliability and avoid "false positives". Assessment facilities must be evaluated, and equipment used must be tested before a simulation with candidates can take place. It is important that the simulated environment takes current technologies and processes in the sector into account.

6.4 Needs/Set-Up

6.4.1 Setting/Contextual Factors

This is an observation in a "real-life" professional setting. It must be organised as a normal day in the life of the candidate (= working day).

6.4.2 Assessors

There are always at least two assessors. One assessor acts actively like a "colleague", without disturbing the assessment process, while the other is passive and assesses from a distance. There could also be trained "colleagues", that must not have an assessor qualification, who may "work with" the candidate in the observation environment. This is only necessary when a colleague is "physically" necessary to assess the competence at hand.

If the assessment is prepared in the proper way, technical competence is relatively easy to assess. In most cases, knowledge behind the action can also be assessed. Competences are tested in a "group" working environment, as it is in reality. Several competences can almost always be assessed at one time. The proper atmosphere is very important.

Assessors need competences for valid observations, such as those that can be acquired in observer training courses. They should have a basic knowledge of diagnostics, be able to deal with perceptual effects (e.g. errors of observation and assessment) and be able to recognize their own subjectivity or bias. Professional competence is essential for the evaluation of the candidate's performance against the background of the assessment standard. It is also needed to set-up the work situation (simulated environment) appropriate to the competences to be assessed.

6.4.3 Interaction with other Assessment Methods:

This method can be combined with a Criterion-Based Interview to fill the gaps or skills that have not been observed (neither negative nor positive). It can also be combined with a multiple choice or open answer test to assess knowledge that was not made visible in the

practical assessment. The Structured Portfolio can always be used to support the assessment.

Preferred matching methods:

Criterion Based-Interview

Structured Portfolio / PACE-VET APP

Written Test (Multiple Choice) - Knowledge

Written Test (Open Answers) - Knowledge

Oral Examination – Knowledge

6.4.4 Outlook

This assessment method is a "Performance-Based Assessment" and therefore open to future technological developments such as the use of augmented reality, virtual reality or gamification. Currently, the development and realisation of highly interactive and professional digital assessment solutions are still relatively expensive and therefore not yet available.

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7 Observation on Site (OOS)

The candidate is observed in an authentic professional context of a real-life situation. This assessment method is used for skills that can be best shown in the workspace. It can verify the ability to carry out certain tasks.

7.1 Quality Concepts

7.1.1 Validity

An advantage of this assessment method is that the observation is close to reality. A disadvantage is that the testing set-up is never fully under control. For example, assessors cannot "per se", foresee the content and technical needs of a production. This unpredictability can, on the other hand, even increase the outcome validity. Such factors only add a further dimension in the assessment and may be very suitable for candidates to demonstrate their working experience and therefore, certain competencies. The external factor indicates that the complexity of a competence may vary.

There is always some risk of confounded results due to the "Hawthorne Effect"[8], i.e., that candidates may behave atypically if they know they are being observed.

The practical situation in a real-life environment is never the same and will not always contain all the competencies that need to be assessed. The validity of the method increases with clearly defined criteria relevant to the event technology industry, according to which the candidate is observed and evaluated. Here the principle applies: The high external validity of the results (= transferability to reality) goes hand in hand with a low internal validity (many uncontrollable variables).

This method is not ideal for assessing underpinning knowledge, due to the lack of control of the assessment situation.

7.1.2 Reliability

The procedure to carry out an examination in a real-life environment is extremely resource-consuming and does not ensure a standardized testing environment. In the complex processes within the build of a production, it is hard to distinguish the results of one individual from the collective result.

The assessment situation is hard to control, neighbouring skills, that are not part of the assessment or behaviour of colleagues can influence the performance of the candidate. Standardization and the corresponding comparability of the observation is difficult to carry out, since every real-life work situation is different. When a candidate is assessed in their own environment, there is a risk for accepting routine with specific equipment, which does

[8] "The Hawthorne Effect is a type of human behavior reactivity in which individuals modify an aspect of their behavior in response to their awareness of being observed."; Wikipedia, https://en.wikipedia.org/wiki/Hawthorne_effect, last checked on October 24th, 2023, see also: interpretation and criticism

not reflect the ability to work with other equipment. When a candidate is tested in an unfamiliar work environment, candidates must have time to acclimatise and familiarise themselves with the organisation and the situation. To increase reliability, the assessment criteria should be specified in advance.

High reliability is usually assured when different assessors show a high degree of consensus in their results with the same candidate in the Observation on Site assessment.

7.1.3 Limitations

Since not all employers or contractors have easily observed job duties or complete job cycles, the Observation on Site method is limited. The method is less suitable for querying specific, defined competencies. Assessment in a typical "deadline" situation means that the assessment itself cannot be the priority. Assessment can influence the production result (for non-stage activities, this is less a problem, e.g. activities in a workshop). There can be privacy issues, because of the other workers present on the job.

7.2 Considerations

7.2.1 Tips

Choose a work environment that is representative for the competencies tested. It is essential to have a list of the key performance criteria that are to be observed and assessed. Framework conditions should be created in which the candidates can behave as much as possible as if they are involved in everyday work. Scoring tools must relate to the competencies in units of event technology and include guidelines for dealing with possible disruptive factors that could influence the assessment. During assessment, notes should be taken and documented.

Not only the use of at least two assessors, but also consultation with co-workers, for example, can also increase the accuracy of the performance evaluation, reduce bias and increase candidate's perceptions of fairness. However, consulting co-workers may also raise privacy concerns.

7.2.2 Challenges

Candidates should not feel monitored during the observation. The activities performed on the day of assessment can be different as expected and therefore some skills might be missed. When working in teams, colleagues can support or counteract the candidate, also unconsciously.

There may be socially or professionally sensitive issues to be dealt with (e.g., invasion of privacy on student political activities or living arrangements) or even legal considerations (e.g., substance abuse).

7.2.3 Scoring Tools

A list with the criteria represents the basis for the assessment, after which it is decided whether the expected behaviour has been observed and whether the candidate has the competence to be assessed.

The criteria should be derived from the sectoral layer skills, in other words, they are a concretisation of the visible, observable result of the skill in a specific situation.

As each situation can differ, the scoring tools will be more general and leave more room for interpretation than with other methods.

7.2.4 Scoring Tools – Example Lighting Unit

The competencies to be assessed in the corresponding unit can be found in the list provided to the assessors. In this example, the Lighting Unit and the competence "Install Lighting". The ESCO description of each competence is included in the list, as well as the required skills, knowledge, and autonomy/attitude. The acceptable assessment methods for each competence are listed as well. Observation on Site can be used as a core assessment method for this competence.

7.3 Implementation

7.3.1 Standards

The standard needs to describe the concrete situations and the expected complexity of the skills to be assessed.

7.3.2 Development

Developing an assessment situation needs a list of expected work situations and a corresponding list of observable criteria, derived from the competencies.

7.4 Needs/Set-Up

Each set-up relates to the work situation. In general:

- The organisation and all the workers need to be briefed in advance about the assessment.
- There needs to be room for the assessors to observe without distracting the normal work processes.
- This type of assessment needs multiple assessors, as it is physically not possible to see everything.

Observable competencies will occur at different moments in the process, which means the assessment may require a long-time span.

7.4.1 Requirements for Assessors

Assessors need competencies for valid observations, such as those that can be acquired in observer training courses. They should have a basic knowledge of diagnostics, be able to deal with perceptual effects (e.g. errors of observation and assessment) and be able to recognize their own subjectivity. Assessment requires in-depth professional expertise to evaluate performance against the background of the assessment standard.

Assessors must also be able to identify interpersonal processes with other co-workers and their influence on candidate's actions.

7.4.2 Combination with other Assessment Methods:

To test the underpinning knowledge of the skills, a second method like a Criterion-Based Interview or theoretical test can be used. The Structured Portfolio can always be used to support the assessment.

Preferred matching methods:

Criterion Based-Interview

Structured Portfolio / PACE-VET APP

Written Test (Multiple Choice) - Knowledge

Written Test (Open Answers) - Knowledge

Oral Examination - Knowledge

7.5 References/Notes

- Catalogus Assessmentmethodes voor EVC, Agentschap Hoger Onderwijs, volwassenenonderwijs, Kwalifi caties en Studietoelagen, Ministery of education and training of the Flemish community (2022). Online: https://assets.vlaanderen.be/image/upload/v1658325254/20220719_CatalogusAssessmentmethoden_tjrz4l.pdf; last checked: 15.04.2024
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8 Post Box Exercise (PBE)

This method can be used for skills that can be validated through written results or through visual documentation (e.g. technical drawings). The candidate gets a specific assignment that includes all essential information and has the time necessary to prepare the result. The result is scored through comparison with a prepared checklist of sample solutions. Examples of results could be personnel planning lists or tables, a light plot, or an e-mail. The advantage is a high certainty of competence, compared with assessing prior work. For more artistic skills, this can be combined with Role Play or a Criterion-Based Interview. This method is highly effective for assessing action orientation and entrepreneurial thinking. The candidate can act independently in the assignment within a wide range of

possibilities. Complex information must be quickly analysed, processed and combined to recommend rational actions.

8.1 Quality Concepts

8.1.1 Validity

Due to the high validity supported by visualisation of competencies, the Post Box Exercise is a popular method. It can be used, among other things, to assess:

- work organization
- decision-making abilities
- organizational skills
- conceptual work
- planning and decision-making behaviour
- recognition of relationships
- determining priorities, and the
- ability to delegate.

Behavioural factors that can be assessed include:

- preparation and planning for action
- work performance (quantity) and
- the ability to seek precise instructions.

The validity of Post Box Exercise is limited by the fact that processes can be very interdependent. To solve one problem, you must solve a prior one.

Previous studies have shown different correlation coefficients (from -.45 to .76) for the relation between Post Box Exercises and job success (see Schippmann et al. 1990). Obermann (2018) uses a value of .18, which corresponds to a very low correlation. However, it should be noted that in the assessment context of validation, job success is only indirectly affected. This method is less good for testing underpinning knowledge, due to lack of control of the test situation.

8.1.2 Reliability

Reliability and evaluation objectivity are special challenges in Post Box Exercises. A meta-analysis based on 16 individual studies showed an inter-rater reliability of .76 (Whetzel et al. 2014). The assessment of different raters is therefore "good" or "substantial".

Since chance hits can distort the assessment results, a sufficient number of tasks should be set. Standardization can further increase reliability. In the scenario, an order and a time window for processing tasks should be defined.

8.1.3 Limitations

Post Box Exercises should be used in combination with other methods. This method is less suitable for querying factual knowledge. Complex practical skills are more likely to be assessed with an Observation in a Simulated Environment or on Site.

8.2 Considerations

8.2.1 Tips

The more realistic the presentation of the documents and the settings, the higher the acceptance for the assessed tasks. After the written processing, an oral discussion should follow. Otherwise, excellent ideas for task processing that deviate from the proposed solutions may not be recognized accordingly. In the debriefing, the candidate can resolve ambiguities and answer questions.

8.2.2 Challenges

One of the traps is that the assignments could be too easy or too difficult.

The solvability of the processes should not depend too much on one another. On the other hand, the documents should be linked to each other in a complex manner, otherwise the analysis level will remain low. If the processing time is too short, the competence how quickly texts are written is overemphasized.

8.2.3 Scoring Tools

There are three options for evaluation:

1. The candidate processes the tasks with free formulations. The assessors then evaluate the documents. This procedure is less recommendable, since the comparability and evaluation objectivity are endangered.
2. Open questions are pre-formulated for each process. The candidates answer them in interviews or in a presentation.
3. Pre-formulated questions with given answers are handed out.

It should be noted that Post Box Exercise solutions are usually not right or wrong, but more or less successful.

8.2.4 Scoring Tools – Example Lighting Unit

The competencies to be assessed in the corresponding unit can be found in the list provided to the assessors. In this example, the Lighting Unit and the competence "Install Lighting". The ESCO description of each competence is included in the list, as well as the required skills, knowledge, and autonomy / attitude. The acceptable assessment methods for each competence are listed as well. A Post Box Exercise could be used as an assessment method for this competence.

The candidate could be given a lighting plot that needs to be translated into practice. Using a provided list of equipment available, the candidate can show conceptual and artistical understanding, technical problem solving and problem predicting skills. A possible Post Box Exercise to test management skills would be a combination of scheduling, consultation with technicians and email correspondence.

8.3 Implementation

8.3.1 Standards

The tasks and scheduled processing time should not vary compared to other candidates. Possible language barriers should be considered. The answers should be evaluated according to a marking guide.

8.3.2 Development

An appropriate task difficulty must be chosen for the development. The planned time for the tasks must not be too short. The main focus during development is on an extensive and diversified creation of tasks that are as close as possible to the daily work environment.

8.4 Needs/Set-Up

In addition to an examination room with chair and worktable, correspondingly prepared documents and possibly equipment may be required. This must be sorted according to the intended order of processing.

8.4.1 Requirements for Assessors

Assessors need appropriate pedagogical and technical knowledge to prepare the tasks and evaluate the approaches and results.

8.4.2 Combination with other Assessment Methods:

To check theoretical knowledge, Written Tests or Oral Examinations should also be used.
Preferred matching methods:
Criterion Based-Interview
Structured Portfolio / PACE-VET APP
Written Test (Multiple Choice) - Knowledge
Written Test (Open Answers) - Knowledge
Oral Examination – Knowledge

8.5 References/Notes

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9 Role Play (RPL)

The candidate is placed in a situation with an actor (interlocutor) as a counterpart. The interlocutor steers the situation, based on a predefined scenario, into specific realistic situations. Observation and assessment are done based on a checklist of criteria. It is a useful method for assessing:

- operational readiness
- goal orientation
- frustration tolerance
- persistence
- problem solving skills
- analytic skills, and
- decision making skills.

Role Play can test the skill of adapting communication and language to different target groups. Some examples for the Role Play are:

- a difficult interview with a collaborator
- a conflict with a key leader in the organisation
- a critical incident at the workplace, or
- a discussion with a designer or with a technical director.

9.1 Quality Concepts

9.1.1 Validity

The validity of the method is increased by guaranteeing that the tasks are appropriate for the competencies to be measured. Above all, interpersonal and artistic skills can be assessed with Role Play. The following communicative and social skills can also be assessed:

- interviewing
- rhetoric
- reasoning
- empathy
- assertiveness
- persuasiveness, and
- sensitivity (behavioural observation)

To increase the validity, the selected role-playing situations should be representative of those inherent in the event technology and live-performance sectors. It is important to make the situation challenging and relevant. The situations need to occur regularly in real-life. A scenario can only reflect one concrete situation and therefore there is a risk that it

doesn't reflect all situations in professional practice. However, the method can be as close to real-life as possible and is well controllable.

A particular challenge for the validity of Role Play is the requirement on the candidate to be active as an actor. Care should be taken here to make it clear that the acting performance is not assessed. The candidate should be able to develop his role freely and without pressure to be able to express his inherent competencies.

Research (Obermann - 2018) has shown that the relationship between job success and the results of Role Play has a very low correlation. It should be noted, however, that in the assessment context, job success is only indirectly relevant in the context of validation.

9.1.2 Reliability

The Role Play should be constructed in such a way that the competencies to be measured should not be reflected in a single situation. Otherwise, there is a risk that the candidate will accidentally behave correctly. To increase reliability, several situations should be implemented to reveal the same competencies.

The situations and the start of the conversation should be clearly worded. Unclear formulations can lead to the candidate misunderstanding the task and situation, which disrupts reliability. Language barriers should also be considered accordingly. If the scenario is well developed, the starting position is identical for each candidate. But the path can be different and contain unpredicted situations. The interlocutor needs to find a balance steering the Role Play on the one hand, but also leaving the initiative to the candidate on the other.

Various factors can limit the candidate's concentration and performance: poor room lighting or ventilation, disturbing sources of noise, lack of equipment, poor health or the psychological condition of the candidate (e.g. fear, stress).

Reliability is increased by not changing the order of the tasks in the Role Play. In this way, the assessment processes remain comparable.

The assessors and interlocutors should be extensively trained to ensure proper evaluation and interpretation, to ensure comparability and objectivity. It should be clear which behaviours can be attributed to certain skills. Reliability is enforced by a good scoring structure.

The behaviour of the interlocutors is standardized by means of written instructions. This is a prerequisite for objectivity, which in turn ensures that different results are due to the performance of the candidates and not to variations in the interlocutors.

9.1.3 Limitations

Role Play is less suitable for assessing knowledge-based skills. Likewise, no competencies can be assessed that are expressed in written or drawn results. The method is less useful for observing physical skills unless it is combined with an Observation in a Simulated Environment. A good scenario, however, could even allow some knowledge-based skills to be assessed.

9.2 Considerations

9.2.1 Tips

The candidate should be made aware that their acting performance is not being assessed. Candidates should behave as they would in everyday work. The atmosphere should be as realistic as possible. The candidate and the interlocutor need prior written information. This allows them to be prepared to be able to react to certain situations and questions. The assessors should not have direct eye contact with the candidate. In advance, it is recommended for assessor training to practice role-playing with video analysis. Assessors need to be trained for the specific scenarios, ideally in interaction with their colleagues.

It can help to get the candidate on the right track to use some properties (accessories) to visualise the role of the actor (for example a typical piece of clothing, documents, models, ...). Make clear candidates are playing their own role in the given situation.

9.2.2 Traps

The situation characteristics from the requirements analysis cannot be implemented carefully enough. This can have the consequence that the behaviour is not relevant for the competence to be tested. Sentences like "In reality I would do it completely differently." are signs of this. There is a risk for socially expected answers and behaviour.

If the assessors have no experience with Role Play, an unpredictable momentum can develop which affects the comparability. Assessors need to be aware of the reasons for all scenario steps and must balance natural behaviour with following the storyline of the scenario that leads to the visibility of the skills. Errors can be a high level of willingness to compromise or severity in the evaluation. Principle of local independence: The interlocutor must act neutrally in the individual situations, even if the candidate had a poor start in a previous situation. Otherwise only the overall performance can be assessed, but not individual competencies. Avoid that the same interlocutor is playing different roles for the same candidate.

A too short instruction in the Role Play can overemphasize situational flexibility while communicative observations can be underemphasized. Uncertainties about the setting (e.g. Has the exercise already started? Who ends this conversation?) should be avoided. Other candidates should not act as conversation partners as this limits the standardization of the Role Play. An assessor can never be the interlocutor.

9.2.3 Scoring Tools

A checklist should be used with comments referencing the expected behaviour of the candidate. The criteria should be derived from the sectoral layer skills, in other words, the area of concretization of the visible, observable result of the skill in a specific situation. As the situations can differ, the scoring tools will be more general and leave more room for interpretation than other methods.

9.2.4 Scoring Tools – Example Lighting Unit

The competencies to be assessed in the corresponding unit can be found in the list provided to the assessors. In this example, the Lighting Unit and the competence "Install Lighting". The ESCO description of each competence is included in the list, as well as the required skills, knowledge, and autonomy/attitude. The acceptable assessment methods for each competence are listed as well. Role Play could be used as an assessment method for this competence.

The candidate could have a discussion with a designer about the lighting plot that needs to be translated into practice. In this discussion e.g. conceptual and artistical understanding, technical problem solving and predicting problems and language use can be assessed.

9.3 Implementation

9.3.1 Standards

Each assessment unit should include a description of the scenario and situation as well as the checklist with comments referencing the expected behaviour of the candidate.

9.3.2 Development

The development of an assessment scenario starts from the analysis of the skills that need to be assessed. The scenario reflects a real-life situation in which the tested skills are prominently present. Based on the scenario, a list of observable criteria, derived from the competences is created.

9.4 Needs/Set-Up

In most cases a quiet space with a table and some chairs is all that is needed. Depending on the assessment, documents may be needed (sketches, light plots, sound documentation, …). The method can also be carried out in a simulated environment or on site in a work environment.

9.4.1 Requirements for Assessors

Assessors must be able to instruct the interlocutor according to the situation. They need skills in observing, diagnosing, and evaluating the candidate's behaviour. The assessment of competencies in PACE-VET requires professional expertise in the sector.

9.4.2 Combination with other Assessment Methods:

Role Play can be used in combination with a Post Box Exercise, where the information needed is not put on paper, but the interlocutor is presenting the information, and the candidate can ask questions about the required results. It can be complemented with a Criterion-Based Interview for skills that didn't become visible.

Preferred matching methods:

Criterion-Based Interview

Structured Portfolio / PACE-VET APP

Post Box Exercise

9.5 References/Notes

- Catalogus Assessmentmethodes voor EVC, Agentschap Hoger Onderwijs, volwassenenonderwijs, Kwalificaties en Studietoelagen, Ministery of education and training of the Flemish community (2015). Online: https://assets.vlaanderen.be/image/upload/v1658325254/20220719_CatalogusAssessmentmethoden_tjrz4l.pdf; last checked: 05.04.2024
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10 Criterion-Based Interview (CBI)

The Criterion Based Interview (also called STARR method) is comparable in many ways to the competency-based interview. It gives the candidate the opportunity, guided by directional questions, to demonstrate skills, based on a concrete situation that happened in their own professional life or to demonstrate skills not observed in an assessment situation.

By focussing on the measurable aspects of a task, and narrowing, but deepening the focus, this is a good method to get a second opinion when competencies were not visible (neither in a positive or negative context) in other assessments or in the portfolio.

The method requires highly skilled assessors. It is useful as an extra tool to assess skills that are not observed (in neither a positive nor negative way). It can also be used for situations that can’t be simulated, like an accident scenario, an audience panic or fire. This method can also be used for problem solving, reflective or organising skills and for underpinning knowledge that doesn't become visible in the skill itself.

10.1 Quality Concepts

10.1.1 Validity

In the Criterion-Based Interview, the basic assumption is that past behaviour allows a prediction for future behaviour. The validity depends on this basic assumption.

10.1.2 Reliability

It can certainly be said that there is good reliability when criteria-based interviews are carried out correctly. The reliability is increased by the questions being pre-formulated in advance and the wording remaining the same. This increases comparability with other interviews.

To ensure objectivity in the evaluation, the interviews should be recorded and evaluated by at least two assessors. They should be extensively trained in evaluation and interpretation, to ensure comparability and objectivity. It should be clear which behaviours can be attributed to certain skills. So, reliability is enforced by a good scoring structure. The behaviour of the assessors is standardized by means of a written instruction. This is a prerequisite for objectivity, which in turn ensures that different results are due to the performance of the candidates and not to variations with the assessors.

10.1.3 Limitations

The interview does not allow to observe or confirm the capacity of the candidate to actually "carry out a task". The method is very intensive and time consuming for assessors. It can only be used for a limited set of competencies.

10.2 Considerations

10.2.1 Tips

The interview should follow a biographical approach, which helps the assessor to understand the career path of the candidate. Ensure that all assessors use the same guidelines/structure. Disruptive factors should be minimized by a high degree of standardization. Variations should be limited. Use simple open questions (e.g. who, when, where, why, how, for how long, …). Continue questioning until you reach the desired focus. Don't judge in your answers or sub questions. Listen actively, show interest, listen to what is said in between the lines, ask deeper if needed, but give the candidate the lead.

10.2.2 Challenges

The personal interests and opinions of the assessors can interfere with the interview process (bias). To avoid this distortion, the assessor must make himself aware of his/her perception tendencies. Attractiveness, size, eloquence, humour, clothing style, nervousness and gender of the candidate can influence the assessment, even though they provide no information about the tested competence. The context can also influence the candidate.

It should be noted that this interview should not assume the role of an oral test, even though the boundaries might be blurry at some points.

There is a risk that, especially in the sub-questions, that the assessor suggests the answers unconsciously. The direction of the interview is dependent on the candidate and the sub questions of the assessors.

10.2.3 Scoring Tools – Criteria

Before the interview, the assessors determine which answers to the questions reflect positive, mixed or negative evidence of skills, knowledge and autonomy/attitude. These indicators can be used to make decisions on the evaluation for competencies assessed.

10.2.4 Scoring Tools – Triangulation

Triangulation is a process by which assessors collect evidence from three different assessment methods to ensure validity in the assessment. In PACE-VET, learning outcomes should be validated by the results of at least three assessment methods.

The portfolio should therefore always be a part of the assessment process.

10.2.5 Example Lighting Unit

The competencies to be assessed in the corresponding unit can be found in the documentation provided to the assessors. In this example, the Lighting Unit and the competence "Work safely with mobile electrical systems under supervision".

The ESCO description of each competence is included in the list, as well as the required skills, knowledge, and autonomy/attitude. The acceptable assessment methods for each competence are listed as well. In this unit, the method "Observation in a Simulated Environment" provides the basis for the assessment. It allows a validation of the mastering of very specific competencies, as the environment is controlled.

The "Criterion-Based-Interview" is a very good method to check competencies that may not have been seen in the "Observation in a Simulated Environment" or when both assessors are in doubt about the assessment results. The "Portfolio" should also be used to support assessment.

One of the skills within the competence might be difficult to observe in a simulated environment: "Act according to the agreed procedure in case of an electrical accident".

The situation for the interview could be the installation of lighting equipment before a rehearsal with the task being the observance of safety procedures that result from an electrical accident. Knowledge blocks can also be addressed and validated in such an interview.

10.3 Implementation

10.3.1 Standards

If the interview is foreseen in the assessment, the context, the focus, the time limits, and the criteria are defined. The other assessment methods used, and their documented results should be considered.

10.3.2 Development

The main development is in the training of the assessors to use the method. But a scheme with questions and sub-questions can support the assessors.

The method is based on an interviewing technique using principles of the STARR method:

- **S**(ituation): What was the situation? - Description of a past work situation

- **T**(ask): What was your task? - Clarification of the responsibilities of the candidate
- **A**(ction): What actions did you take, what did you do? - Explanation of the performed actions
- **R**(esult): What was the result, what happened? - Statement about the results
- **R**(eflection): What did you learn? - Evaluation of the situation from the candidate's perspective

10.4 Needs/Set-Up

10.4.1 Setting/Contextual factors

The interview needs a quiet room, with a table and chairs in a non-confrontational set-up and plenty of time.

10.4.2 Requirements for Assessors

It must be conducted by two assessors to avoid bias in the results and should require a written transcript or recording of the interview for evaluation.

The assessor needs basic skills in conducting unbiased interviews and needs professional skills in the sector to be able to evaluate competency levels from the candidate's responses to questions.

10.4.3 Interaction with other Methods

The Criterion-Based Interview is useful as a good tool to assess skills that are not observed in other assessment methods.

10.5 References/Notes

- Catalogus Assessmentmethodes voor EVC, Agentschap Hoger Onderwijs, volwassenenonderwijs, Kwalificaties en Studietoelagen, Ministery of education and training of the Flemish community (2022). Online: https://assets.vlaanderen.be/image/upload/v1658325254/20220719_CatalogusAssessmentmethoden_tjrz4l.pdf; last checked: 05.04.2024
- ISC Professional (2023): Competency-Based Interviews. Online: https://www.interview-skills.co.uk/free-information/interview-guide/competency-based-interviews; last checked: 28.07.2023
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- Schmidt, F. L. & Hunter, J. E. (2000). Messbare Personenmerkmale: Stabilität, Variabilität und Validität zur Vorhersage zukünftiger Berufsleistung und berufsbezogenen Lernens. In: M. Kleinmann & B. Strauß (Hrsg.), Potentialfeststellung und Personalentwicklung (S. 15–43). Göttingen: Verlag für Angewandte Psychologie.

11 Assessment Competencies: Impartiality/Bias

11.1 Description

Impartiality is defined as: not being partial or biased/treating or affecting all equally.
Bias can be defined as partiality or prejudice, or conscious or unconscious personal and sometimes unreasoned preferences. In PACE-VET, impartiality is an important competence for assessors. In the assessment process assessors are to:
Show impartiality in an assessment situation = ESCO. The ESCO description is:
"Assess candidates based on objective criteria and methods according to a predefined standard or procedure, taking into account prejudice or bias, to make or facilitate objective and transparent decisions."

11.1.1 Relationship to Assessors Competencies

According to the PACE-VET Assessor competencies list, the following apply to all assessors and all assessment methods.

11.1.2 Skills

Assessors should be able to:

- assess candidates based on objective criteria and methods according to a predefined standard or procedure,
- minimise prejudice or bias, and
- facilitate objective and transparent decisions.

11.1.3 Knowledge

Assessors should know about:

- assessment strategies incorporating objective criteria and methods,
- the pre-defined assessment standards and procedures,
- strategies to minimise prejudice or bias, and
- strategies to facilitate objective and transparent decisions.

11.1.4 Autonomy/Attitude

Assessors should have:

- a sense of methodology, and
- emotional intelligence.

Assisting candidates with "special needs" can also be understood as an important factor to ensure impartiality. This topic is dealt with in the learning video IC-2 – Learners with "Special Needs".

11.2 Relationship to Assessment of Learning Outcomes

11.2.1 Definition

According to cedefop, assessment is the "Process of appraising knowledge, know-how, information, values, skills and competencies – acquired in formal, non-formal or informal settings – against relevant standards (learning outcomes, validation)."[9]

That means that assessment involves defining:

- which standards or objectives are being assessed
- which types of evidence are best to collect
- which evidence is best for this particular candidate, and
- which evidence is the best indicator of achievement.

The assessors, however, must also recognize that bias and prejudice must be minimised in the assessment process and that all evaluations are made objectively and are transparent.

11.2.2 Facts/Interpretation

Assessment should only be based on facts and NOT on interpretation. This is not as easy as it may seem. Everyone creates their own "subjective reality" from their perception of experience from their sensual input. An individual's construction of reality, not the objective input, may dictate their judgements and perception. For this reason, assessors must know forms of assessment bias and use strategies to minimize their affect in assessment.

11.2.3 Cognitive Assessment Biases

Whenever human behaviour is observed and/or evaluated by another person (=observer), observation errors can occur. The construct to be observed (e.g. a competence) is then not perceived in its reality or objectively but is influenced or falsified by the subjective perception of the observer. What and how something is perceived depends, among other things, on the respective expectations, feelings and attitudes of the observer.

Some very typical assessment biases are:

11.2.3.1 Halo Effect (Overexposure Effect)

A certain positive characteristic "outshines" several others, so that it is used to infer several other characteristics or the overall personality (e.g. verbal fluency).

11.2.3.2 Horn Effect (Reverse-Halo Effect)

A certain negative characteristic "outshines" several others, so that it is used to infer several other characteristics or the overall personality (e.g. ineloquence).

[9] cedefop, European Centre for the Development of Vocational Training; Glossary – Quality in education and training, (2024); Online: https://www.cedefop.europa.eu/en/tools/vet-glossary/glossary?search=learning+outcomes; last checked on April 11th, 2024

11.2.3.3 Liking-Similarity Effect

Observers assess candidates who are similar to them in a particularly favourable light. They overlook inappropriate behaviour more easily or reinterpret it positively.

11.2.3.4 Confirmation Bias

Is the tendency to search for, interpret, focus on and remember information in a way that confirms one's preconceptions.

11.2.3.5 Overvaluation of Negative Results

Negative results are noticed much more frequently and have a greater impact on the assessment than positive results.

11.2.3.6 Primacy-Recency Effect

The first or last assessment experience about a candidate is best remembered.

11.2.3.7 Stereotypes and Prejudices

Prejudices about a particular population group (e.g. "Germans are...", "Woman technicians are...") can influence the perception of a candidate belonging to that group.

11.2.3.8 Implicit Personality Theories

Based on one characteristic of the candidate, other characteristics are derived that are often not related to it at all (e.g. "extroverted people are more emotional than others.")

11.2.3.9 Authority Bias

The tendency to attribute greater accuracy to the opinion of an authority figure (unrelated to its content) and be more influenced by that opinion.

11.2.3.10 Contrast Effect

A candidate will appear more or less successful than they do in isolation when they are immediately preceded by, or simultaneously compared to, respectively, a less or more successful candidate.

11.2.3.11 Incorrect Benchmarking

The assessor compares the person being observed with themselves, or with other outstanding candidates, which is often unjustified (e.g. due to less professional experience).

11.2.3.12 Subjective Evaluation Tendency

If observations are evaluated using a scale, the so-called evaluation behaviour or subjective evaluation tendency also plays a role. Some people tend to evaluate rather strictly and use the lower scale values (strict tendency), while others tend to use the middle scale values (tendency towards the middle) and still others tend to move towards the "upper" end of the scale (mild tendency).

For a detailed list of cognitive bias (Wikipedia), see
https://en.wikipedia.org/wiki/List_of_cognitive_biases
and the graphic: "Cognitive Bias Codex" at the end of this chapter.

11.2.4 Sector Related Biases and Traps

In the event and live performance sectors, most participants are proactive and therefore prepare for, intervene in, or try to control an expected occurrence or situation. It is therefore important, that assessors DO NOT:

- help before help is asked for or needed,
- anticipate possible mistakes or failures, or
- take over…

Assessors must learn to wait for a possible candidate's initiative. Judgement that is taken too quickly or that is based on too little information is not impartial. It should always be remembered that the personality of the assessor plays a role and consequences of the assessment (job opportunities) can influence judgement as well.

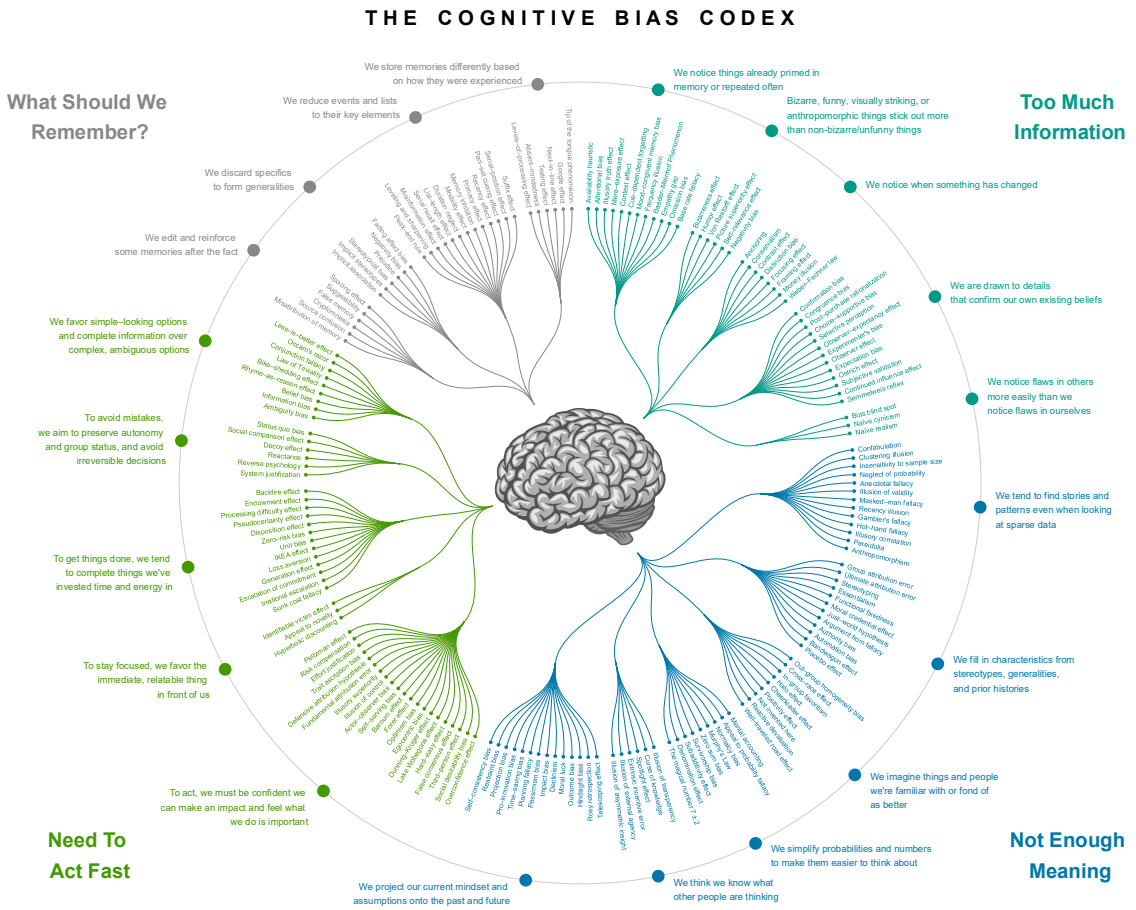
11.2.5 Subjectivity/Objectivity/Intersubjectivity

As assessors can only see what they see through their own eyes, it is of upmost importance that they understand, recognize, and reflect their own subjectivity and possible bias in the assessment situation.

Some simple rules to achieve more objectivity as an assessor are:

- assess the behaviour only according to the standardized methods and criteria (facts)
- keep "personal" observation and assessment separated (no interpretation)
- make notes during assessment to avoid loss of information
- four-eyes principle – at least two assessors, and
- ongoing training and professional self-assessment.

An emphasis on intersubjectivity supports objectivity. If two assessors share the same perception of a situation and can agree on a given evaluation, then the results should be more objective than those done by one person.



Cognitive Bias Codex: Wikipedia's list of 188 cognitive biases, grouped into categories and rendered by John Manoogian III (jm3) as a radial dendrogram (circle diagram). Category model by Buster Benson, biases linked to corresponding Wikipedia articles by TilmannR. https://upload.wikimedia.org/wikipedia/commons/a/a4/The_Cognitive_Bias_Codex_-_180%2B_biases%2C_designed_by_John_Manoogian_III_%28jm3%29.png

12 Assessment Competencies: Candidates with Special Needs

12.1 Description

The term "special needs" is a short form to refer to candidates with any behavioural, physical, emotional, or learning challenges that require specialized accommodations of any sort at school, work, or in the community. The phrase "special needs" is a euphemism and has no legal meaning, and it should be noted, that some experts prefer the word "disability".

While the list of possible diagnoses included under the label "special needs"10 is enormous, some of the most common related to academic settings can include:

- Autism,
- ADD/ADHD (Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder),
- learning disabilities (dyslexia, dysgraphia, etc.),
- Tourette's syndrome (TS),
- disorders that incorporate intellectual disabilities, such as Down syndrome
- disorders that make physical activity challenging, including cerebral palsy, blindness, or deafness,
- speech and language disorders ranging from apraxia of speech to stuttering,
- emotional and behavioural disorders including anxiety, depression, oppositional-defiant disorder,
- physical differences such as amputated limbs or dwarfism, and
- other lesser-known disorders, such as non-verbal learning disorder.

These conditions could also be regarded as "special gifts". Conditions like ADHD or autism spectrum disorders can have very positive effects in a creative artistic-technical environment.

12.1.1 Relationship to Assessors Competencies

In the assessment process assessors are to:

Assist candidates with special needs= ESCO. The ESCO description is:

"Aid candidates with special needs following relevant guidelines and special standards. Recognise their needs and accurately respond to them if needed."

According to the PACE-VET Assessor competencies list, the following apply to all assessors and all assessment methods.

12.1.2 Skills

Assessors should be able to:

- recognise candidate's individual special needs,

[10] Rudy. Lisa Jo DISABILITIES AND CHRONIC CONDITIONS, What to Say Instead of "Special Needs" – Why the Term "Special Needs" Is Confusing and Offensive, (2022); Online: https://www.verywellfamily.com/what-are-special-needs-3106002; last checked on April 10th, 2024

- prepare the candidate's surroundings according to relevant guidelines and special standards to facilitate special needs, and
- organise additional support if necessary.

12.1.3 Knowledge

Assessors should know about:

- basic knowledge of mental and physical diseases,
- relevant guidelines and special standards, and
- processes and solutions to facilitate special needs.

12.1.4 Autonomy/Attitude

Assessors should:

- have safety awareness,
- be aware of other's behaviour,
- have awareness of own behaviour,
- have awareness of raised levels of risk,
- have respect for safety warnings and instructions,
- be able to cooperate,
- be able to follow instructions and procedures,
- have patience,
- have emotional intelligence, and
- have a problem-solving approach.

12.1.5 Relationship to Assessment of Learning Outcomes

These "conditions" are not necessarily negative for candidates to validate that they have the competencies that are needed, but they trigger a lot of bias.

- A candidate that has difficulties to express him/herself may automatically be seen as "less intelligent", while the real problem is maybe only the lack of vocabulary.
- A candidate in a wheelchair may be perceived as unable to perform technical tasks.

To guarantee equal rights in the assessment process, it may be necessary that assessors adapt the standard test procedures to the "special needs" of candidates. This does not mean that they look less critical in assessing the competencies. It simply means that measuring them in an adapted way that would fit in their future work environment is essential.

12.1.6 Tools

How can we adapt to "special needs"?

Assessment within a physical environment (Observation in a Simulated Environment/Observation on Site) can be adapted according to the adaptations one would expect in a real-life working environment. For example, a ramp can be foreseen for a wheelchair user. Or the candidate could bring their own adapted equipment to the assessment, as long as they fit the requirements of the assessment procedure. Written

examinations can be replaced by oral examinations for people with language, reading or writing issues.

Competencies that are impossible to accomplish due to the "special needs" of the candidate are more difficult challenge. Signing off on a competence that cannot be achieved by the candidate in real-life is not acceptable. An example would be the competence: "Follow safety procedures when working at heights" in an assessment for a candidate in a wheelchair. Although theoretically possible, the "task working at heights" for technicians in a wheelchair isn't a realistic task in today's working environment. An alternative would be to interview the candidate to check his insight in the competence, but the validation would need to mention that the competence was not measured in practice.

Due the variety of "special needs", it is left to the assessors to define alternative methods. Any alteration should be based on an assessment of the "special needs" and an evaluation of the competencies and performance criteria. The core question is: do we measure what the competence describes.

Some examples:

- For working safely, you don't need to be able to read, that's why we have safety signs. = A written exam can be replaced with an oral examination.
- We do not measure language skills.
- = An examination could be held in another language.
- We do not measure reading skills.
- = A candidate who works under supervision can be given the assignment verbally, with time for questions, instead of on paper.

The essence is that we ensure that the end result is not influenced by the necessary alterations made, that we measure what we need to measure. Where specific parts of a competence cannot be measured for obvious reasons, this should be mentioned in the validation certificate. In the end, it is up to the assessors to decide what is possible.

12.2 References/Notes

- Reasonable adjustment in teaching, learning and assessment for learners with disability - A guide for VET practitioners; The State of Queensland (Department of Employment, Small Business and Training), (2018). Online:
- https://desbt.qld.gov.au/__data/assets/pdf_file/0028/8299/reasonable-adjustment-for-web.pdf;last checked: 11.04.2024
- European Agency for Special Needs and Inclusive Education, Profile for Inclusive Teacher Professional Learning: Including all education professionals in teacher professional learning for inclusion. (A. De Vroey, A. Lecheval and A. Watkins, eds.). Odense, Denmark (2022); online: https://www.european-agency.org/sites/default/files/Profile_for_Inclusive_Teacher_ProfessionalLearning.pdf;
- last checked: 11.04.2024

- European Patterns of Successful Practice in Vocational Education and Training – Participation of Learners with SEN/Disabilities in VET; European Agency for Development in Special Needs Education, (2013), Online: https://www.european-agency.org/sites/default/files/european-patterns-of-successful-practice-in-vet_vet-report_en.pdf;last checked: 11.04.2024

13 Preparation, Documentation and Deliberation

13.1 Description

Assessors must prepare, document, and deliberate their assessments.

13.2 Preparation

Each of the assessment methods requires preparation. In an ideal situation, the assessment centre and the accreditation body ensure that the set-up for assessment in correlation to the units being assessed and the assessment methods used are prepared in advance. Assessors must make themselves acquainted with the information provided and ensure that set-up and assessment documents meet the requirements for their assessment.

13.2.1 Relationship to Assessors Competencies

In the assessment process assessors are to:

Prepare the assessment of prior learning = ESCO. The ESCO description is:

"Familiarise the candidate with the assessment situation and guide them through the process of assessment of their prior learning."

According to the PACE-VET Assessor competencies list, the following apply to all assessors and all assessment methods.

13.2.2 Skills

Assessors should be able to:

- Familiarise candidates with the assessment situation, and
- Guide candidates through the assessment process.

13.2.3 Knowledge

Assessors should know about:

- The role of assessment in vocational education
- The purpose of the validation of the competencies being assessed
- The specific assessment processes and methods in TeBeVAT / PACE-VET
- The needed set-up for the assessment, and
- The specific appeals processes in TeBeVAT / PACE-VET.

13.2.4 Autonomy/Attitude

Assessors should have:

- A sense of methodology,

- Emotional intelligence, and
- Empathy.

13.3 Considerations

13.3.1 Observation in a Simulated Environment

In this assessment method there are some special considerations in the preparation.

- The assessors check in advance, before the candidate arrives, if all the material and equipment needed is available (see B-2: "Technical Rider").
- The candidate is greeted and receives a comprehensive safety briefing based on the risk analysis of the assessment situation.
- In addition, the entire procedure and set-up is explained to the candidate (see B-3: "Checklist Introduction").
- Subsequently, the candidate can then get acquainted with the assessment space and ask questions related to the specific functions of any (not standard) equipment.
- During assessment, one assessor is "active" and "escorts" the candidate. The candidate can ask this assessor questions or for help. The second assessor is "silent" and observes without comment.
- The attention points for assessment are linked together like a chain. The consecutive points build on the results of each other. If one result is compromised, the assessors can adapt the next attention point in the assessment.
- The "active" assessor functions as a colleague. This role should not be proactive, should not take initiative and act only when asked by the candidate. If resources allow, an "assistant" could also take over this role.
- The "active" assessor performs tasks that are out of the responsibility of the candidate, like slinging a truss or operating fly bars.
- Assessors immediately stop the assessment if the safety of the candidate, the assessors or the equipment is seriously compromised.

13.4 Documentation

Each of the assessment methods require specific documentation. In an ideal situation, the assessment centre and the accreditation body ensure that the proper documents for assessment are available.

13.4.1 Relationship to Assessors Competencies

In the assessment process assessors are to:

Document prior learning assessments = ESCO. The ESCO description is:

"Observe a performance and use existing templates to protocol answers and information collected during tests, interviews, or simulations. Adhere to a pre-defined frame of reference and structure the protocol comprehensible for others. Ensure that pre-defined templates and procedures are clear, comprehensible, and unambiguous."

According to the PACE-VET Assessor competencies list, the following apply to all assessors and all assessment methods.

13.4.2 Skills

Assessors should be able to:

- Use existing templates to protocol answers and information collected,
- Adhere to a pre-defined frame of reference, and
- Structure the protocol comprehensible for others.

13.4.3 Knowledge

Assessors should know about:

- Common and specific templates to protocol answers and information collected, and
- About common and specific frames of reference.

13.4.4 Autonomy/Attitude

Assessors should have:

- Accuracy, and
- A sense of methodology.

13.5 Documentation PACE-VET

There are several documents that assessors need to be familiar with.

A. Unit with Competencies

The ESCO description of each competence is included in the list, as well as the required skills, knowledge, and autonomy/attitude. The acceptable assessment methods for each competence are listed as well. This is the basis for the assessment of the related unit.
The assessment methods for the unit are determined in advance.

B. Assessment Procedure with Technical Rider

This is an overview of the assessment procedure.
B-1: General overview
B-2: where applicable, as in the method Observation in a Simulated Environment:

- A floor plan
- Equipment list, and
- Guidelines and a checklist to create the assessment set-up.

B-3: A checklist for the introduction of the candidate with the house rules and safety briefing as well as a floor plan that the candidate can use during assessment.
B-4: A "cheat sheet" for the assessors, explaining the most important elements of the assessment documents.

C. Measured Competencies

Assessment is always based on skills. Candidates must prove they have mastered the skills. Assessors observe or measure without interference or questioning. In this list, concrete and measurable actions are described that would be expected from a technician

that commands a competence. Where possible, the skills are written in observable sentences.

D. Attention Points

The assessors mark against a predefined list what skills they have observed (Yes), what skills they did not observe (NO) and what skills could not be observed (Neither - it could not be observed if the candidate behaved in a proper way or not).

E. Results

This includes the assessment results document and the feedback form.
After deliberation, the assessors sign off on the results using a prepared form.
They can also give feedback to the assessment centre in regard to:

- Organisation (planning, communication, etc.),
- Candidate,
- Equipment,
- Venue, and
- Procedure(s).

13.6 Deliberation

Assessors decide autonomously and in consensus at the end of the assessment if the candidate has mastered all the competencies and completed the unit. It is in their authority to assess each observed action and to make a final decision. In case there are uncertainties in the measuring criteria, the competence description and the skills prevail. It is the assessors' discretion to decide.
As some skills or knowledge blocks may not be evident in one assessment method (not enough time or a method is limited in assessment), other assessment methods can be pursued to determine if the candidate can master the competencies.

13.6.1 Quality Concepts

The quality management in the assessment procedures in PACE-VET is based on the "Conformity Assessment – General requirements for bodies operating certification of persons (EN ISO/IEC 17024:2012)"[11]. This international standard "specifies requirements which ensure that certification bodies for persons operating certification schemes for persons operate in a consistent, comparable and reliable manner." Documentation and procedures for handling and controlling the documents (internal and external) are required for the fulfilment of the standard.

[11] https://www.iso.org/standard/52993.html

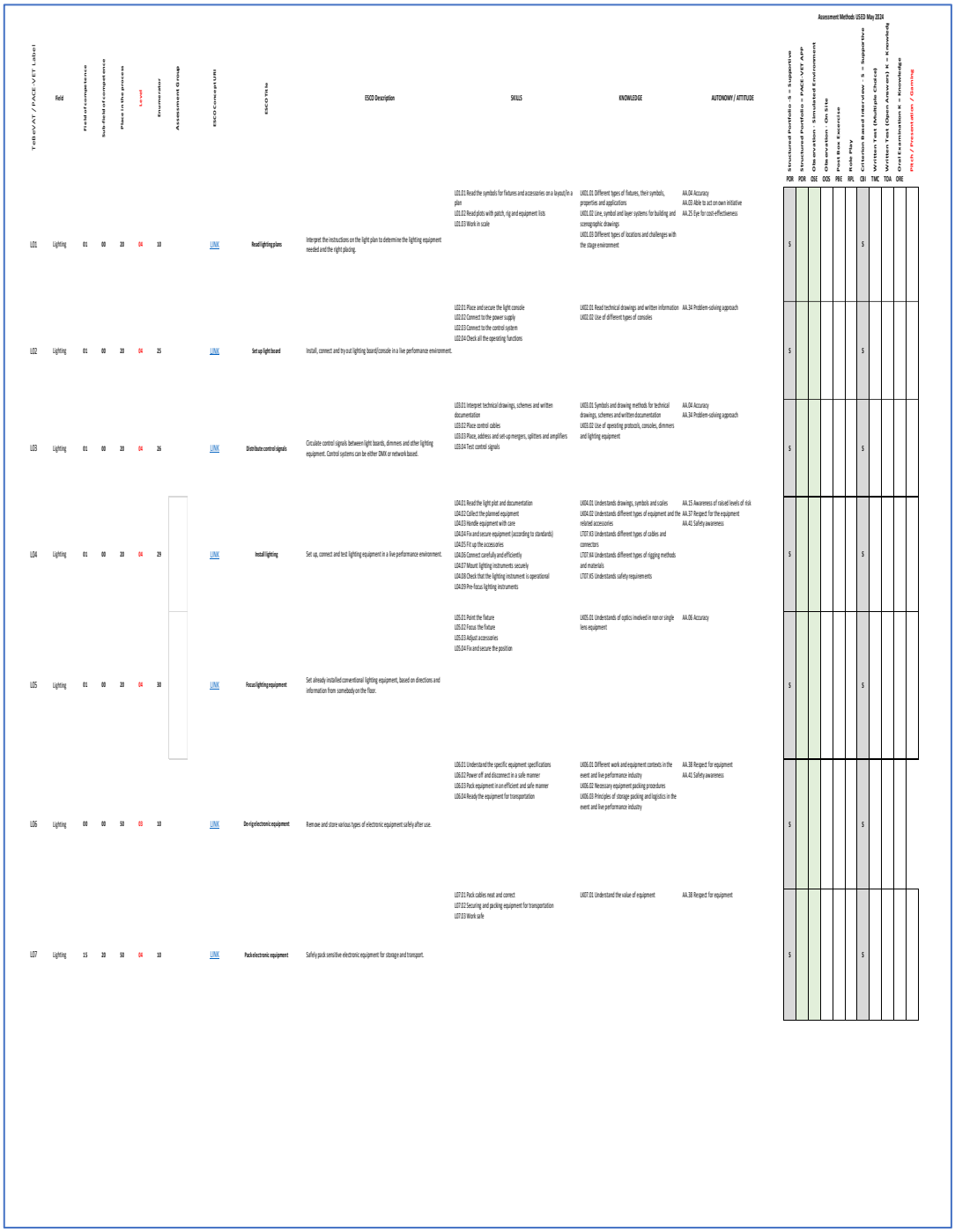
13.7 References/Notes

- European Theatre Technicians Education (ETTE); Basic safety for the theatre and event industry; Course manual for teachers; Teachers version 01.01.EN.01; Part 1, (2018); Online: http://ette.dthgev.de/resources/ETTE-combi-handbook-v01_01_EN_03_TEA.pdf;last checked: 15.04.2024

14 Assessor Documentation – Bergen op Zoom – May 2024

14.1 A. Unit with Competences

SEE EXCEL: PACE-VET_Lighting_Unit



TellVAT / PACE-VET Label	Field	Field of competence	Sub-field of competence	Place in the process	Level	Enumerator	Assessment Group	ESCO-Concepts Link	ESCO Title	ESCO Description	SKILLS	KNOWLEDGE	AUTONOMY / ATTITUDE	Assessment Methods USED May 2024: Structured Portfolio = S = Supportive	Structured Portfolio = PACE-VET APP	Observation - Simulated Environment	Observation - On Site	Post Box Exercise	Role Play	Criterion Based Interview - S = Supportive	Written Test (Multiple Choice)	Written Test (Open Answers) K = Knowledge	Oral Examination K = Knowledge	Pitch / Presentation / Gaming
														POR	POR	OSE	OOS	PBE	RPL	CBI	TMC	TOA	ORE	
L01	Lighting	01	00	10	04	10		LINK	Read lighting plans	Interpret the instructions on the light plan to determine the lighting equipment needed and the right placing.	L01.01 Read the symbols for fixtures and accessories on a layout/in a plan L01.02 Read plots with patch, rig and equipment lists L01.03 Work in scale	L001.01 Different types of fixtures, their symbols, properties and applications L001.02 Line, symbol and layer systems for building and scenographic drawings L001.03 Different types of locations and challenges with the stage environment	AA.04 Accuracy AA.09 Able to act on own initiative AA.35 Eye for cost-effectiveness	S						S				
L02	Lighting	01	00	10	04	15		LINK	Set up light board	Install, connect and try out lighting board/console in a live performance environment.	L02.01 Place and secure the light console L02.02 Connect to the power supply L02.03 Connect to the control system L02.04 Check all the operating functions	L002.01 Read technical drawings and written information L002.02 Use of different types of consoles	AA.34 Problem-solving approach	S						S				
L03	Lighting	01	00	10	04	16		LINK	Distribute control signals	Circulate control signals between light boards, dimmers and other lighting equipment. Control systems can be either DMX or network based.	L03.01 Interpret technical drawings, schemes and written documentation L03.02 Place control cables L03.03 Place, address and set up mergers, splitters and amplifiers L03.04 Test control signals	L003.01 Symbols and drawing methods for technical drawings, schemes and written documentation L003.02 Use of operating protocols, consoles, dimmers and lighting equipment	AA.04 Accuracy AA.34 Problem-solving approach	S						S				
L04	Lighting	01	00	10	04	29		LINK	Install lighting	Set up, connect and test lighting equipment in a live performance environment.	L04.01 Read the light plot and documentation L04.02 Collect the planned equipment L04.03 Handle equipment with care L04.04 Fix and secure equipment (according to standards) L04.05 Fit up the accessories L04.06 Connect carefully and efficiently L04.07 Mount lighting instruments securely L04.08 Check that the lighting instrument is operational L04.09 Pre-focus lighting instruments	L004.01 Understands drawings, symbols and scales L004.02 Understands different types of equipment and the related accessories LT07.K5 Understands different types of cables and connectors LT07.K6 Understands different types of rigging methods and materials LT07.K5 Understands safety requirements	AA.15 Awareness of raised levels of risk AA.37 Respect for the equipment AA.41 Safety awareness	S						S				
L05	Lighting	01	00	10	04	30		LINK	Focus lighting equipment	Set already installed conventional lighting equipment, based on directions and information from somebody on the floor.	L05.01 Point the fixture L05.02 Focus the fixture L05.03 Adjust accessories L05.04 Fix and secure the position	L005.01 Understands of optics involved in non or single lens equipment	AA.06 Accuracy	S						S				
L06	Lighting	00	00	50	03	10		LINK	De-rig electronic equipment	Remove and store various types of electronic equipment safely after use.	L06.01 Understand the specific equipment specifications L06.02 Power off and disconnect in a safe manner L06.03 Pack equipment in an efficient and safe manner L06.04 Ready the equipment for transportation	L006.01 Different work and equipment contexts in the event and live performance industry L006.02 Necessary equipment packing procedures L006.03 Principles of storage packing and logistics in the event and live performance industry	AA.38 Respect for equipment AA.41 Safety awareness	S						S				
L07	Lighting	15	20	50	04	10		LINK	Pack electronic equipment	Safely pack sensitive electronic equipment for storage and transport.	L07.01 Pack cables neat and correct L07.02 Securing and packing equipment for transportation L07.03 Work safe	L007.01 Understand the value of equipment	AA.38 Respect for equipment	S						S				

15 B-1. General Overview: Assessment OSE

15.1 Test Procedure

15.1.1 General course of the Assessment in a Simulated Environment

The assessors check in advance, before the candidate enters the room, if the material is present (see technical rider) and in good working order. The assessors ensure the setup matches the set-up plan. Assessors can decide in consensus and based on local circumstances and adapt the assessment setting, as long as all elements are included. Adaptations must be noted in the final report.

The candidate has received in advance a brochure describing the whole procedure and all the elements of the introduction. The candidate receives an oral introduction which walks him / her through the entire procedure and arrangements. (see checklist introduction)

Before starting the test, the candidate has the opportunity to get acquainted with the test space and ask questions.

The candidate receives a comprehensive safety briefing, based on the risk analysis of the test situation, at the start of the test (see checklist introduction). This includes the responsibilities of their function and respecting the house rules.

At the end of the introduction, the candidate is asked to sign off the briefing document. This document ensures that all safety and privacy issues are clear for the candidate.

The “active” assessor instructs the candidate briefly (including the notes for the candidate in each test). The candidate can ask questions (or for physical help) to this assessor. The “silent” assessor observes without comment.

The active assessor functions as a colleague. This assessor should not be proactive, should not take initiative and act only when asked by the candidate.

The assessor will perform tasks that are out of the responsibility of the candidate, like switching on or off power, and operating motors or fly bars.

The attention points for assessment are linked together like a chain. The consecutive points build on the results of each other. If one result is compromised, the assessors can adapt the next attention point in the assessment.

15.1.2 Total Duration

The duration of an assessment is about 45 minutes, not including introduction, evaluation or reset time. The whole test cycle will take 75 minutes. (The introduction takes 10 minutes. The evaluation takes 10 minutes. Resetting the stage for the next candidate takes 10 minutes and can overlap with the introduction.)

The assessors can indicate when the time limit for a particular test is close.

Candidates should take the assessment within the allotted time. In case of technical problems or unforeseen situations, the assessors can prolong the length of the assessment.

15.1.3 Safety

The candidate must bring his own safety shoes and can bring gloves, ear protection, etc. to the test. Assessors can stop the assessment if the safety of the participant, the assessors or the equipment is seriously compromised.

15.1.4 Assessment Decision

At the end of the assessment, the assessors decide based on their observations if the candidate passes or not. Assessors decide autonomously and in consensus at the end of the assessment if the candidate has mastered all the competencies and completed the unit. It is in their authority to assess each observed action and to make a final decision. In case there are uncertainties in the measuring criteria, the competence description and the skills prevail. It is the assessors' discretion to decide. The assessors judge only on the competencies and related criteria. Other observations should not influence the assessment. The assessors inform the candidate about their decision and give feedback on their performance.

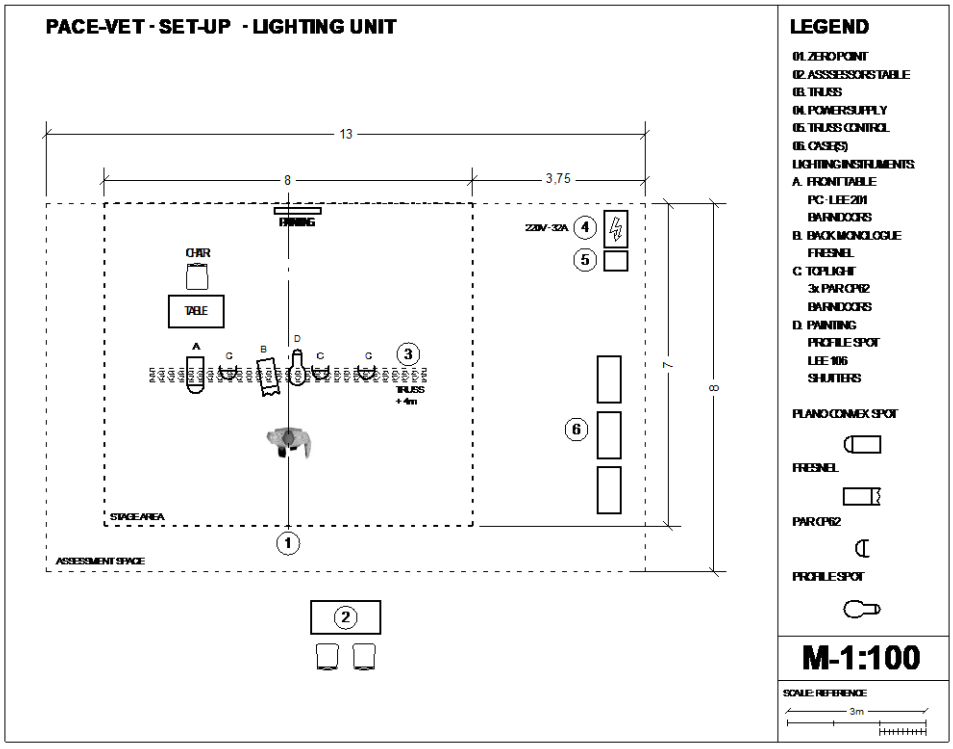
A Criterion-Based Interview as a second assessment method will be carried out. This can support assessment, especially if (after the Observation in a Simulated Environment):

- a candidate shows different / unexpected (but not incorrect) behaviour, or
- certain competences did not become visible (but were not incorrect).

The Portfolio can always be used for assessment.

16 B-2. OSE · Technical Rider

16.1 Floor Plan



Truss: bottom edge should be at 3m at start of assessment and after installation, returned to the same height

16.1.1 Equipment List

Power supply

2 x 16 A mono-phase, marked 10 A, stage left back (Schuko or CEE, depending on the spotlight cables)

1 x 16A three-phase for motor control, stage left back

1 x 16A power supply for light board, etc.

Internet access

Power cables

5 cable 10 m (1,5 mm^2, Schuko)

5 cables 5 m (1,5 mm^2, Schuko)

2 cables 2 m (1,5 mm^2, Schuko)

4 x splitter box 4ch

Rigging

THERE ARE NO RIGGING COMPETENCES TO BE ASSESSED

The following are already set up

(the motor hoists and control system can be replaced by a motorised fly bar)

2 x motor hoist

1 x control system for motor hoists

Power cables for motor hoists

2 x slings

Accessories (shackles, etc.)

Ladders

1 x A ladder, working height 3m

Safety equipment

1 x Emergency exit light

2 sets safety signs (hard hat, safety shoes, harness, hanging loads)

1 x Fire extinguisher

1 x First aid kit

2 x Hard-hat

2 sets working-gloves

Tables, chairs

1 x Table approx. 2m x 1m (assessors)

1x Table approx.. 1,2 x 0,7m

3 x Chairs

Different attachment system and different kinds of tape

Velcro-Tie-Wraps

different types of tape (Gaffer, electro, ballet, …)

White tape

Marker

Wrench with wrist-strap

Flight cases

1 x flight case 1, with wheels, spotlights

1 x flight case 2 with wheels, cables, tipped, marked content

1 x flight case 3 with wheels, light board

Lighting

Spotlights with a cable of max. 1,5m

1 x Plano-Convex Spotlight 1kW

With Gel Frame Holder / Barndoors

1 x Fresnel 0,5 kW

3 x PAR CP62 1 kW

1 x Profile Spotlight 1 kW

With Gel Frame Holder / Shutter Assembly

Safetys

Gel Frames:

1x Plano-Convex LEE 201

1x Profile Spotlight LEE 106

17 B-3. Introduction Candidate

17.1 Introduction assessors

The assessors briefly introduce themselves.

The assessors assume two different roles: an "active" assessor and a "silent" assessor. This should be indicated to the candidate (see Note silent assessors).

17.2 Introduction candidate

The candidate briefly introduces himself.

17.3 Schedule of the assessment

The schedule is run through, hereby the following elements are agreed:

17.4 Assessment structure and order

The candidate gets a drawing of the finished product to be built.

The evaluators explain in brief what assignments (sub-assessments) will be done and in what order.

A · Orientation, unloading equipment and installation

B · System set-up and focus

C · De-Rigging and packing

D · Portfolio Assessment

E · Criterion-Based Interview

17.5 Duration of the assessment

The timing of the assessment is explained.

The assessors explain the circumstances under which an assessment will be discontinued due to exceeding the time allowed for the assessment.

17.6 Responsibility

The limits of the candidates' responsibility are explained. The assessor will point out the actions that need to be done by the assessor, like switching the power on and operating the fly system.

17.7 Asking questions

The candidate can ask the "speaking" assessor all questions he/she/it wants. It is up to the assessor to decide whether the answer is part of the expected competence and if the assessor answers the questions or not.

17.8 Asking for physical help

The candidate can ask for physical help with tasks he/she/it can't or shouldn't perform him/herself/themselves. Asking for assistance has no negative influence on the assessment results.

17.9 Remark about notes (not negative)

It is made clear to the candidate that when the assessors take notes is not necessarily a negative signal. This to keep the candidate at his ease.

17.10 Note assessment

Only the ten competences will be measured, other competences are only used to measure these but will not be taken in account. For example, focussing lights is not measured, but working on height is.

There are no trick situations in the test, but situations that also occur in normal work can be simulated.

The candidate will receive his/her/its result at the end of the assessment.

17.11 Note silent assessor

The principle of "active" and "silent" assessor is explained at the introduction of the assessors. (To guarantee objectivity there is one assessor observing the process from the outside, while the second assessor is observing the process from the inside.)

The "active" assessor acts as an equal colleague. The candidate can treat him in this way.

17.12 Complaints and Code of ethics

The complaints procedure and the code of ethics are repeated (the candidate has already heard this in the information brochure and in the guidance, but it seems important to repeat this.)

17.13 Floor Plan for Candidate:

The candidate will receives a floor plan of the setup.

18 House Rules and Safety Briefing

18.1 General Rules

Use of the fly system

The candidate is not supposed to use fly systems.

Check personal protection equipment

The assessors check whether the candidate's safety shoes (and other brought PPE) comply with the standards.

Stopping the assessment

The conditions under which an assessment can be stopped for safety reasons is briefed:

* safety of candidate
* safety of the assessors
* safety of the equipment

Short overview space

The candidate is given a brief tour of the assessment space (and is asked if he has more questions).

Note about the use of PPE

Gloves, hard hats, etc are provided by the candidate.

In this space expects that, based on their risk assessment, you perform under the most strict safety regulations, more concrete:

* you need to wear a harness in the aerial work platform
* you need to wear a hard hat in the aerial work platform
* ear protection has to be worn during noisy activities
* gloves need to worn during activities with risk
* you need to secure all tools used on height
* we expect you to point out to colleagues unsafe situations

Maximum weight limit

* the maximum weight that a single person is allowed to lift in this house is 25 kg.

Check safety equipment

The assessors verify safety shoes and other brought PPE's.

Verification ID candidate

The assessors verify the ID of the candidate.

The candidate signs the safety briefing confirmation and the rights & privacy declaration.

19 B-4. "Cheet Sheet"

This "cheat sheet" is a short reminder on how the scoring of competences works.

19.1 Competences

The test procedures include 5 assignments (sub-assessments) that measure competences derived from the ESCO framework, ETTE and the TeBeVAT Units "Lighting" and "Sound". The competences are numbered from 01 to 10 in the reference table "Overview". Not all competences are assessed.

19.2 Skills

The competences are detailed in several skills, and in the scoring sheets A to E: general statements of what you want to see, to observe, when a candidate is working.

The skills from the ten competences are numbered in the reference table giving the competence number and a decimal behind it. (For example: "01.04")

19.3 Sub-Assessment

The complete assessment is divided in 5 sub-assessments = assignments, listed from A to E. In the "Overview", you can see which skill is measured in which sub-assessment.

X means a skill **is measured** at least once in an assignment.

O means that a skill **can be measured** in one of the assignments, these are skills that are more general and can occur at different moments.

19.4 Measuring criteria

In each sub-assessment a set of attention points are given. We call them measuring criteria. These are the concretisation of the skills in this specific test situation. The measuring criteria are what you need to observe in this concrete situation if the candidate masters the skill. The reference to the "Overview" = skill measured is given at the end of the line.

19.5 Observation scores

Each measuring criterium can be marked with 3 possibilities.

1. the measuring criterion is observed, you have seen the candidate behave in the proper way, the candidate has performed as expected.
2. the measuring criterion is not observed, the candidate did not perform as expected.
3. it was impossible to observe the behaviour. You could not see if the candidate behaved in a proper way or not. This can be caused by previous actions of because you missed something.

(We avoid using right or wrong, because this would already include a judgement, while we only want to observe in this stadium.)

19.6 Other competences

The entire assessment only measures the 10 given competences, other observations should not be taken in account.

19.7 If in doubt

In case something in the measuring criteria is unclear, the competence description and the skills prevail. It is the assessors' discretion to decide.

19.8 Not measured skills

Some skills are not measured, or only measured once.

The reason for this is that they are difficult to simulate, for time or efficiency reasons.

In this case, the skills will be measured in a written, multiple choice, competence-based test.

19.9 Decision

The two assessors decide in consensus at the end of the test if the candidate masters all competences. It is their authority to weight each observed action and to make a final decision.

20 C. Assessment Overview and Measured Competences

Competences – Skills / Knowledge / Autonomy & Attitude

SKILLS	KNOWLEDGE	AUTONOMY & ATTITUDE

	L01: Read lighting plans Interpret the instructions on the light plan to determine the lighting equipment needed and the right placing			
		ASSESSMENT METHODS		
ID	Measured Criteria	**POR**	**OSE**	**CBI**
L01.01	Read the symbols for fixtures and accessories on a layout/in a plan	**S**	**X**	**S**
L01.02	Read plots with patch, rig and equipment lists	**S**	**X**	**S**
L01.03	Work in scale	**S**	**X**	**S**
LK01.01	Different types of fixtures, their symbols, properties and applications	**S**	**X**	**S**
LK01.02	Line, symbol and layer systems for building and scenographic drawings	**S**	**X**	**S**
LK01.03	Different types of locations and challenges with the stage environment	**S**	**X**	**S**
AA.03	Able to act on own initiative	**S**	**X**	**S**
AA.04	Accuracy	**S**	**X**	**S**
AA.25	Awareness of cost-effectiveness	**S**	**X**	**S**

	L02: Set up light board Install, connect and try out lighting board/console in a live performance environment.			
		ASSESSMENT METHODS		
ID	Measured Criteria	**POR**	**OSE**	**CBI**
L02.01	Place and secure the light console	**S**	**X**	**S**

L02.02	Connect to the power supply	S	X	S
L02.03	Connect to the control system	S	X	S
L02.04	Check all the operating functions	S	X	S
LK01.01	Read technical drawings and written information	S	X	S
LK01.02	Use of different types of consoles	S	X	S
AA.33	Problem-solving approach	S	X	S

	L03: Install lighting Set up, connect and test lighting equipment in a live performance environment.			
		ASSESSMENT METHODS		
ID	Measured Criteria	**POR**	**OSE**	**CBI**
L03.01	Read the light plot and documentation	S	X	S
L03.02	Collect the planned equipment	S	X	S
L03.03	Handle equipment with care	S	X	S
L03.04	Fix and secure equipment (according to standards	S	X	S
L03.05	Fit up the accessories	S	X	S
L03.06	Connect carefully and efficiently	S	X	S
L03.07	Mount lighting instruments securely	S	X	S
L03.08	Check that the lighting instrument is operational	S	X	S
L03.09	Pre-focus lighting instruments	S	X	S
LK03.01	Symbols and drawing methods for technical drawings, schemes and written documentation	S	X	S
LK03.02	Use of operating protocols, consoles, dimmers and lighting equipment	S	X	S
AA.14	Awareness of raised levels of risk	S	X	S
AA.37	Respect for the equipment	S	X	S
AA.41	Safety awareness	S	X	S

SKILLS	**KNOWLEDGE**	**AUTONOMY & ATTITUDE**

	L04: Distribute control signals Circulate control signals between light boards, dimmers and other lighting equipment. Control systems can be either DMX or network based.			
		ASSESSMENT METHODS		
ID	Measured Criteria	**POR**	**OSE**	**CBI**
L04.01	Interpret technical drawings, schemes and written documentation	S	X	S
L04.02	Place control cables	S	X	S
L04.03	Place, address and set-up mergers, splitters and amplifiers	S	X	S
L04.04	Test control signals	S	X	S
LK04.01	Symbols and drawing methods for technical drawings, schemes and written documentation	S	X	S
LK04.02	Use of operating protocols, consoles, dimmers and lighting equipment	S	X	S
AA.04	Accuracy	S	X	S
AA.33	Problem-solving approach	S	X	S

	L05: Focus lighting equipment Set already installed conventional lighting equipment, based on directions and information from somebody on the floor.

		ASSESSMENT METHODS		
ID	Measured Criteria	POR	OSE	CBI
L05.01	Point the fixture	S	X	S
L05.02	Focus the fixture	S	X	S
L05.03	Adjust accessories	S	X	S
L05.04	Fix and secure the position	S	X	S
LK05.01	Understands of optics involved in non or single lens equipment	S	X	S
AA.04	Accuracy	S	X	S

	L06: De-rig electronic equipment Remove and store various types of electronic equipment safely after use.			
		ASSESSMENT METHODS		
ID	Measured Criteria	POR	OSE	CBI
L06.01	Understand the specific equipment specifications	S	X	S
L06.02	Power off and disconnect in a safe manner	S	X	S
L06.03	Pack equipment in an efficient and safe manner	S	X	S
L06.04	Ready the equipment for transportation	S	X	S
LK06.01	Different work and equipment contexts in the event and live performance industry	S	X	S
LK06.02	Necessary equipment packing procedures	S	X	S
LK06.03	Principles of storage packing and logistics in the event and live performance industry	S	X	S
AA.37	Respect for the equipment	S	X	S
AA.41	Safety awareness	S	X	S

SKILLS	KNOWLEDGE	AUTONOMY & ATTITUDE

	L07: Pack electronic equipment Safely pack sensitive electronic equipment for storage and transport.			
		ASSESSMENT METHODS		
ID	Measured Criteria	POR	OSE	CBI
L07.01	Pack cables neat and correct	S	X	S
L07.02	Securing and packing equipment for transportation	S	X	S
L07.03	Work safe	S	X	S
LK07.01	Understand the value of equipment	S	X	S
AA.37	Respect for the equipment	S	X	S

X = Core assessment method

S = Supportive assessment method

Co-funded by the European Union

PACE VET

Assessment Procedure Overview of assessment and measured competences

Skills / knowledge in italics = assessed with other assessment methods = NOT in the simulated environment

X means a skill is measured at least once in a sub-assignment

O means that a skill can be measured in one of the sub-assignments, these are skills that are more general and can occur at different moments.

L01	**Read lighting plans**	Assignments | Assessment				
		A	B	C	POR	CBI
01.01	Reads light plan	X			O	O
01.02	Interprets the instructions in the light plan	X			O	O
01.03	Selects the lighting equipment needed	X				
01.04	Checks the integration of lighting equipment	X				
01.05	Understands the designated placing of the fixtures	X				
01.06	*Grasps content and artistic specifications*					X
01.07	*Compares lighting concept with local conditions and setup*	O				X
01.08	*Evaluates requirements for technical and scenic implementation, design/artistic specs*	O				X
01.09	*Understands different types of locations and challenges with the stage environment*	O				X
01.10	*Knows the safety requirements for electrical equipment*	O			X	X

L02	**Set up light board**	Assignments | Assessment				
		A	B	C	POR	CBI
02.01	Specifies light board position	X				
02.02	Takes mounting options into account	X				
02.03	Takes safety provisions into account	X				
02.04	Carries out a visual inspection of the light board and cables for detection and assessment of damage and compliance with safety requirements	X				
02.05	Sets up light board according to instructions	X				
02.06	Secures technical performance equipment and accessories	X				
02.07	Checks cables before usage	X				
02.08	Places load cables	X				
02.09	Connects to power supply	X				
02.10	Checks the function of the lighting board	X				
02.11	Identifies possible errors or failures	X				
02.12	*Knows the safety requirements for electrical equipment*	O			X	X

L03	**Install lighting**	Assignments | Assessment				
		A	B	C	POR	CBI
03.01	Reads the light plot and documentation	X	X			
03.02	Collects equipment according to the lighting plan	X	X			
03.03	Carries out a visual inspection of the lighting instruments for detection and assessment of damage and compliance with safety requirements	X				
03.04	Transport devices, system parts, components, tools and other work equipment to protect them from damage	X	X			
03.05	Attaches and sets up equipment according to the local standards and safety regulations	X	X			
03.06	Attaches and sets up accessories according to the local standards and safety regulations	X	X			
03.07	Mounts and rigs technical performance equipment according to instructions and/or plans	X	X			
03.08	Check that technical performance equipment and objects can move freely during different operations when needed	X	X			
03.09	Secures technical performance equipment and accessories	X	X			
03.10	Connect devices to one another and to dimmers using control cables	X	X			
03.11	Connects to power supply					
03.12	Carries out a functional check of lighting instruments and additional devices		X			

03.13	Uses the light plan to determine pre-focus of lighting instruments		X			
03.14	Pre-focusses lighting instruments		X			
03.15	Identifies possible errors or failures		X			
03.16	*Knows the safety requirements for electrical equipment*				X	X

L04	**Distribute control signals**	Assignments | Assessment				
		A	B	C	POR	CBI
04.01	Tests control signals		X			
04.02	Places control cables	X	X			
04.03	Takes safety provisions into account		X			
04.04	Mounts and rigs technical performance equipment according to instructions and/or plans	X	X			
04.05	Secures technical performance equipment and accessories		X			
04.06	Connects to load cables		X			
04.07	Connects to the control system		X			
04.08	Checks the function of the lighting board		X			
04.09	Applies and patches lighting instruments in the desk		X			
04.10	Test control signals		X			
04.11	Identifies possible errors or failures		X			
04.12	*Knows different network devices, applications and data transmission (DMX; ADM; ArtNet; sACN; ACN)*		O		X	X

L05	**Focus lighting equipment**	Assignments | Assessment				
		A	B	C	POR	CBI
05.01	Uses the light plan to position light beam from lighting instrument	X	X			
05.02	Points the fixture in the proper direction and angle	X	X			
05.03	Uses the adjustment possibilities of the lighting instrument to meet lighting requirements (focus)		X			
05.04	Uses the adjustment possibilities of the lighting instrument accessories to meet lighting requirements (focus)		X			
05.05	Securely mounts equipment according to the local standards and safety regulations		X			
05.06	Identifies possible errors or failures		X			
05.07	*Understands of optics involved in non or single lens equipment*	O			X	X

L06	**De-rig electronic equipment**	Assignments | Assessment				
		A	B	C	POR	CBI
06.01	Powers off and disconnects in a safe manner			X		
06.02	Uses specific equipment specifications when removing and storing			X		
06.03	Packs equipment in an efficient and safe manner			X		
06.04	Readies the equipment for transportation regarding equipment and packing specifications			X		
06.05	*Different work and equipment contexts in the event and live performance industry*				X	X
06.06	*Principles of storage packing and logistics in the event and live performance industry*				X	X

L07	**Pack electronic equipment**	Assignments | Assessment				
		A	B	C	POR	CBI
07.01	Packs cables neat and correct			X		
07.02	Secures and packs equipment for transportation			X		
07.03	Packs equipment in an efficient and safe manner			X		
07.04	*Knows about the value of equipment used and proper packing and storage to retain value*				X	X
07.05	*Principles of storage packing and logistics in the event and live performance industry*				X	X

Health & Safety (optional)

H01	**Work with respect for own safety**	Assignments | Assessment				
		A	B	C	POR	CBI
H01.01	Understands own position in the safety chain and acts accordingly	X	X	X		X
H01.02	Works according safety training and instructions	X	X	X		
H01.03	Protects oneself against hazards	X	X	X		
H01.04	Signals risks to responsible colleagues	O	O	O	O	X
H01.05	*Understands the risks in a performance environment and the mechanisms behind them*	O			X	X

H02	**Work ergonomically**	Assignments | Assessment				
		A	B	C	POR	CBI
H02.01	Identifies ergonomic risks	X	X	X		
H02.02	Organizes workplace ergonomically	X	X	X		
H02.03	Applies the ergonomic principles and methods while lifting, carrying or moving heavy or unpractical loads	X	X	X		
H02.04	Uses the right equipment when lifting, carrying or moving heavy objects	X	X	X		
H02.05	Asks for help for tasks you can't carry out on your own	X	X	X		
H02.06	Communicates with colleagues while lifting, carrying or moving objects	X	X	X		

H03	**Work safely with mobile electrical systems under supervision**	Assignments | Assessment				
		A	B	C	POR	CBI
H03.01	Reads electrical diagrams and plans for mobile electrical installations	O				X
H03.02	Calculates mono-phase electric loads	X	X	X		
H03.03	Provides power distribution for light, stage, sound, video and rigging purposes	X	X	X		
H03.04	Puts cables, fuse boards and splitters in place, based on instructions	X	X	X		X
H03.05	Connects, labels, protects, and secures cables	X	X	X		X
H03.06	Performs visual inspection for electric risks	X	X	X		
H03.07	Troubleshoots basic problems: checking cables, connections, ...	X	X	X		
H03.08	Uses appropriate tools and PPE's	X	X	X		
H03.*09*	*Repairs mono-phase cables (checked by supervisor)*					
H03.*10*	*Acts accordingly the agreed procedure in case of an electrical accident*					O

H04	**Follow safety procedures when working at heights**	Assignments | Assessment				
		A	B	C	POR	CBI
H04.01	Identifies/spots environmental influences and changes that affect the safe use (weather, rake, floor stability, ...)			X		
H04.02	Mounts and uses the equipment according to the safety regulations and instructions			X		
H04.03	Visually inspects the equipment			X		
H04.04	Applies the appropriate collective protection			X		
H04.05	Uses the appropriate personal safety equipment			X		
H04.06	Ensures no objects can fall during activity			X		
H04.07	Secures small tools and equipment			X		
H04.08	Closes off underlying areas			X		
H04.09	Ensures underlying work area is free			X		
H04.10	Communicates with colleagues while working on heights			X		
H04.11	*Identify / spot the risks for personal injury*					

21 D. Attention Points

Assignment A

A. Orientation, unloading equipment and installation	15”
Starting Time:	
End Time:	

Assessor:	NOT OBSERVED		OBSERVED	
Wears safety shoes	☐	☐	☐	H01.03
Uses gloves	☐	☐	☐	H01.03
Wears helmet	☐	☐	☐	H01.03
Informs oneself about local practices	☐	☐	☐	01.10
Reads plan	☐	☐	☐	01.01
Orients him/herself to the location and stage set-up according to the plan	☐	☐	☐	01.02
Orients him/herself with the equipment at hand	☐	☐	☐	01.03
Changes set-up if needed	☐	☐	☐	01.07
Asks “active” assessor to lower truss to working height	☐	☐	☐	H02.05
Ensures underlying work area is free	☐	☐	☐	H04.09
Communicates with “active” assessor during lifting process	☐	☐	☐	H02.06
Takes mounting options into account	☐	☐	☐	02.02
Works ergonomically	☐	☐	☐	H02.02
Specifies light board position	☐	☐	☐	02.01
Selects the proper equipment	☐	☐	☐	01.03

Makes sure the equipment can be integrated	☐	☐	☐	01.04
Places equipment as designated in plan	☐	☐	☐	01.05
Organises cases for easy access (in an efficient and ergonomic way)	☐	☐	☐	H02.02
Puts cases and equipment directly in the right place	☐	☐	☐	H02.02
Lifts close to the body	☐	☐	☐	H02.03

	NOT OBSERVED		OBSERVED	
Carries equipment ergonomically	☐	☐	☐	H02.03
Monitors environment while carrying objects	☐	☐	☐	H01.05
Sets up light board according to plan	☐	☐	☐	02.01
Takes mounting options into account	☐	☐	☐	02.02
Takes safety provisions into account	☐	☐	☐	02.03
Sets up light board according equipment instructions	☐	☐	☐	02.05
Secures technical performance equipment and accessories	☐	☐	☐	02.06
Carries out a visual inspection of the light board	☐	☐	☐	02.04
Checks lighting instruments before usage	☐	☐	☐	03.03
Transports lighting fixtures	☐	☐	☐	03.04
Mounts lighting fixtures	☐	☐	☐	03.05
Fixes clamps properly	☐	☐	☐	03.05

Secures lighting instruments with safety cable	☐	☐	☐	03.09
Secures lighting instrument accessories with safety cable/other safety feature	☐	☐	☐	03.09
Select proper cables for system	☐	☐	☐	03.02å
Checks cables before usage	☐	☐	☐	02.07
Organises cables in a proper way	☐	☐	☐	03.04
Connects spots properly	☐	☐	☐	03.07
Keeps slack in cables	☐	☐	☐	03.08
Uses sustainable fixing methods for the cables	☐	☐	☐	03.09
Secures cables at end of truss or fly bar	☐	☐	☐	03.07
Secures flying connections	☐	☐	☐	H04.06
Ensures enough cable to go high	☐	☐	☐	03.08
Connects cables to dimmer	☐	☐	☐	03.10

	NOT OBSERVED		OBSERVED	
Ensures no power overload on power supply	☐	☐	☐	H03.02
Provides power distribution for light, stage, sound, video and rigging purposes	☐	☐	☐	H03.03

Performs visual inspection for electric risks	☐	☐	☐	H03.06
Connects to power supply	☐	☐	☐	02.09
Checks the function of the lighting board	☐	☐	☐	02.10
Identifies possible errors or failures	☐	☐	☐	02.11
Troubleshoots basic problems: checking cables, connections, ...	☐	☐	☐	H03.07
Carries out a functional check of lighting instruments and additional devices	☐	☐	☐	03.12
Identifies possible errors or failures	☐	☐	☐	03.15
Uses the light plan to determine pre-focus of lighting instruments	☐	☐	☐	03.13
Pre-focusses lighting instruments	☐	☐	☐	03.14
Signals risks	☐	☐	☐	H01.04
Protects oneself against hazards	☐	☐	☐	H01.03
Uses appropriate tools	☐	☐	☐	H03.08
Works according to rules and regulations	☐	☐	☐	H01.02

Comments, remarks:

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Assignment B

B. System Set-up and Focus	7,5"
Starting Time:	
End Time:	

Assessor:	NOT OBSERVED		OBSERVED	
Applies and patches lighting instruments in the desk	☐	☐	☐	04.09
Tests control signals	☐	☐	☐	04.10
Identifies possible errors or failures	☐	☐	☐	04.11
Asks "active" assessor to raise truss to focus height	☐	☐	☐	H02.05
Ensures all equipment can be moved safely	☐	☐	☐	03.08
Checks above area is free before moving upwards	☐	☐	☐	03.08
Communicates with "active" assessor during lifting process	☐	☐	☐	H02.06
Carries ladder in an appropriate way	☐	☐	☐	H02.03
Checks ladder before use	☐	☐	☐	H04.03
Asks "active assessor" for help setting up the ladder	☐	☐	☐	H02.05
Asks "active assessor" to hold the ladder	☐	☐	☐	H02.05
Ensures helper wears hard hat	☐	☐	☐	H04.04
Checks for objects in pockets	☐	☐	☐	H04.06
Climbs ladder the proper way	☐	☐	☐	H04.02
Works with face to ladder, tips of foot to ladder (not backwords)	☐	☐	☐	H04.02

Moves ladder when objects are out of reach	☐	☐	☐	H02.01
Communicates with "active" assessor when using ladder	☐	☐	☐	H02.06
Follows light plan when focussing	☐	☐	☐	05.01
Points and angles lighting instruments properly	☐	☐	☐	05.02
Focusses lighting instruments	☐	☐	☐	05.03
Uses lighting instrument accessories to meet requirements	☐	☐	☐	05.04
Secures lighting instruments and accessories in focussed position	☐	☐	☐	H02.06

	NOT OBSERVED		OBSERVED	
Sets light board settings according to light plan	☐	☐	☐	02.10
Signals risks	☐	☐	☐	H01.04
Protects oneself against hazards	☐	☐	☐	H01.03
Uses appropriate tools	☐	☐	☐	H03.08
Works according to rules and regulations	☐	☐	☐	H01.02

Comments, remarks:

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PACE VET

Assignment C

B. De-rigging and packing	7,5"
Starting Time:	
End Time:	

Assessor:	NOT OBSERVED		OBSERVED	
Powers off system	☐	☐	☐	06.01.
Organises cases for easy access (in an efficient and ergonomic way)	☐	☐	☐	H02.02
Puts cases and equipment directly in the right place	☐	☐	☐	H02.02
Asks "active" assessor to lower truss to working height	☐	☐	☐	H02.05
Ensures underlying work area is free	☐	☐	☐	H04.09
Ensures all equipment can be moved safely	☐	☐	☐	03.08
Communicates with "active" assessor during lifting process	☐	☐	☐	H02.06
Performs visual inspection for electric risks	☐	☐	☐	H03.06
Disconnects cables	☐	☐	☐	06.02
Ensures pens of plugs don't fall and hit the floor when taken down	☐	☐	☐	06.02
Removes cables first	☐	☐	☐	06.02
Puts cables directly in cases	☐	☐	☐	06.03
Stores cables neat and correct	☐	☐	☐	07.01
Stores cable accessories ("Velcro" ties)	☐	☐	☐	06.02
Removes equipment	☐	☐	☐	06.02

Puts equipment directly in the right case	☐	☐	☐	06.03
Makes sure cables and equipment have not been damaged (visual check)	☐	☐	☐	06.04
Secures and packs equipment for transportation	☐	☐	☐	07.02
Makes sure everything is packed before closing cases	☐	☐	☐	07.03
Uses gloves	☐	☐	☐	H01.04
Signals risks	☐	☐	☐	H01.04
Protects oneself against hazards	☐	☐	☐	H01.03
Uses appropriate tools	☐	☐	☐	H03.08
Works according to rules and regulations	☐	☐	☐	H01.02

Comments, remarks:

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22 E. Assessment Results

OSE: Observation in a Simulated Environment

Lighting Unit · Bergen op Zoom · 23.05.2024

The candidate: _____

Assessed at: Bergen op Zoom, on May 23rd 2024

☐ Masters all competences and passed the assessment

☐ Did not meet the assessment criteria

Has shown to master the competencies of the assignments:

- ☐ L01 Read lighting plans
- ☐ L02 Set up light board
- ☐ L03 Distribute control signals
- ☐ L07 Install lighting
- ☐ L08 Focus lighting equipment
- ☐ L09 De-rig electronic equipment
- ☐ L10 Pack electronic equipment

☐ Advice for further learning

Remarks / Attention Points

_____ _____

Assessor 1 (name and signature) **Assessor 2** (name and signature)

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23 F. Assessment Feedback

OSE: Observation in a Simulated Environment
Lighting Unit · Bergen op Zoom · 23.05.2024

The candidate: _____

Assessed at: Bergen op Zoom, on May 23rd 2024

Remarks:

- ☐ organisation (planning, communication, etc.)
- ☐ candidate
- ☐ equipment
- ☐ test environment
- ☐ procedure(s)

Remarks / Attention Points

_____ _____

Assessor 1 (name and signature) **Assessor 2** (name and signature)

24 Written Test – Multiple-Choice (TMC)

Multiple-Choice tests are written assessments that either contain questions or items where only one answer can be correct, or, in the case of Multiple-Response tests, contain questions or items with several correct answers. Skills and creativity cannot be directly assessed with either type of test. Nevertheless, they allow a very reliable query of factual knowledge. Unless otherwise stated, both test types are summarized in PACE-VET under the term "multiple-choice test". The following cognitive performance levels can be assessed using multiple-choice tests:

- Reproduction of memorized knowledge,
- Reorganization: Independent processing and arranging of learned knowledge,
- Transfer: Transferral of basic principles to new, similar tasks, and
- Problem-solving thinking: Solving by reason of new questions and aspects.

If the tests are carried out on a regular basis and with a large number of candidates, this assessment method is particularly economical.

24.1 Quality Concepts

24.1.1 Validity

Validity is not necessarily guaranteed. The main challenge is the discrepancy between complex cognitive processes and simply ticking an answer. Multiple-Choice tests can help to evaluate a competence if they require a quick assessment of different facets of a complex subject. Well-written items can move candidates to higher-order thinking, such as application, integration, and evaluation.

24.1.2 Reliability

The objectivity of Multiple-Choice Tests is significantly higher than for classic written exams. The evaluation is independent of the subjectivity of an assessor and can even be automated. However, high reliability goes hand in hand with well-formulated questions or using a better term: "items". Items can be presented as incomplete statements, analogies, or mathematical equations. The tests allow for inclusion of a broad range of topics on a single exam.

24.1.3 Limitations

Creativity or skills cannot be assessed with multiple choice tests. Any items that are ambiguous may confuse candidates. Candidates might simply select a random answer and still have a chance of receiving a positive score. They may also provide correct answers that were memorized without being all that well understood.

24.2 Considerations

24.2.1 Tips

A high quality of alternative answers reduces the possibility of scoring by simply selecting an answer by random (lucky guesses). According to studies, three answer options are

sufficient to make such random scoring unlikely. Depending on the item, five or more answer options may be necessary for multiple-response tests.

24.2.2 Challenges

Too many alternative answers will require greater effort in the designing of the test. There is also a risk of utilizing not plausible distractors (distractor = false answer option) and therefore revealing the correct response. The clarity of questions or items is easily compromised. An analysis of candidates with high exam scores can help to find out if a question or item is being missed. If so, there's probably something wrong with the design of the question or item.

24.2.3 Scoring Tools – Criteria

A major advantage of multiple-choice-tests is that they can be evaluated quickly and easily. In addition, the quality of items can be determined statistically. Poorly formulated items can be recognized through statistical sampling. As already mentioned, only one answer can be correct for multiple-choice items. If the right answer is marked, one point will be awarded. If a wrong answer or no answer is marked, no point will be awarded. The awarding of points is different for multiple-response tests. Every correct marked answer scores one point (right answers marked, or false answers not marked). Every incorrect marked answer brings one minus point (right answers not marked, or false answers marked). The difference determines the total score of the question. If the difference is negative, the score is 0 Points.

24.2.4 Scoring Tools – Example Lighting Unit

The competencies to be assessed in the corresponding unit can be found in the documentation provided to the assessors. In this example, the Lighting Unit and the competence "Ensure safety of mobile electrical systems".

The ESCO description of each competence is included in the list, as well as the required skills, knowledge, and autonomy/attitude. The acceptable assessment methods for each competence are listed as well. In this unit, the method "Observation in a Simulated Environment" provides the basis for the assessment. A Multiple-Choice-Test could be used to evaluate the candidate's knowledge blocks needed for this competence, such as "Basic electrical concepts and calculations". The "Portfolio" should always be used to support assessment.

24.3 Implementation

24.3.1 Standards

For a high degree of standardization, test documents should be formulated in a clear and understandable way and implemented into the assessment without modification. Language barriers or special needs must be considered.

24.3.2 Development

When preparing tests, high quality and plausible distractors should be chosen for the optional answers. Tests should always be related to the competencies being assessed and not only focussed on whether candidates have memorized certain facts and details.

The quality of the questions or items is as or more important than the absolute number of questions or items on the test to achieve satisfactory reliability. Findings suggest that three-option Multiple-Choice design saves time for covering more content and items in the test, thereby increasing test validity and reliability.[12] The length of the assessment depends on the amount of learning outcomes to be assessed. According to Carnegie Mellon University, "When students are under time pressure, they may make mistakes that have nothing to do with the extent of their learning." Therefore, it is also important that there is an appropriate amount of time for the assessment. Although there can be no clear guidelines for a "mean" response time, as that is dependent on the question or item, in general, 60 seconds for each answer should be calculated. Solution matrix documents or an automated correction programme can provide for a simple and rapid assessment of the results.

Artificial Intelligence provides many possibilities for the generation of Multiple-Choice tests and for the evaluation of the test results. Care should be taken that the assessment remains at a high quality and that subjectivity, as well as special needs of candidates are respected in the process.

24.4 Needs/Set-Up

24.4.1 Setting / Contextual factors

Tests can be performed either traditionally with a pen and paper or digitally on a computer or mobile device. Candidates need a quiet space without distractions and oversight to prohibit cheating.

24.4.2 Requirements for Assessors

Designing tests requires a high level of technical expertise in order to develop quality items and useful distractors. For the evaluation of the test no special skills are required.

24.4.3 Interaction with other Methods

This assessment method can be combined with any other method, especially when cognitive performance levels are to be assessed.

The Multiple-Choice Test can be combined with the Written Test - Open Answers assessment method in order to increase test validity and reliability.

Written Test - Open Answers

[12] Afsaneh Dehnad, Hayedeh Nasser, Agha Fatemeh Hosseini; A Comparison between Three-and Four-Option Multiple Choice Questions, Procedia - Social and Behavioral Sciences, Volume 98, 6 May 2014, Pages 398-403; https://www.sciencedirect.com/science/article/pii/S1877042814025233

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25 Written Test - Open Answers (TOA)

25.1 Description

A Written Test with Open Answers consists of questions for which there are no predefined answer options. This means that there is no influence from any given answer options. As it is a written test, the questions are answered in a written form. This includes texts that are mechanically or digitally produced by the candidate. Open questions can be used to query information in text form or numerical information. Open questions are useful, for example, if the understanding of a situation is to be assessed or if the number of answer options would be too large.

Case studies can be considered a sub-form of the Written Test with Open Answers. They can be used to simulate everyday working life, and the tasks associated with it. The tasks to be solved would address a situation common to the industry. Analytical and organizational competencies, such as the approach to a difficult problem, can be assessed. Case studies measure action orientation, entrepreneurial thinking and understanding of complexity.

25.2 Quality Concepts

25.2.1 Validity

Open questions are used to check knowledge or situational interpretation. The disadvantage is that it checks more the skill to express yourself through written language than it checks the real ability to perform in real life. It proves you know how to act, but not that you are able to act. Answers are checked against a checklist but need the interpretation of skilled assessors.

Open answers are most suitable in situations, where:

- New information should be gained,
- Respondents should not be primed by the given response possibilities, or
- Holistic feedback is asked for and given answers would significantly limit the informative value of the answer.

25.2.2 Reliability

Tests can be intimidating for people who have had bad experiences with these types of tests in previous learning contexts.

Research has shown that dissatisfied people give longer answers to express their dissatisfaction. Thus, the respondent's mood influences the length of the response, which limits reliability. Different field sizes for the answer to the same question also affect reliability.

25.2.3 Limitations

Since a high degree of formulation competence is required to answer open questions, a poor result cannot necessarily be inferred from an inadequate result.

Open questions are not suitable for measuring practical skills. They are only of limited help when assessing social skills.

25.3 Considerations

25.3.1 Tips

Questions should be clearly formulated. It must be clear to the candidate what form of answer is expected (e.g. bullet points, small essay, several details).

With extensive case studies, it takes more time to analyse the text and answer the question. To reduce the chance of accidental hits and thus increase reliability, there should be several independent observation options for each requirement dimension.

25.3.2 Challenges

The field sizes for the response should be adjusted according to the expected scope. A reasonable amount of time should be calculated to answer the question.

25.3.3 Scoring Tools – Criteria

Correction keys can be in place (what the assessors want to see) to enable an assessment. To assess a case study, the assessors use a model solution (chronologically based on the items in the case study) and an observation sheet (sorted by competencies). The answers given are compared with the model solution. To ensure the evaluation objectivity, especially creative answers do not receive additional points. If the required answer has not been given, the candidate can be evaluated per item. The ticks are then added and entered on an appropriate scale. Finally, the assessors compare the results of their observations with each other to be able to record an overall result.

25.3.4 Scoring Tools – Example Lighting Unit

The competencies to be assessed in the corresponding unit can be found in the documentation provided to the assessors. In this example, the Lighting Unit and the competence "Ensure safety of mobile electrical systems".

The ESCO description of each competence is included in the list, as well as the required skills, knowledge, and autonomy/attitude. The acceptable assessment methods for each competence are listed as well. The assessment method Written Test – Open Answers could be used to support evidence of competencies connected to implementing the appropriate measures in an emergency situation according to established procedures.

25.4 Implementation

25.4.1 Standards

The Written Test with Open Answers is difficult to standardize. An evaluation of the answers by several assessors can increase the validity of the results. A marking guide should allow a wide range of possible answers without losing the professionalism of the test.

25.4.2 Development

The questions should be designed in such a way that it is transparent what the scope of the answers should be. A predefined text field can provide the candidate with information about the scope and length of the answer. The questions should be derived from the competencies to be measured in each unit. In the assessment, care should be taken not to assess linguistic expression.

25.5 Needs/Set-Up

25.5.1 Setting/Contextual factors

Besides pen and paper, mechanical or digital equipment can also be used to answer the questions. Candidates need a quiet space without distractions and oversight to prohibit cheating.

25.5.2 Requirements for Assessors

Assessors need comprehensive skills to evaluate complex texts without bias. They must be able to identify content and professional skills despite a lack of articulation. The assessment of answers requires in-depth professional expertise.

25.5.3 Interaction with other Methods

Since the test does not assess practical skills, it should be combined with Role Play or Observation, for example. The test can be combined with a Multiple-Choice Test to assess more factual knowledge.

Written Test - Multiple-Choice

25.6 References/Notes

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26 Oral Examination (ORE)

An oral examination is a method of assessing the candidate through spoken communication. Assessors and candidate interact through conversation. An oral exam can take place as a presentation, interrogation, or application (oral account of a practical conclusion or lesson). Oral exams generally do not assess linguistic competence as such, but rather knowledge, understanding and problem-solving abilities.

26.1 Quality Concepts

26.1.1 Validity

Oral examinations can be a valid method for assessing:

- understanding
- applied problem-solving
- interpersonal competence
- intrapersonal qualities (confidence, self-awareness, professionalism, ethics), and
- integrated practice.

Validity is higher when the oral exam only queries specifically what is related to the competencies being assessed. To check the content validity, it must be clear that the discussed content is related to the required competencies, and whether the content goes beyond them or whether they are only barely discussed. To increase the construct validity of the assessment, the queries and related tasks must be in line with the theoretical understanding of the skills in the units of event technology being assessed.

26.2 Reliability

Reliability can be affected by candidate anxiety, or individual hearing or speech difficulties of candidates or by bias of the assessors (e.g. due to gender, ethnicity, language).

To standardize exams and increase comparability, a list of criteria and an answer key should be created and documented. Simply the fact that assessors might double-check an enquiry can affect reliability. An answer that was only given on request should possibly get fewer points.

To increase the reliability, competencies should be assessed in different ways.

The use of two assessors also increases reliability.

Due to the limited number of questions and the many possible disruptive factors in the interaction, oral exams are less reliable than other assessment methods.

26.3 Limitations

The candidates should be informed in advance about the framework conditions of the oral exam (e.g. time, location, time frame, requirements and items that are and are not included). A list of criteria helps the assessors to objectively assess the results of an oral exam. Assessors should be aware that double-checking inquiries can give the candidate

unwanted tips about answer expectations. Candidates should be given sufficient time to answer questions or to present their results.

26.4 Considerations

26.4.1 Tips

The exam should follow a structured approach. Ensure that all assessors use the same guidelines. Disruptive factors should be minimized by a high degree of standardization. Variations should be limited. Simple open questions should be used (e.g. who, when, where, why, how, for how long, …). Listen actively, show interest, listen to what is said in between the lines, ask deeper if needed, but give the candidate the lead.

26.4.2 Challenges

It should not be the presentation and speaking skills that are assessed, but rather the mastering of competencies that are queried as part of the assessment process.

There should be a record of the oral exam: all questions and the answers. Otherwise, the results can be disputed afterwards.

26.4.3 Scoring Tools – Criteria

Results can usually be evaluated immediately after an oral exam. A marking guide can be used here, which also serves as a framework for feedback to the candidate. Since it can be difficult to take notes and interview the candidate at the same time, it makes sense to use at least two assessors. In this case, one can record the conversation while the other is conducting the conversation. Three assessors are ideal, with the third only recording the process. Audio or video recording of the oral test is also highly recommended.

26.4.4 Scoring Tools – Example Lighting Unit

The competencies to be assessed in the corresponding unit can be found in the documentation provided to the assessors. In this example, the Lighting Unit and the competence "Ensure safety of mobile electrical systems".

The ESCO description of each competence is included in the list, as well as the required skills, knowledge, and autonomy/attitude. The acceptable assessment methods for each competence are listed as well. An oral test might be used to assess whether the candidate would know the appropriate measures to take to safeguard or evacuate workers, participants, visitors, or the audience according to established procedures. At the same time, the candidate's awareness of raised levels of risk during the use of mobile electrical systems can be queried.

26.5 Implementation

26.5.1 Standards

The created marking guide should be aligned with the competence descriptions of the units being assessed. The questions and related tasks of the oral exam should be precisely

formulated in advance and each candidate should be asked the same questions. The candidate's answers are compared with the expected answers from the marking guide. In addition, which cues and/or support that the assessors can provide during the exam are defined in advance.

26.5.2 Development

The development process involves the creation of questions and their related tasks that are designed to assess the relevant competencies. Expected answers and possible cues are set out in a marking guide.

26.6 Needs/Set-Up

26.6.1 Setting/Contextual factors

Depending on the scope of the exam, a preparation room with writing materials for the candidate, an examination room and, if applicable, the necessary technical equipment that belongs to a related task is required.

26.6.2 Requirements for Assessors

The assessor needs basic skills in conducting unbiased dialogue. He needs professional skills in order to be able to deduce appropriate competencies from the candidate's report according to the marking guide. Professional and pedagogical competencies are necessary to create the tasks.

26.6.3 Interaction with other Methods

Since the oral examination does not test practical skills, a combination with corresponding methods like observation or role play is necessary.

Preferred matching methods:

Observation in a Simulated Environment

Observation on Site

Role Play

Structured Portfolio / PACE-VET APP

26.7 References/Notes

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