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SKILLS4WATER

SOFT SKILLS

ASSESSMENT GUIDE

V5

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Contents

1. Introduction

SKILLS4Water is an ERASMUS+ project that aims to equip students and young water professionals with essential soft skills, integrate them into higher education curricula, promoting innovation and leadership in the European water industry, and disseminate related best practices across Europe. The project will benefit Higher Education Institutions (HEIs), their students, and the water industry, as well as help inform policymakers, thus contributing to building a sustainable and resilient water future and providing the EU with a skilled workforce.

The Soft Skills Assessment Guide (D3.3) developed under WP3 (Innovative Training Programme Development & Implementation) is designed to support Higher Education Institutions (HEIs) in assessing student development of targeted soft skills through designed learning activities as well as evaluating the effectiveness of the activities integrated into their water-related curricula. These activities are designed to enhance and develop 6 identified soft skills: *responsibility, motivation, teamwork, communication, problem-solving,* and *flexibility.* In addition to the above, the guide aims to identify the gaps and barriers that limit the development of soft skill training that need to be addressed for future improvements.

The guide provides a structured approach to pre- and post-pilot assessment of students' skills, including useful information 1. On the method used to perform the assessment, 2. On the soft skills assessed, and 3. On the criteria used for the assessment.

Developing these soft skills is crucial as they equip young professionals with the qualities and capabilities necessary to lead and innovate in the increasingly complex and interdisciplinary water industry.

2. Soft Skills Assessment Methods and Tools

In the higher education sector, the assessment of soft skills is critical for preparing students to the increasing demands of the job market. In the last years, a variety of methods have emerged to support this process. Looking at soft skills as a combination of personal attributes, which focuses on *how* someone does something, self-assessment tools such as reflective questionnaires and self-rating scales are frequently used to check soft skills levels and awareness in students, though they may be limited by subjectivity (OECD, 2021[5]). An alternative approach consists in using assessment surveys conducted by third parties, which may reduce self-bias and provide a higher level of objectivity. The main difference among the two approaches (self-assessment and assessment) are their main focus:

- Self-assessment: focuses on self-reflection and awareness
- Assessment: focuses on objective performance evaluation

In HEIs, behavioural self-assessments and performance-based assessments, including simulations, role-playing, and situational judgment tests, are increasingly applied to evaluate students' soft skills such as real-time decision-making and collaboration in practical scenarios (Guerrero Sosa et al., 2025). In some cases, the integration of AI-driven frameworks further enhances these assessments by capturing and interpreting behavioural cues, which offer valuable feedback for both learners and educators (Guerrero Sosa et al., 2025). Additionally, validated tools such as the Multiple Soft Skills Assessment Tool (MSSAT) and instruments tailored to specific contexts, like the Contemporary Business Soft Skills Instrument (used in working environments), provide scalable and research-based approaches for assessing key competencies aligned with employability and lifelong learning (Frontiers in Psychology, 2024; Heikkinen & Myyryläinen, 2025). In the case of HEIs, frameworks such as EntreComp offers also comprehensive models for embedding and evaluating entrepreneurial and transversal competencies across curricula (European Commission, 2016). Beyond surveys, questionnaires and frameworks for self-assessment and assessment of soft skills, additional assessment methods and tools recommended for educators who wish to implement an assessment strategy to evaluate their students' soft skills level and enhancement are reported in Table 1.

Table 1 – Assessment Methods and Tools

Assessment Methods and Approaches	Assessment Tools
Reflective Practices	Reflective essays, reflective diaries and real-case scenarios discussions
Interviews	Soft skills Checklists
Group Work	Evaluation forms and collaboration rubrics
External Observation	Soft skills scoring guide

3. Pilot Pathways: The case of Romania, Spain and Serbia

To promote the integration of essential soft skills into higher education curricula focused on water- related subjects, a standardized soft skill framework accompanied by an innovative soft skill training program was developed in Work Package 2 of the Skills4Water project. Recognizing the need to assess the level of soft skills of students attending the courses, an assessment was conducted involving the distribution of pilot questionnaires to students across Romania, Serbia, and Spain. A total of nr responses were collected, offering valuable insights on the importance of soft skills for students.

3.1 Student Questionnaire Types

Two distinct questionnaires were created, each tailored to gather feedback specifically to assess the soft skill level of the students before and ~~6 months~~ after the implementation of the innovative soft skills training program (Table 2).

Table 2 – Questionnaire Types

Pre-Assessment Questionnaire	This questionnaire aimed to measure the perceived proficiency of students in a selected set of soft skills before the training. A total of nr students participated in the pre training assessments. Out of which 54 respondents were from Romania, 13 from Serbia and 52 from Spain.
Post-Assessment Questionnaire	This questionnaire aimed to measure the perceived proficiency of students in a selected set of soft skills after completing the courses and modules in which soft skills training and activities were implemented. A total of 55 students participated in the post training assessments. Out of which 19 respondents were from Romania, 14 from Serbia and 22 from Spain.

Targeted Soft Skills: There were 6 identified soft skills in which the students self-assessed their soft skill levels. Each skill was adequately defined within the questionnaire to help the students understand the soft skill (Table 3).

Responsibility	Responsibility includes the ability to fulfil obligations, make ethical decisions, and be accountable for one's actions.
Motivation	Motivation involves the internal drive and determination to achieve goals, overcome challenges, and consistently perform at a high level.
Teamwork	Teamwork involves the ability to collaborate effectively with others to achieve common goals.
Communication	Oral or written communication involves the ability to convey information, ideas, and emotions effectively in various contexts.

Problem Solving	Problem-solving is the ability to analyse, strategize, and generate effective solutions to complex issues or challenges.
Flexibility/Adaptability	Flexibility/adaptability is the ability to adjust, learn, and thrive in changing circumstances.

Table 3 – Targeted Softs Skills

3.2 Questionnaire Structure

The Pre-Assessment and Post-Assessment Questionnaires consisted of four sections with a total of nine questions focussing on: 1. background information, 2. personal soft skills, 3. interpersonal soft skills, and 4. situational soft skills. The background section collectsed data about the students' university and field of study, which were useful for regional mapping of successful training implementation, while the remaining three sections assessed specific participants' soft skill levels. To facilitate data collection across three different Higher Education Institutions (UGAL in Romania, UCA in Spain, UNIS in Serbia), a quantitative approach was adopted. The questionnaires primarily used two types of questions: Likert Scale Questions and Multiple-Choice Questions.

Likert Scale Questions

A Likert scale is a type of rating scale widely used to measure participants' opinions, attitudes, motivations, or perceptions. It presents a range of options from one extreme attitude to another, and often includes a neutral or moderate midpoint.

In the context of the soft skills pre/post assessment questionnaires, a 5-point Likert scale iswas applied, ranging from "Not at all skilled" to "Very skilled." (e.g., Images 1 and 2). This format alloweds respondents to rate their perceived competence in each targeted soft skill area. By using Likert scales, the questionnaire can effectively quantify and capture the complexity of students' self-assessments, providing a clearer picture of their soft skills development before and after participating in the planned learning activities.

Scenario Based Multiple Choice Questions

Scenario-based multiple-choice questions present respondents with realistic situations and a set of predefined answer choices. These answer options may be phrased with descriptive wording or structured using a numbered rating format. As a closed-ended question type, scenario-based multiple-choice questions are effective for gathering quantitative data about how students might apply their soft skills in practical contexts.

In the soft skills pre/ post assessment questionnaires, the scenario-based multiple-choice question (Image 3) helpeds to measure students' ability to recognize and select appropriate behaviours or responses that demonstrate their competency in certain soft skills.

Image 1 – Example of Likert Scale Question for Pre-Assessment:

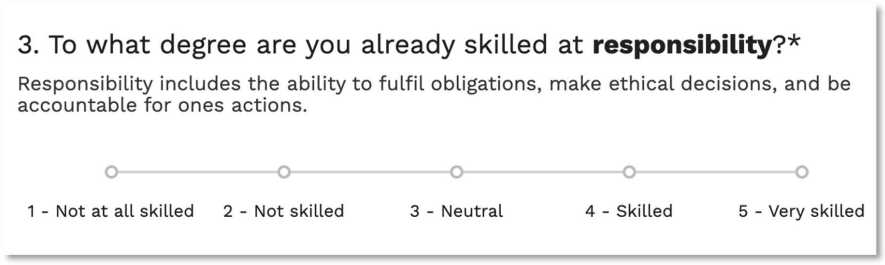


Image 2 – Example of Likert Scale Question for Post-Assessment

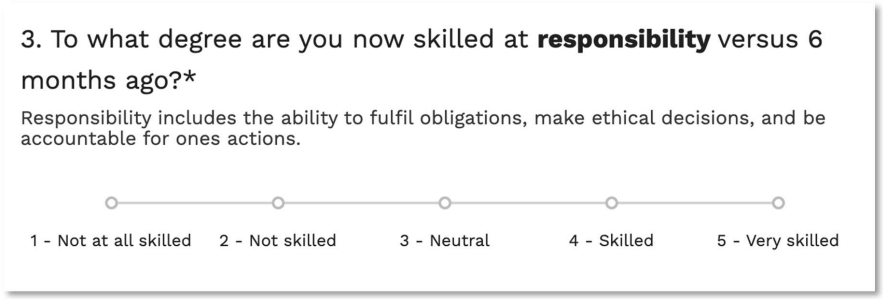
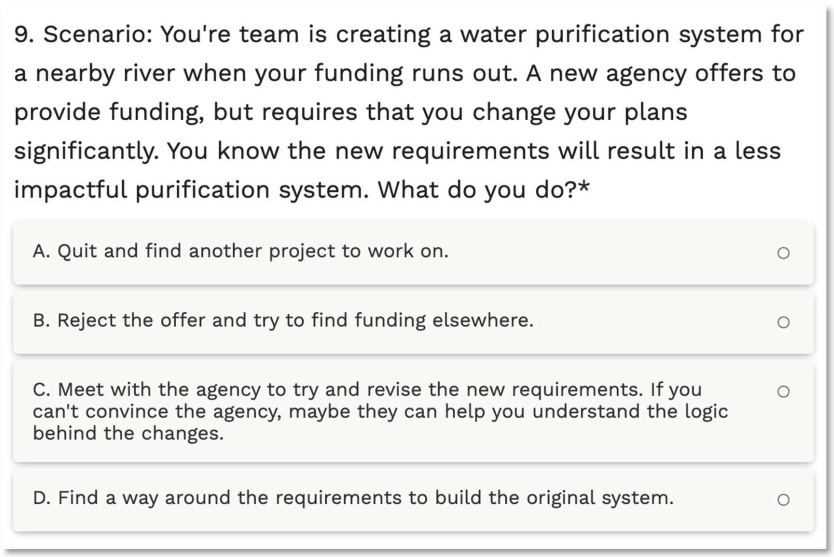


Image 3 – Example of Scenario-Based Question both Pre/Post Assessment



3.3 Gaps and Barriers

It is important to be aware of potential gaps and barriers that could affect the success of skill assessment across different contexts. These challenges may emerge during the development, implementation, or assessment of skills from training activities, and could influence both student outcomes and the quality of the evaluation processes.

During the implementation of the Skills4Water project, one of the significant challenges that hindered the development of training activities in the Serbian case studies was the political landscape. Due to the ongoing political climate and related protests, universities faced considerable backlash and disruptions, including government-led interruptions of classes. These circumstances created barriers to developing and delivering soft skills training in an effective and timely manner for students benefit.

Other examples of challenges were for instance activities that were not consistently conducted according to schedule, which may have created an environment of rushed or incomplete delivery.

Met opmerkingen [IL1]: This image needs the number and figure caption

4. Evaluation Criteria for Soft Skills Assessment

For each targeted soft skill, educators can identify evaluation criteria which will support them in evaluating the actual enhancement and development of young water professionals and students' soft skills. Examples of evaluation criteria can be found in Table 64.

Table 64 – Evaluation Criteria

Met opmerkingen [IL2]: Excellent table!!

Soft Skill	Example of Assessment criteria
Responsibility	1. **Meeting deadlines**: demonstrates the ability to manage time effectively by submitting assignments on time. 2. **Completing assignments**: Fulfilling academic assignments with thoroughness and attention to requirements. 3. **Being accountable**: Taking ownership of actions, acknowledging mistakes and following through with commitments. 4. **Ability to seek educators and/or peer support**: Reaching out for support when facing difficulties or in need of clarifications.
Motivation	1. **Engagement in learning** activities: Active participation in tasks, discussions and shows great interest and enthusiasm 2. **Attendance to classes and to water-related seminars**: Attends scheduled classes in a timely manner and voluntarily participates or shows interests in water related seminars and events.

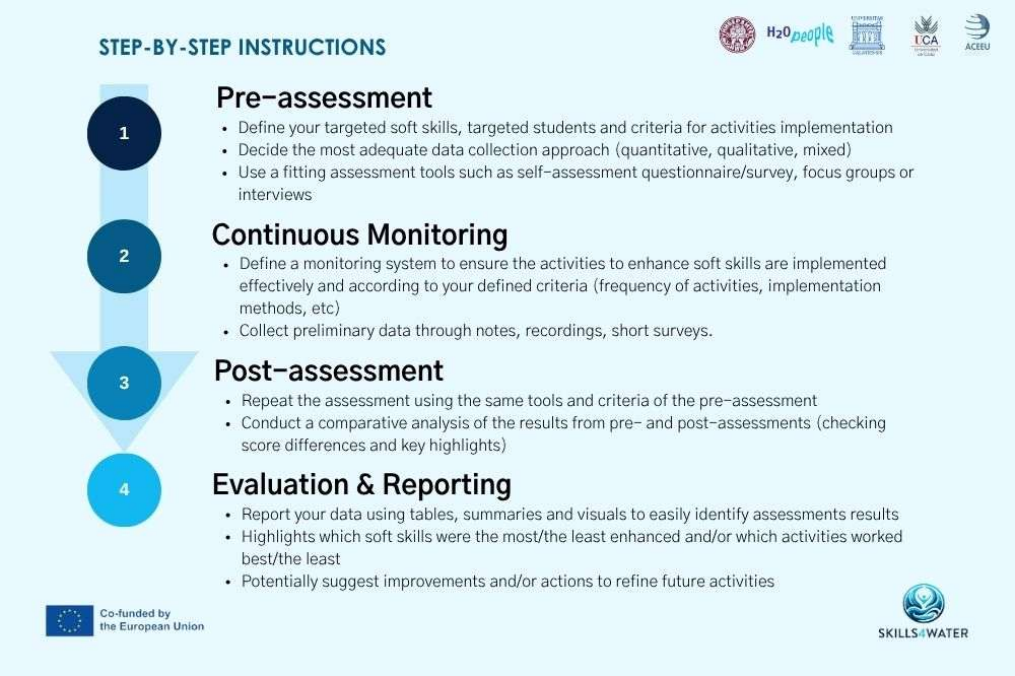
	3. **Participation during lectures**: Being proactive during classes by responding to and asking questions and participating in class discussions. 4. **Enrolling in supplementary courses**: An eagerness to seek additional learning opportunities out of interest.
Teamwork	1. **Collaboration within a team**: Cooperates with other team members by sharing ideas, responsibilities and working towards a common goal. 2. **Supporting peers in class and groups projects**: Assists and supports classmates by helping, sharing knowledge and promoting a safe work environment. 3. **Managing discussions and potential conflicts constructively**: Being open about disagreements while being respectful and diplomatic and focusing on resolutions that can maintain team cohesion.
Communication	1. **Clarity and coherence in presentations and class discussions**: The ability to present information in a logical and articulate manner 2. **Effectiveness in expressing ideas, concepts in both written and oral formats**: Expresses thoughts and information clearly in both writing and speech through suitable language and tone.
Problem Solving	1. **Problem Identification**: Identifies problems and clearly describes issues and challenges. 2. **Problem Analysis**: Logically analyses the issues by examining the cause, patterns and relevant information 3. **Problem Solution**: Develops and applies practical and evidence-based solutions.
Flexibility/ Adaptability	1. **Response to Unexpected Challenges/Problems/Changes**: Remains calm and collected when faced with changing situations or unforeseen events. Has the ability to adaptively tackle abrupt challenges. **2.** **Embracing New Ideas, Approaches, and Perspectives**: Openness to different viewpoints and methods. Willing to experiment with new and innovative approaches.

5. Recommendations

Performing assessment is not always easy and in the case of soft skills assessment in educational environments it can be even more tricky. Based on the practical implementation of assessments in three HEIs, as well as a review of tools and methods, the following Step-by-Step Instructions (Image 14) and Recommendations are provided to support educators and institutions in designing, conducting, and improving soft skills assessments.

Specifically, a successful assessment can be performed following a 4-step approach which includes: Pre-assessment, Monitoring, Post Assessment, and Evaluation and Reporting. Each phase includes adopting a series of steps which can facilitate the collection of data, pre- and post-activities implementation, their evaluation and finally, their reporting to provide overview and continuous improvement.

Image 4 – Soft Skills Assessment Implementation Instructions



Assessing the level of soft skills in students may result in facing unexpected challenges. These include: 1. lack of standardised of commonly understood definition (Kyllonen, ;2024), 2. difficulty in objective measurement (Heikkinen et al~~;~~, 2025), 3. low reliability of results due to self-reporting (Frontiers in Psychology~~;~~, 2024), 4. c~~C~~onducting assessment in contexts that are difficult to standards (i.e. teams and classes), 5. potential lack of assessment knowledge of educators. Because of these reasons, conducting a successful soft skills assessment should take into consideration setting a common definition of the soft skills to be assessed in order for all students to reflect and assess themselves based on definitions commonly understood. It should also take into consideration the variety of assessment tools at disposal (~~check~~ see chapter 2 on assessment methods and tools) as well as which of those tools, approaches and methods are the most fitting ones to the class environment or educational context.
~~Below are listed~~ A set of useful recommendations for educators and trainers are listed below.

1. STANDARDISE TOOLS AND METHODS FOR ASSESSMENT
Develop and adopt a consistent set of tools (e.g. rating scales, questionnaires) methods and assessment procedures (e.g. timing, frequency) to be used in different courses or educational modules will support ensuring comparability of assessment results as well as will contribute to reduce assessment variations such as educational contexts and teams.

2. PRESENT WATER-RELATED CASE SCENARIOS
As reported in chapter 3, including real-case scenarios on water-related challenges (e.g. drought management, sustainable water governance, pollution mitigation) will require students to enhance their soft skills and provide additional feedback on their usability.

3. USER-FRIENDLY TOOL TO CONDUCT THE ASSESSMENT

The assessments can be performed using a variety of tools and instruments. In order to increase the usability of the data collected as well as to improve the assessment experience for both students and educators, we recommend developing and/or using (digital) user-friendly tools such as survey and questionnaires (Google Forms, Paper-Form, Survey Monkey), focus groups, interviews and ~~quizzez~~quizzes (Kahoot; Quizzez).

4. INTEGRATE ASSESSMENT THROUGHOUT THE LEARNING PROCESS

In order to track progression and monitoring, not only of the activities implemented but also of their effectiveness and impact in enhancing soft skills, the assessment could be implemented ~~at different~~ at different stages: pre, during, post course. The assessment during the courses or modules can be performed through short surveys or checked in interviews.

5. USE THE ASSESSMENT RESULTS TO IMPROVE CURRICULA OR TO DEVELOP CUSTOMISED ONES.

Analyse assessment data to identify strengths and gaps in students' soft skills~~,~~ and feed these insights into curriculum design or redesign—at the module, programme, or institutional level. To ensure that soft skills development is purposefully embedded in teaching and learning, aligned with learners' needs and evolving societal and labour market demands.

6. TEACHERS/EDUCATORS/PROFESSORS IN THE POST-CURRICULUM ASSESSMENT

Engage educators actively in analysing post-assessment results, reflecting on teaching practices, and co-designing new learning strategies to support soft skill development. To foster a feedback loop between assessment and pedagogy, build educator capacity in evaluating soft skills, and ensure that improvements are grounded in classroom realities and expert judgement.

7. TRAIN EDUCATORS IN SOFT SKILLS ASSESSMENT

Finally, attending workshops on assessment, learning about data collection and accessing learning content on soft skills assessment (e.g. Skills4Water Assessment Guide) could support educators and trainers in better understanding and practicing soft skills assessment and evaluation, with the results of ensuring consistent and fair assessment, while building institutional capacity.

6. Conclusions

The Soft Skills Assessment Guide represents a contribution to supporting Higher Education Institutions in assessing and instilling key soft skills among students pursuing water-related curricula. By introducing practical tools for assessment, this guide empowers educators to measure and track the development of soft skills that are essential for preparing future water professionals to address complex and evolving industry demands. The case studies presented across Romania, Spain, and Serbia serve as a strong example, demonstrating the effectiveness of using well-designed questionnaires and appropriate question styles to assess students' soft skills. At the same time, these case studies highlight potential gaps and barriers that may hinder the assessment process. The evaluation criteria outlined in this guide provide clear reference points for educators to assess students' progress in each targeted soft skill area. When combined with the practical recommendations presented, including standardising tools and methods, integrating assessment throughout the learning process, and involving educators in reflective practice, these elements form a holistic structure for supporting the continuous development of soft skills in higher education.

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