



Validation Report

Prepared by:



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Validation Report of the Pilot Phase for Microcredentials

1. Introduction

This report presents the validation results of the pilot phase dedicated to testing two sets of microcredentials: three Italian microcredentials (MC) designed by Scuola Camerana and three Portuguese MC designed by C4G. The pilot involved Italian and Portuguese staff and teachers in both the design and assessment processes. The learner group consisted of colleagues and alumni.

2. Objectives of the Pilot Phase

- Evaluate the effectiveness of the designed MCs in addressing targeted skills and competencies.
- Assess the feasibility of the implementation process, including delivery and assessment methods.
- Gather feedback from participants (staff, teachers, and learners) to refine the MCs before full-scale implementation.
- Compare the approaches taken by Scuola Camerana and C4G to identify best practices and possible areas for harmonization.

3. Description of the Microcredentials

3.1 Italian Microcredentials (Scuola Camerana)

- MC 1: Utilizzo dell'AI a supporto della programmazione della Virtual Reality in Unity

The “Using AI to Support Virtual Reality Programming in Unity” microcredential focuses on the application of Artificial Intelligence to optimize the programming and development of Virtual Reality environments in Unity. Students will learn to use AI algorithms to assist in scripting to improve user experiences and create interactive and engaging environments. This microcredential provides basic skills in using AI for VR programming in Unity. The microcredential is aimed at users who use Unity software for VR applications and know the C# programming language. The main microcredential skills are the following:



- Understand the basics of programming in C# for Unity (basic logical operations, control expressions)
- Use prompt engineering to interact with the AI
- Understand the basics of how to interact with AI
- Configure the Unity game engine using AI support
- Configure the Unity game engine through AI for the development of Virtual Reality applications
- Use the Unity interface
- Understand and master the Unity navigation system
- Interpret the results provided by the AI chatbot
- Understand how to interpret and possibly modify and correct the results from the AI chatbot

- MC 2: Utilizzo base di Unity per applicazioni di Virtual Reality

The “Basic Use of Unity for Virtual Reality Applications” Microcredential provides basic training in using Unity to create virtual reality experiences. Students will learn to create interactive virtual environments using the Unity game engine. This microcredential offers practical skills and theoretical knowledge to enter the world of virtual reality and exploit the potential of Unity to create immersive experiences. The microcredential is aimed at users with basic C# programming skills. The main microcredential skills are the following:

- Understand the basic ways of configuring Unity's camera parameters
- Configure the lights
- Understand the basic configuration methods of the lights, defining the best lighting system, set-up of the lighting parameters
- Configure the audio
- Understand the basic ways of configuring audio parameters and the differences between 3D and 2D spatialized audio
- Configure game objects
- Understand the basic ways of managing game objects and their properties
- Use basic scripting to control the virtual environment
- Apply the basics of C# programming applied to Unity and develop appropriate data structures, with in-depth analysis of debugging functions

- MC 3: Set-up Macchine Utensili a Controllo Numerico

The "Set-up Numerically Controlled Machine Tools" microcredential provides practical skills to set up and prepare numerically controlled machine tools. Students will learn the set-up procedures, knowledge of the instructions for configuring the tool table of numerical control machines, tooling management and determination of the piece zero. This microcredential is



ideal for those who already have basic skills in metrology, mechanical processing and technical drawing reading and wish to acquire specialized skills in the metalworking sector through the use of numerically controlled machine tools.

The main microcredential skills are the following:

- Manage equipment
- Ability to efficiently manage the equipment necessary for the set-up and use of numerically controlled machine tools.
- Understand the instructions for configuring the tool table
- Understand the instructions necessary to correctly configure the tool table of numerically controlled metalworking machines.
- Assemble the tool assembly
- Ability to assemble the tool assembly of numerically controlled machine tools.

3.2 Portuguese Microcredentials (C4G)

- MC 1:Técnicas avançadas de Prompting

This micro-credential is intended for trainees to understand how language models work, adapt prompts to different contexts and optimize interactions for specific objectives. The main microcredential skills are the following:

- It is intended that trainees are able to create "Act-as" prompts
- Tone of voice and writing style
- Understand how ChatGPT can adjust the tone of voice and writing style for the same content in different contexts.
- Meta Prompts
- Creating advanced prompts to define and structure how a language model should respond to a complex task.

- MC 2: Introdução ao ChatGPT

This Microcredential aims to:

- Understand the fundamentals of artificial intelligence with a specific focus on ChatGPT
- Explore ChatGPT features, benefits and settings
- Empower participants to create effective prompts to maximize use of ChatGPT
- Be able to access and use ChatGPT
- Configuring ChatGPT
- Understand how you can customize ChatGPT's artificial intelligence
- Creating effective prompts



- Creating clear and effective prompts to generate accurate and relevant results

- MC 3: Operacionalizar o google calendar como equipa

This "Operationalizing Google Calendar as a Team" micro-credential aims to provide trainees with key techniques for organizing and coordinating team scheduling activities in Google Calendar. Participants will learn to: - be on the same calendar - understand abbreviations for scheduling - set their own or colleagues' meetings with Google Meet and Zoom. This micro-credential is ideal for teams looking to improve their efficiency and productivity when working together. The main microcredential skills are the following:

- Knowledge and understanding of abbreviations used for scheduling on Google Calendar, facilitating communication and interpretation of scheduled appointments.
- Meeting scheduling Ability to organize your own or colleagues' meetings using integrated tools such as Google Meet and Zoom, optimizing team communication and collaboration.
- Calendar Organization Ability to effectively organize and manage your team calendar in Google Calendar, ensuring all activities and appointments are properly scheduled.

4. Methodology

4.1 Design and Implementation

- Collaboration between Italian and Portuguese staff to ensure coherent frameworks.

Both staff, Italian and Portuguese, started from the results of the survey on the skills most in demand and from their experience in the field resulting from their daily dealings with companies, i.e. the real beneficiaries of the skills to be made available: the theme that emerged most strongly was artificial intelligence (AI).

However, the choice of the three micro-credentials to be implemented took other elements into account:

- Presence of internal know-how
- Availability of training material or the resources to produce it
- Availability of assessors, i.e. experts capable of evaluating the evidence.



- Appetite for possible pilot candidates.
- Possibility of differentiating areas and levels of in-depth study
- Adequate level of complexity towards learners

- Development of learning materials and assessment criteria.

The training materials were selected and integrated to be usable online. In order to guarantee the sustainability of the project results even after the end of the contractual period, materials suitable for self-training were selected, so as to ensure effectiveness even in the absence of support.

The evaluation criteria were defined within the MICOO platform and refined during the pilot. For each MC, the activities that the user was to do and the evidence that was to be produced were defined.

Each piece of evidence was evaluated according to four criteria: **relevance**, **credibility**, **consistency** and **detail**.

- Selection of participant groups (colleagues and alumni).

The groups for the pilot were composed with the support of teaching colleagues and alumni, who currently work in the company and have the right training sensitivity and at the same time are familiar with the company's needs and organisational constraints.

4.2 Assessment Approach

- Formative and summative assessments conducted by Italian and Portuguese evaluators

The summative evaluation was based on the evidence produced and the score produced by the use of the 4-criteria rubric (Relevance, Credibility, Consistency and Detail), although it was deemed necessary to include the possibility of giving feedback through a notes field. In this way, the evaluation, although summative, included formative elements capable of informing the user of the weaknesses of the results produced.

- Use of digital tools and in-person evaluations.

The evaluation took place exclusively through the MICOO tool (ASSESS app) without direct contact between evaluator and evaluated

Peer and self-assessment components have not been included in the evaluation process.



The modality adopted revealed some critical issues that have been addressed with appropriate additions and modifications.

1. Need to take into account the possibility of loading errors or misunderstandings in the loading of evidence. Where evidence is assessed as not relevant, it is excluded from evaluation and no further evaluation is allowed.
2. Need to weigh the weight of the elements assessed, so as to avoid flattening the micro-credential and not to discriminate between key elements that are particularly important in ensuring the successful production of professional outcomes, versus ancillary elements, which alone do not make a significant impact.
3. Difficulties in producing the quantity and quality of evidence necessary to 'reassure' the evaluator of the adequate level of professionalism required.

4.3 Data Collection

The operational methods of data collection were analysed in detail in the two pilot finalisation reports:

- [Pilot & Finalisation Report Italy- Download](#)
- [Pilot & Finalisation Report Portugal- Download](#)

5. Key Findings

5.1 Effectiveness of Microcredentials

- Participants reported high satisfaction with the relevance of the MC content.
- The evaluation technique implemented in the platform required several improvements to facilitate the work of the assessor, such as:
 - The way evidence is displayed/readable
 - Management of the use of videos, such as start and stop
 - Assignment of evaluations with feedback of the outcome
 - Clarity of the evaluation status in the eyes of the evaluator (passed/failed)
- Microcredentials portability in the labour market was evaluated very positive by users.

5.2 Feasibility of Implementation

- Time allocation for completion was adequate.
- Learners require technical assistance to use the platform.
- Differences in pedagogical approaches between Scuola Camerana and C4G were noted, with the decision to make greater use of the 'earn' approach, i.e. an MC



decoupled from the training component. C4G organized also specific F2F training sessions to support the acquisition of the MC's.

- Feasible assessment after several additions and modifications

5.3 Feedback from Participants

- Staff and teachers found the co-design process challenging due to the fact that microcredential design experience is based on a very practical approach focused on activities and skills
- Learners suggested improvements in evidence uploading, in particular video uploading and uploading from smartphone gallery
- Assessment strategies were perceived as adequate.
- Users appreciated Micoo Platform in terms of usability, web design, graphics and microcredentials portability.

6. Recommendations for Improvement

- Adjustments to assessment methodologies to ensure fairness and accuracy.
- Potential harmonization of design approaches between Italian and Portuguese MCs.
- Increase video upload space or set a compression system for videos
- Mobile App implementation
- Possibility to realize live interviews with assessors
- Chatbot implementation for online help
- Authenticity of evidences uploaded: it is necessary to carefully verify the authenticity of the evidence, as some of these, especially images and photos, may not be authentic or may have been generated by other people. From this perspective, videos are considered as strong evidence as through them it is possible to see users carrying out the activities required by the microcredential.
- It is important to reassure the learner that multimedia evidence of him/her in face and work or private environments will only be visible to the evaluator and possibly to those he/she decides to authorise for a limited time.
- Improve the portability of MC's by increasing the possibilities of sharing and saving in standard formats (currently available Open badge 2.0 and Europass).
- Improving the learner-side user experience in the direction of greater intuitiveness, so as to reduce the need for technical assistance.

7. Conclusion

The pilot phase provided valuable insights into the strengths and areas for improvement of both sets of microcredentials.



Pilot activity has proven that Micoo Platform is a powerful tool for the design and acquisition of microcredentials, also receiving very positive feedback from users in terms of usability and web design.

While the overall reception was positive, specific refinements are necessary to enhance the learning experience and ensure alignment with industry and educational standards. Further iterations and broader testing are recommended before full-scale implementation.

