

Competencies and Employability Beyond Borders: Formal and Informal Contexts

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Demographic and job market-related changes around the world require increased job and qualification mobility and dynamic adaptation, such as re-, up-, and sideskilling. Countries in Europe, e.g., lack qualified staff due to an aging society, while many young Africans are looking for opportunities without having the formal qualifications according to European standards.

Technological disruption creates new job profiles for roles that did not previously exist, while relevant training pathways to prepare workers for these jobs have yet to emerge. In all those cases, relevant competencies are readily available. Some upskilling might be required, but this could be built on existing qualifications. However, these qualifications are often not visible as they do not result from formal education and training offers. It is widely recognized that Open Badges provide opportunities to make those competencies visible, but often there are still no mechanisms in place to identify and assess them to be made visible in a trusted and reliable way.

How is it possible to bridge the gap between required qualifications and available skills and competencies? How can available qualifications be made visible in a trusted and reliable way? A cooperation between common sense and the University of Applied Sciences IMC Krems explored whether AI can assist in identifying relevant competencies for a use case in tourism.

The case describes a seasoned tourism staff member from an African country without formal training who wants to apply at an European five-star hotel. How can badges be issued which can be trusted by a high-level institution? How can Artificial Intelligence assist in creating assessments and competency descriptions to enhance employability? Can AI assist to translate between different competency frameworks? Can it provide a bridge between formal, non-formal, and informal contexts of competency acquisition?

A group of Master students worked on providing answers to these questions and developed a conceptual prototype. The prototype includes approaches for AI and human based assessments (including the interaction of AI and human assessors), competency descriptions and the issuance of related badges.

This presentation presented the results and outlined how they can be used to develop a stable framework for identifying and assessing competencies across borders and across

formal and informal contexts to issue badges that are reliable and trusted, thus creating employability and supporting job mobility. This also relates to an initiative with an African Government and its National Qualifications Authority aiming at setting up a National Skills Passport. Also discussed was the question of how skills, qualifications, and competencies can be identified and described to be used in different contexts of mobility, and how they can be translated and identified.

Concepts and approaches for the Recognition of Prior Learning were integrated. A supporting framework and taxonomy were developed to ensure quality and enable the interoperability, comparability, and stackability of credentials. This framework was reflected in metadata, which can support machine-readability for evaluation, and data analysis at scale. Thus, it can provide data-based evidence for initiating and implementing national re- and upskilling initiatives nationwide, while it supports job-, and skill-mobility at the individual level.

Keywords: Open Badges, AI-assisted assessment, Recognition of Prior Learning, skills mobility, informal learning, competency frameworks