Accessible Opportunities for Virtual Mobility Skills in Higher Education

Open Virtual Mobility

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1 What is virtual mobility?

Virtual mobility refers to a form of academic mobility in which students and teachers in higher education can study or teach by using digital tools and platforms without physically traveling to another higher education institution abroad. The Erasmus program, superseded by Erasmus+, has been one of the most well-known European programs promoting academic mobility of students and staff. Academic mobility supports personal development, fosters respect for diversity and other cultures, encourages linguistic pluralism, increases the capacity for cooperation and enhances 21st century skills which are crucial for citizenship and employability (Buchem et al., 2018).

Virtual mobility provides innovation in mobility with specific benefits. Virtual mobility as a form of academic mobility allows students and teachers to gain international academic experience without leaving their country. Virtual mobility can be especially beneficial for students and teachers who cannot travel due to issues related to health, finances or politics.

Virtual mobility also allows for a greater variety of studying and teaching modes, e. g. distance, part-time, online and personalized forms of education.

The European Commission defines virtual mobility in the following manner:
"a set of activities supported by Information and Communication Technologies, including e-learning, that realize or facilitate international, collaborative experiences in a context of teaching, training or learning." (European Commission, Erasmus + Programme Guide, 2019, p. 327).

Virtual mobility can be used to complement physical mobility, such as Erasmus+ mobility programs[1], or even replace physical mobility since no traveling is required. Education can take face-to-face, blended or online forms. This is also the case for mobility which always goes together with it. It can be short and long term, synchronous and asynchronous. ICT forms of teaching and learning amplify the potential of education and the mobility related to it.

[1] https://ec.europa.eu/programmes/erasmus-plus/programme-guide/part-b/three-key-actions/key-action-1/mobility-higher-education-students-staff_en

None of the forms of mobility is an alternative for replacing the other. Each form adds to the enrichment of education, offering students the opportunity to acquire international competences and skills. All forms of mobility can be offered separately or in combination.

The sequence of physical, blended and online mobility is usually based on the principles of international curriculum and course design. Virtual mobility can be employed by teachers and students to perform the following tasks:

- prepare for physical mobility (before traveling)
- create blended mobility (combined physical and virtual mobility)
- follow up on physical mobility (after traveling)
- participate in international mobility without physical mobility (no traveling)

As the above list of uses of virtual mobility provides just some examples, other uses could be added.

Virtual activities can take on various virtual elements to include cooperations, exchanges, campuses, classrooms, seminars, laboratories, demonstration centers, collaboration centers, communities, learning platforms, internships, and workplaces adapted to labor-market needs (cf. European Commission, 2019). Virtual mobility is based on a contract between universities (to facilitate the recognition of credits) and not between a student and a university. Fully facilitated virtual mobility is aligned with course offers of a cooperating university and allows students to have their credits accepted at their home university. Such programs provide access to online libraries and student support. Students can also study at several universities online and build / set up a personalized study program.

2 What is open virtual mobility?

Virtual mobility opens up traditional borders of higher education: Students and teachers can enrich their personal learning activities by studying together, interacting and collaborating with learners from various universities, as well as from different cultures and contexts, and in this way enhance their 21st century skills (Voogd & Pareje Roblin, 2010).

Although Virtual Mobility has the potential to provide new pathways to academic mobility, it also has some limitations. Since virtual mobility is “organized at an institutional level,” it is based on formal cooperation agreements between universities and requires virtual mobility programs to be fully embedded in core processes of the cooperating institutions (Op de Beeck, 2013). However, there are many activities initiated by individual teachers or students which are not based on formal agreements, yet still have a high potential for teachers and students to develop important 21st century skills like collaborating, networking and working with digital tools and resources. Such activities include non-formal collaborations between teachers and student groups in specific courses (e. g. virtual learning communities), creation and use of Open Educational Resources (OERs) as well as production and participation in non-formal online courses including Massive Open Online Courses (MOOCs).

Therefore, Open Virtual Mobility was proposed as a new term by the nine partner organizations in the OpenVM strategic partnership to describe a non-formal approach to virtual mobility based on the principles of Open Education. Open Education is an umbrella term which has been discussed as a significant element of the European educational policy agenda. Open Education principles applied to higher education in Europe include the following activities: (a) reducing or removing access barriers such as financial, geographical, time and entry-requirement barriers, (b) modernizing higher education in Europe by means of digital technologies, and (c) bridging non-formal and formal education by making it easier to recognize learning achievements (Inamorato dos Santos, Punie & Castaño-Muñoz, 2016). Both Virtual Mobility and Open Education aim to enhance international knowledge flows, employ digital media, improve teaching and learning, attract and keep talented personnel through internationalization, innovation and capacity-building (Buchem et al., 2018).

The theoretical framework applied in the OpenVM project to define Open Virtual Mobility is the OpenEdu framework developed by the Joint Research Centre of the European Commission. The OpenEdu framework takes a holistic view and proposes ten dimensions of Open Education with the following six core dimensions: access, content, pedagogy, recognition, collaboration and research. Moreover, there are four further transversal dimensions: strategy, technology, quality and leadership. The core dimensions represent what is included, whereas transversal dimensions indicate how to achieve it (Inamorato dos Santos, Punie & Castaño-Muñoz, 2016). Each dimension interrelates with all other dimensions and allows for varying degrees of openness in higher education. The model is employed in the OpenVM project to apply a holistic strategy for opening up virtual mobility along these ten dimensions.

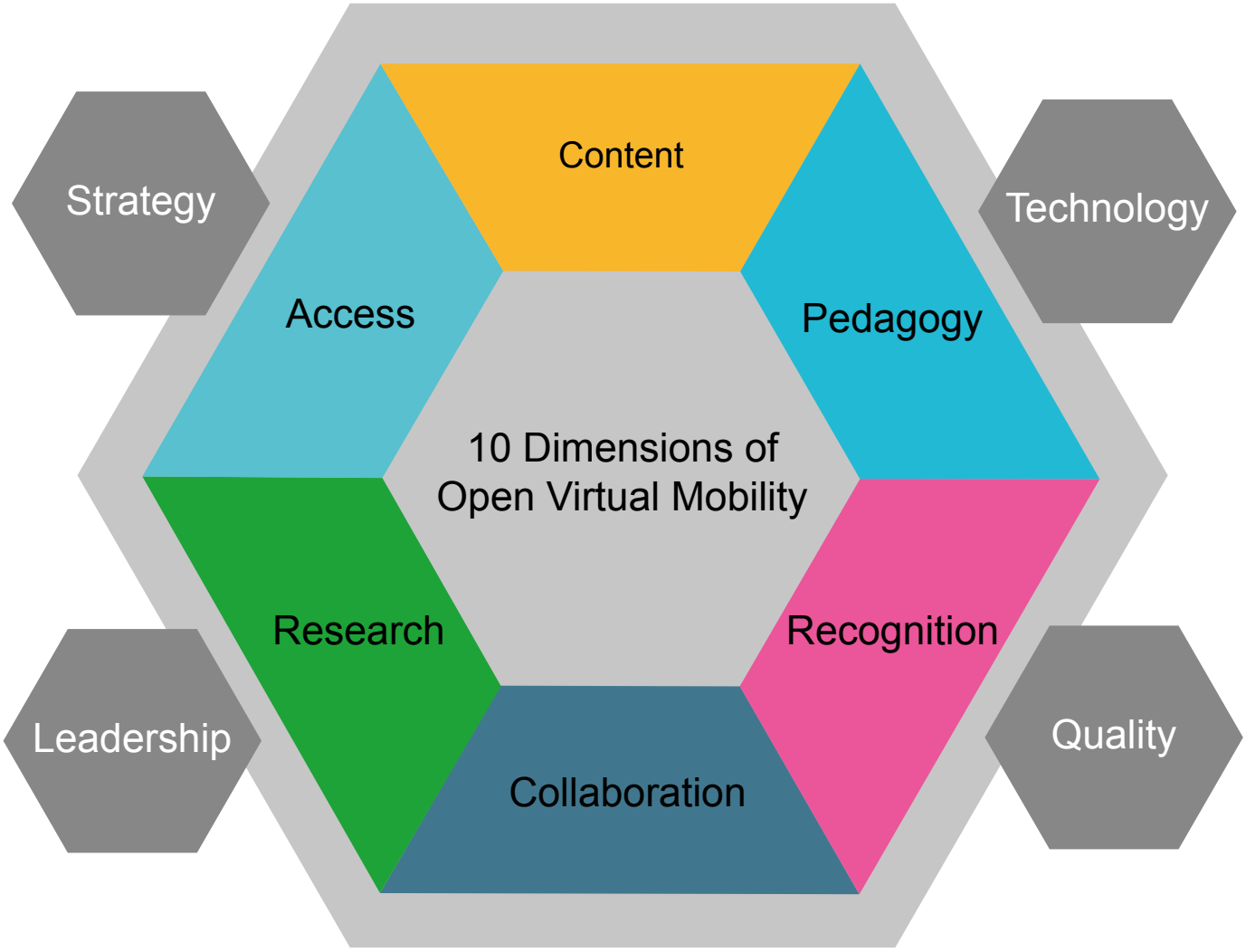

Figure 1: Visualization of OpenEdu Framework applied to Virtual Mobility

3 What is the OpenVM project

Open Virtual Mobility project (abbreviated: OpenVM) is a three year (2017-2020) strategic partnership for innovation and the exchange of good practices founded by the European Erasmus+ program of the European Commission.

Altogether ten European organizations from higher education work together in the OpenVM project. These organizations are as follows:

1. Beuth University of Applied Sciences Berlin, Germany (coordinator)
2. Open University Netherlands, Nether lands
3. Politehnica University of Timisoara, Romania
4. Università Roma Tre, Italy
5. Fondation UNIT/AUNEGE, France
6. University of Balearic Islands, Spain
7. Consorzio Interuniversitario Cineca, Italy
8. Katholieke Universiteit Leuven (KU Leuven), Belgium
9. European Association of Distance Teaching Universities (EADTU), Netherlands
10. European Distance and E-learning Network (EDEN), (associated partner), UK

The objective of the OpenVM project is to enhance the uptake of virtual mobility in higher education by enabling virtual mobility and supporting teachers and students in higher education in developing skills required for successful participation in and/or preparation of virtual mobility. The possibilities and benefits of virtual mobility are still unknown to a great number of teachers and students in Europe (Dauksiene, 2010). Dauksiene (2010) pinpoints some of the key barriers impeding Virtual Mobility implementation on a wider scale in higher education in Europe. These include a lack of knowledge and/or the lack of consensus about the concept of Virtual Mobility on the national and institutional levels, the lack of examples of Virtual Mobility in practice and applicable scenarios for Virtual Mobility implementations, the lack of knowledge and/or experience in recognizing and accrediting Virtual Mobility activities, and the lack of evidence about the effectiveness of Virtual Mobility at various levels, e. g. its contribution to physical mobility, intercultural experience, and internationalization.

For more information, please visit the Open Virtual Mobility project website and the Open Virtual Mobility Learning Hub respectively:

1. https://www.openvirtualmobility.eu/
2. https://hub.openvirtualmobility.eu/login/index.php

4 What is the OpenVM Learning Hub

One of the key outcomes of the Open Virtual Mobility project is the Open Virtual Mobility Learning Hub (OpenVM Learning Hub)[2], an online learning environment for the development, assessment and recognition of virtual mobility skills in higher education.

The OpenVM Learning Hub hosts a set of eight mini-MOOCs, in each of the eight competency areas. Each mini-MOOC is dedicated to a specific competency cluster needed for successful engagement in virtual mobility. In each mini-MOOC the learner can study at one of three levels: Foundations, Intermediate and Advanced (see sections below for more information). The OpenVM Learning Hub also includes a repository of Open Educational Resources, which is also available at the project website.[3] Additionally, the OpenVM Learning Hub offers a marketplace in which students and teachers can share information about their own offers with others and look for available virtual mobilities, as well as open virtual mobility activities and programs.

The OpenVM Learning Hub incorporates several components, services, technologies and tools. The OpenVM Learning Hub is based on the Learning Management System Moodle 3.6 as a backend system with the following integrated components:

- Open Badges integration with the partner badging platform Bestr via xAPI
- Semantic Competency Directory for referencing competencies to Open Badges and for mapping the compe tencies to the ESCO framework[4]
- H5P interactive content functionality for the creation of OERs
- E-Portfolio System Mahara for skill assessment at an advanced level
- Moodle Gamification Plugins for mea ningful gamification
- Group Formation Tool for algorithmic, feature-based learning group building
- Self-assessment tool

[2] https://hub.openvirtualmobility.eu/login/index.php
[3] https://www.openvirtualmobility.eu/oer/
[4] ESCO is the European Skills/Competences, Qualifications and Occupations (ESCO Framework
https://ec.europa.eu/esco/portal/home

The OpenVM Learning Hub is a multilingual online learning environment which promotes collaborative learning, connectivist social networking as an instructional method, OERs as content type, and open digital credentials for recognition and validation competencies. It provides a user-friendly interface including a mobile interface to encourage all learners to access the hub easily, engage in a variety of open learning activities, and connect with other users and develop their OpenVM competencies[5] [6].

Figure 2: Picture of the OpenVM Learning Hub

[5] Andrei Ternauciuc, Radu Vasiu, Vlad Mihaescu, and Diana Andone. „Integrating Open Technologies in the Virtual Mobility Learning Hub.“ In 2019 IEEE 19th International Conference on Advanced Learning Technologies (ICALT), vol. 2161, pp. 24-28. IEEE, 2019.

[6] Diana Andone, Andrei Ternauciuc, Vlad Mihaescu, and Silviu Vert. „Developing the Open Virtual Mobility Learning Hub.“ In European MOOCs Stakeholders Summit, pp. 111-120. Springer, Cham, 2019.

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5 Why should I take OpenVM MOOCs?

Massive Open Online Courses (MOOCs)[7] available in the OpenVM Learning Hub are specifically designed to support learners in developing competencies required for successful engagement in virtual mobility, in order that students intending to engage in Virtual Mobility can leverage the MOOCs to prepare for the experience or as a support during the experience.

Each MOOC is dedicated to one of the eight competency clusters and includes engaging learning activities (both individual and group-based), interactive Open Educational Resources (OERs), self-assessment and digital credentials which recognize competencies that learners have developed in each MOOC. Learners can develop competencies in the following eight competency clusters:

1. Media and digital literacy
2. Active self-regulated learning skills
3. Autonomy-driven learning
4. Networked learning
5. Intercultural skills and attitude
6. Interactive and collaborative learning in an authentic international environment
7. Open-mindedness
8. Open virtual mobility knowledge

These eight competency clusters are the result of Group Concept Mapping research conducted in the OpenVM project with students and teachers in higher education.

[7] https://hub.openvirtualmobility.eu/my/

All OpenVM MOOCs are designed as mini-MOOCs. Mini-MOOCs are smaller, shorter, and cover less content and fewer skills than traditional MOOCs, which are much longer and can be difficult to complete (Clark, 2016). The granular structure of OpenVM mini-MOOCs addresses the engagement and motivation-loss problem in longer online courses. The series of eight mini-MOOCs aims to facilitate just-in-time and on-the-go learning.

If the choice of the mini-MOOC is not imposed, learners can test their prior OpenVM skills via a self-assessment tool.
Based on the results of the tool, they can know their strengths and weaknesses and choose to follow, for example, the mini-MOOCs for which they have the lowest scores.
Learners thus have access to personalised and flexible learning paths.

Each OpenVM mini-MOOC is divided into three brief parts, called “levels” – Foundations, Intermediate and Advanced. With each mini-MOOC broken down into three levels, learning pathways can be designed by individual learners depending on their initial and intended competency levels. To assess the initial level of a given skill, each mini-MOOC starts with a pre-assessment of competencies. Based on the results of the pre-assessment, one of the three levels is proposed to the learner, who can decide to follow a recommended pathway[8].

In this way learners can study in a flexible, modular manner in accordance with their own interests, needs and preferences.

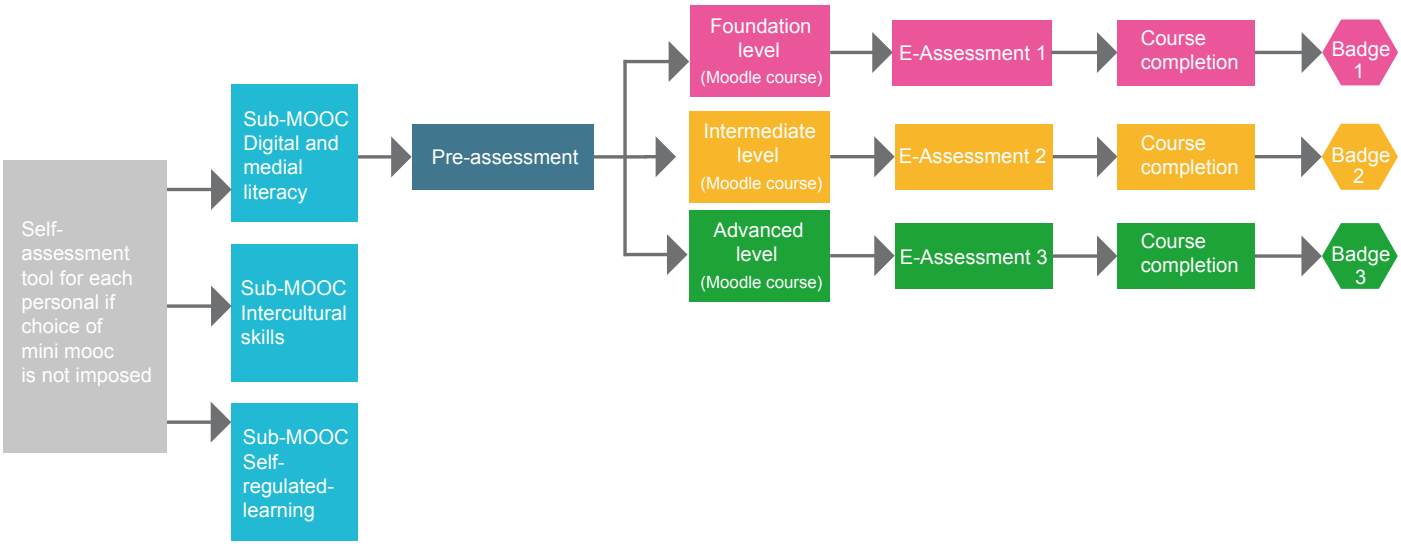

Figure 3: Structure of MOOCs

[8] Poce, A., Re, M. R., Amenduni, F., & Valente, M. (2019). MOOC and OERs in a Virtual Mobility Experience. In EMOOCs-WIP (pp. 181-186)

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OpenVM mini-MOOCs are designed in accordance with the principles of Constructive Alignment as proposed by Biggs (1996). They align micro-learning objectives, activities and assessment with digital micro-credentials. In this way learners know from the start what and how they will proceed with the learning process and how their competencies will be recognized with digital credentials. Furthermore, OpenVM mini-MOOCs are designed in accordance with the meaningful gamification approach and aim to enhance the learning experience through less emphasis on external rewards and more emphasis on learner control and ownership (Buchem & Carlino, 2019). Meaningful gamification encourages learners to become active co-designers of their own learning pathways.

Furthermore, the OpenVM mini-MOOCs have been designed in order to enhance autonomous and self-regulated learning. In order to do that, there are numerous hints/tips/suggestions to show information that can support the students in their decision-making.

For example, there is an introductory piece of information about the possible pathways in each of the mini-MOOCs. Also, there is information about the type of each OER used in a given learning activity and tutorials for taking/making self-assessments. The information on the previous and following learning activities along with the image of the related Open Badge on the right side of the screen allow learners to be aware of the stage of learning they are at.

The eight OpenVM mini-MOOCs are high quality courses whose design is the product of an iterative cycle of foundation, design, development and assessment. All OpenVM mini-MOOCs are/were launched after a process of research-based design (Reeves, 2006) along with a piloting stage during which data from various learner groups is collected and employed to improve the product and optimize it for meeting learner needs.

6 What skills can I develop in OpenVM MOOCs?

The OpenVM mini-MOOCs provide learners an opportunity to develop skills for successful participation in virtual mobility. The OpenVM project defined eight main competence clusters for virtual mobility, each including a number of skills and subskills.

In order to determine which competencies, skills and subskills are relevant for successful participation in virtual mobility, an empirical study using Group Concept Mapping (GCM) was conducted (Kane & Trochim, 2007) with European experts in both Virtual Mobility and Open Education. Based on the outcomes of the GCM study, seven competence areas were identified including their constituent skills and subskills. Furthermore, an additional, eighth, competence area on the knowledge of the concept of (open) virtual mobility was added to the OpenVM competence framework.

In OpenVM mini-MOOCs the following eight OpenVM skills can be developed:

1. Media and digital literacy
2. Active self-regulated learning skills
3. Autonomy-driven learning
4. Networked learning
5. Intercultural skills and attitude
6. Interactive and collaborative learning in an authentic international environment
7. Open-mindedness
8. Open virtual mobility knowledge

Media and Digital Literacy

Demonstrating learner control

- Bring high level of self-regulation competency to the online collaboration aspect
- Set one's own learning objectives
- Organize content and schedules

Being proficient in assessing quality in courses and resources found online

- Profiency in assessing course and OER quality

Being proficient in using online learning technologies

- Awareness of the differences between on- and offline
- Proficiency in searching for new courses & resources and
- Profiency in using digital platforms
- Profiency of independent use of tools for online communication

Autonomy-driven learning

Demonstrating selfdirectedness in decisionmaking on own learnin

- Develop learning self-regulation strategies
- Develop persistence and creativity in organizing one's own study

Demonstrating independent learning

- Be able to study in a flexible way, independent of time and place
- Enhance lifelong learning skills
- Adapt and further develop knowledge of Open Education ICT tools
- Learn in an open digital context

Interactive and collaborative learning in an authentic international environment

Enhanced team work skills

- Enhace team work skills

Collaboratiing with peers from different disciplines

- Exchange knowledge with peers from different disciplines
- Interact and collaborate with peers from different disciplines

Collaboratiing with peers within the context of an international learning experience

- Experience different learning methodologies
- Have a learning experience different from learning offline and in own country
- Collaborate in the open digital contexts

Interacting with authentic international resources in a foreign language

- Interact with libaries and databases, in other countries in a foreign language
- Access to and use of authentic resources in a foreign language

Active self-regulated learner skills

Being able to self-regulate learning processes

- Be self-responsible
- Be self-disciplined
- Be able to plan & organize one's own learning
- Be pro-active

Being able to self-reflect on learning experiences

- Be able to reflect on one's own learning process
- Be communicative

Demonstrating ownership over own learning(attitude)

- Being motivated to learn
- Be constructive towards the course goal
- Have both digital and cultural competences

Networked learning

Engaging in digital networking

- Be able to use networks(being „networking savvy“) for learning
- Learn to work and cooperate in an international setting with the use of ICT and social platforms
- Enhance international and digital competence

Dealing with complexity in networked learning

- Cross boundaries in learning
- Learn how to deal with complex situations
- learn how to deal with ambiguity

Open-Mindedness

Being open-minded and tolerant

- Be open-minded
- Be tolerant

Demonstrating self-confidence in interaction with peers and teaching staff

- Be not afraid of interacting with peers or teachers at other institutions

Show willingness to improve proficiency in foreign languages

- Be proficient in foreign languages
- Be willing to further improve profiency in foreign languages

Intercultural skills and attitude

Gaining cultural knowledge

- Gain knowledge about the culture they „visit“
- Get to know other cultural-based perspectives of education

Enhancing own cultural identity

- Gain knowledge about own culture
- Become self-aware of their own cultural identity

Understanding cultural perspectives

- Improve understanding of intercultural issues at general and disciplinary level
- Get a feeling of how learning (or teaching) is like in a different country

Enhance cultural understanding

- Gain international, intercultural experiences
- Experience different cultural settings (in all its facets) through online courses
- Exposure to different working and cultural backgrounds

Demonstrating cultural understanding

- Direct interaction with peers from other cultural settings during VM activities
- Exchange knowledge with peers from different cultural settings
- Be able to deal with intercultural issues

Applying intercultural awareness in culturally challenging circumstances

- Learn to reserve judgement on the people you work with, to avoid cultural misunderstandings
- Become self-aware of the cultural prejudice
- Can deal with intercultural issues
- Feel confident in interacting with people from other cultures

Figure 4: Competency clusters and subskills

7 How can I assess my skills in OpenVM MOOCs?

Learners in OpenVM MOOCs have a number of opportunities to assess their virtual mobility skills, including automatic self-assessments and human-supported evidence-based assessments.

The e-assessment of virtual mobility skills also includes diagnostic, formative and summative assessments:

- Diagnostic assessment is a form of pre-assessment and allows learners to determine the level of their own skills prior to taking a mini-MOOC.
- Formative assessment is employed to provide feedback during the learning process within each mini-MOOC level.
- Summative assessment provides a final evaluation of skills and is conducted at the end of a mini-MOOC level.

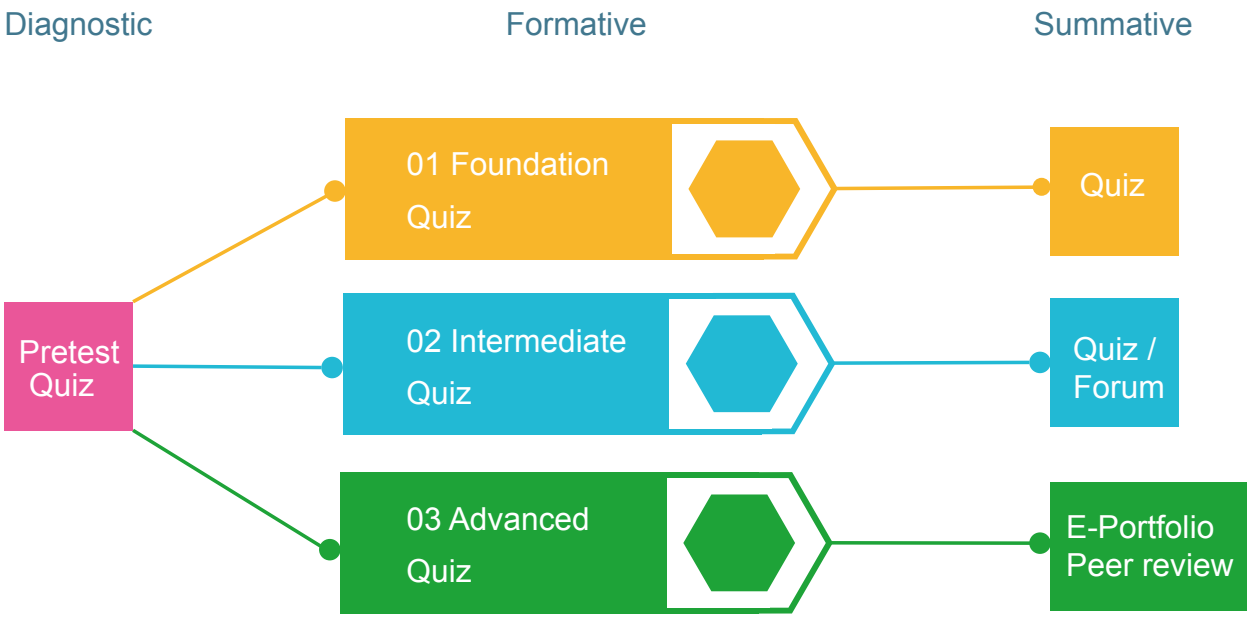

Figure 5: Types of E-Assessments applied in OpenVM MOOCs

These two types of e-assessment are available to learners in OpenVM mini-MOOCs:

- automated e-assessment based on a test score (e-tests)
- non-automated e-assessment based on evidence of learning (e-portfolios) and combined with peer review (peer assessment)

Summative assessment in OpenVM MOOCs is combined with the OpenVM Credentials which are issued as part of the project summative e-assessments. Assessment has been designed in accordance with the principle of constructive alignment, i.e. in line with the learning objectives and learning activities. At foundation and intermediate levels, the learning objectives are rather low (in the sense of Bloom) and focus more on the acquisition of knowledge than skills. Also for these levels the evaluations consist of e-tests well adapted to the measurement of the acquisition of knowledge.

For the advanced levels of the mini MOOCs, the evaluation and activities focus more on the control and implementation of skills (preexisting or acquired during the MOOC). For this purpose, activities such as the e-portfolio, through which the student can provide evidence of his or her skills, are used as well as a peer assessment of what is included in the e-portfolio. These two activities make it possible to achieve high-level learning objectives (in the Bloom sense) and also to evaluate competencies that are more complex to evaluate than simple knowledge. Learners can evaluate themselves on the knowledge acquired but also in a more personalized way regarding individual skills. The assignment of learning partners is optimized by a group-formation algorithm which uses answers provided by learners to a questionnaire. This data is employed to improve the quality of learning outcomes in the learning group (Bellhäuser et. al, 2018).

8 How can I demonstrate and share my skills?

Learners in OpenVM MOOCs receive shareable digital proof of the skills developed in mini-MOOCs in the form of digital credentials. OpenVM Credentials are based on the Open Badges standard.[9] Open Badges are the emerging standard to digitally valorize learning outcomes and to communicate learning achievements by providing visual symbols of accomplishments packed with / accompanied by verifiable data and evidence that can be shared across the web (Mozilla Foundation, 2016).

Initiated by the Mozilla Foundation in 2011, the Open Badge standard has been adopted worldwide by individuals and organizations including higher education to recognize specific competencies, which would often remain unrecognized and/or are not included in formal degrees and certificates. Open Badges employ a form of Portable Network Graphics (PNG) with embedded metadata allowing for the verification of validity and ownership (Buchem et al., 2018).

Open Badges provide a digital, open and flexible way to define skills and competencies, identify them visually and issue proof of competency mastery to learners which can be accompanied by evidence.

OpenVM Open Badges describe the OpenVM skillset coherently with the skills identified in the GCM activity; Open Badges also link to the competency directory in which competency descriptions are human- and machine-readable to allow exploration of relations between competencies (Konert et al., 2019). The criteria that need to be met to obtain a specific Open Badge are expressed transparently and have a specific connection with the activities required by the mini-MOOCs in the OpenVM Learning Hub.

[9] https://openbadges.org/

In the OpenVM Learning Hub, OpenVM Credentials can be earned upon successful completion of a specific level of a mini-MOOC level. Each mini-MOOC ends with an OpenVM Credential which recognizes a particular skill at Foundations, Intermediate or Advanced Level. Upon successful completion of each level of the mini-MOOC, the learner can earn an OpenVM Credential which certifies the learner's competencies at a particular level.

For example, each of the three levels in the mini-MOOC on intercultural skills end with one OpenVM badge, which is issued to each individual learner:

1. Intercultural skills: Foundations Level[10]
2. Intercultural skills: Intermediate Level[11]
3. Intercultural skills: Advanced Level[12]

In order to certify their skills, the learners have to complete all required activities and pass all e-assessments in a given mini-MOOC. For automated assessments (e-tests), at least 50% of the overall score must be achieved in order to pass this e-assessment.

Open Badges, as a granular form of OpenVM Credentials, each recognizing a particular skill at a particular level, create a unique system of micro-credentials.

The OpenVM Credentials make the learning outcomes visible and achievable for learners. There are altogether 24 OpenVM Credentials which recognize virtual mobility skills in eight skill types multiplied by three levels (Foundations, Intermediate, Advanced). OpenVM Credentials are issued and hosted on the Bestr platform in order to highlight to learners that such credentials – and the related skills – are based on a didactic activity but are a precious resource that can be exploited/utilized outside of the didactic frame. Placement of Open Badges on Bestr invites students to visualize other skills that other institutions have deemed relevant in the perspective of lifelong learning, and allows users to benefit from new features that might be activated on the platform. Advanced Level mini-MOOCs credentials are issued not only as Open Badges but also as Blockcerts,[13] as a way of differentiating the more advanced achievement and as an experimentation opportunity for the project.

[10] https://bestr.it/badge/show/884
[11] https://bestr.it/badge/show/883
[12] https://bestr.it/badge/show/913
[13] https://blog.bestr.it/en/2019/06/13/blockcerts-bestr-faq

9 How can I use OpenVM Credentials?

The OpenVM project uses open digital credentials to value and recognize virtual mobility skills which learners have developed through participation in mini-MOOCs. OpenVM Credentials are based on the Open Badge standard and issued through the Bestr[14] digital platform of the project partner Cineca.[15] The Bestr platform is employed to store, issue and display Open Badges. All Open Credentials issued in the OpenVM project can be viewed on the Bestr website[16] dedicated to the OpenVM project.

OpenVM Credentials can be displayed and shared as verifiable records (digital certificates) in digital media selected by the learners. For example, learners can display their OpenVM Credentials in the Learning Management System of their university, in an E-Portfolio System like Mahara or on a professional social networks like LinkedIn.[17] [18]

They can be inserted in a digital résumé[19] or on a professional personal website,[20] credentials can be downloaded in the standard Open Badge format in order to be verified, stored and managed on platforms of the student's choice. The Blockcerts format can also be downloaded where available in order to be shared and/or independently verified. Finally, the student can share the this particular "award" web page for his/her credentials, on which the reader will be able to view all information and access the available digital formats (Open Badge and eventually Blockcerts).

[14] https://bestr.it
[15] https://www.cineca.it/en
[16] https://bestr.it/project/show/107#
[17] https://blog.bestr.it/en/2017/05/24/how-do-i-add-badge-my-linkedin-profile
[18] https://blog.bestr.it/en/2018/02/01/how-add-badges-your-curriculum-vitae
[19] https://blog.bestr.it/en/2017/07/31/add-your-badge-your-website
[20] https://mahara.org/

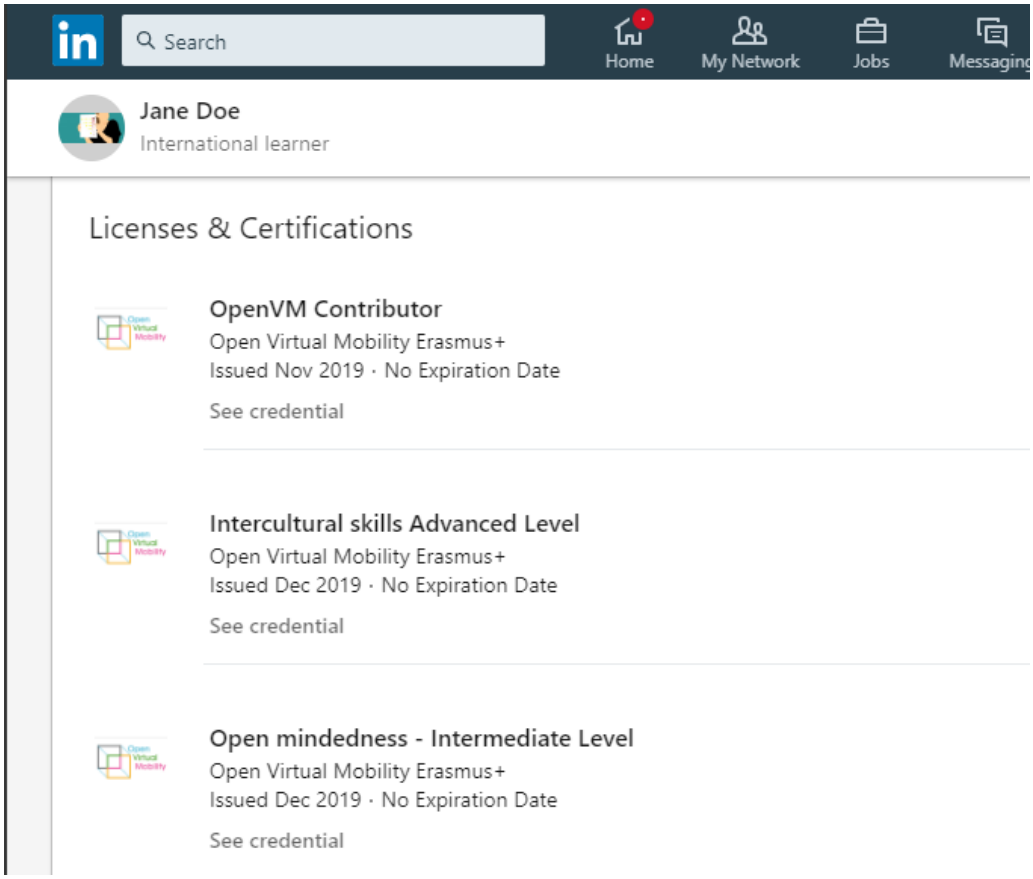

Figure 6: OpenVM Credential displayed in a LinkedIn profile

Here is the guide to „How do I add a badge to my LinkedIn profile?“ https://blog.bestr.it/en/2017/05/24/how-do-i-add-badge-my-linkedin-profile

Each OpenVM Credential is a digital certificate which includes information – so-called metadata – about the skills certified by the OpenVM Credentials (Field: Skills), the criteria used to issue each credential (Field: Criteria), and information on the issuer (Field: Issuer). This metadata is encoded in the PNG picture of the OpenVM Credential in accordance with the Open Badge standard.

The learner can employ earned OpenVM Credentials on platforms of their choice for various aims, like the following:

- to share information about acquired skills with teachers and peers
- to display information about acquired skills to potential employers
- to reach a wider audience with their online profiles

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