



# **D1.3 Institutional Guidelines and recommendations for successful implementation of OCW**

*In the context of virtual mobility*

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## Title

Guidelines and recommendations for successful implementation of OCW

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## Project

OpenCourseWare in the European Higher Education Context:

*how to make use of its full potential for virtual mobility with the support of the Lifelong Learning Programme of the European Union*



## Partners

- Delft University of Technology (TUD)
- Universidad Politécnica Madrid (UPM)
- Universitat de Barcelona (UB)
- Katholieke Universiteit Leuven (KU Leuven)
- Université de Lyon, VetAgro Sup
- OpenCourseWare Consortium (OCWC)
- Creative Commons (CC)
- European Association of distance Teaching Universities (EADTU)

## Website

<http://opencourseware.eu>

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## Abstract

This report is the results of an European education project funded by the Lifelong Learning Programme of the European Union called "Open Course Ware in the European HE context: How to make use of its full potential for virtual mobility?".

The Consortium partners consider OpenCourseWare (OCW) to be an essential component of the development of virtual mobility. However, the Consortium partners are convinced that OCW's potential (in the context of virtual mobility) is still underutilized. The possibilities of OCW are not yet well known to students. Pedagogical aspects to enable self-study for a wide range of users are sometimes neglected. Issues in terms of cultural differences, recognition, quality control, interactivity and support (either from fellow students or teachers) impede large-scale utilization.

Academic mobility, in general refers to students and teachers in Higher Education moving to another institution inside or outside their own country to study or teach for a limited time. Virtual Mobility (VM), for instance; stands for the use of information and communication technologies (ICT) to obtain the same benefits as one would have with physical mobility but without the need to travel. Or, in other words, it is a form of learning that consists of virtual components shared through an ICT supported learning environment that includes cross border collaboration with people from different backgrounds and cultures. VM is relatively a new concept, and it is still 'under development'.

Based on our experiences in past and recent projects, we would like to combine the concept of virtual mobility and the OCW environment. This report is the result of this. The focus of the report is the creation of guidelines and recommendations for successful implementation of OCW that institutions can use implementing a virtual mobility programme.

The state of the art of the overall report contains a classification of three different subcategories: OER/OCW related quality criteria, standards and policies on quality in e-learning and publication of courses; and last but not least, standards and policies on quality in virtual mobility.

From the state of the art research and after an analysis of the same, we created a proposal of a quality model for the implementation of OER in the context of virtual mobility. In addition, we present a proposal for a quality model for the successful implementation of OCW in virtual mobility. This model is represented through domains, features and indicators (terms that we defined and described in details within this document).

As the name of the document speaks for itself, this report ends with a global recommendations, best practices and conclusions for the virtual mobility scenarios for students, described with details in the report 'Promoting virtual mobility scenarios through OCW in the EU context'.

## **Glossary of abbreviations**

VM – Virtual mobility

OCW – Open Course Ware

HE – Higher Education

HEIs – Higher Education Institutions

EU – European Union

OERs – Open Educational Resources

EFQM - The European Foundation for Quality Management

ECTS – European Credit Transfer and Accumulation System

CC – Creative Commons ICT - Information and Communication Technologies

## 1. Introduction

*This document provides a proposal of a quality model with guidelines and recommendations for virtual mobility for the successful implementation of OpenCourseWare in Higher Education Institutions. The Consortium partners consider OCW to be an essential component in the development of virtual mobility. However, the Consortium partners are convinced that OCW's potential (in the context of virtual mobility) is still underutilized. The possibilities of OCW are not yet well known by students. Pedagogical aspects to enable self-study for a wide range of users are sometimes neglected. Issues in terms of cultural differences, recognition, quality control, interactivity and support (either from fellow students or teachers) impede large-scale utilization*

*The objective of this report is to create a set of guidelines and recommendations for the implementation of OCW in a virtual mobility programme<sup>1</sup>. These guidelines and recommendation are contextualized within (virtual) mobility scenarios identified in deliverable D1.2 entitled Promoting virtual mobility scenarios through OCW in the EU context.*

The guidelines will be publicly and freely available on the project website; and the target group is all HEIs interested in OCW.

*\*Note:* As target groups of HEI interested in OCW, we interpret both managers of the institutions and teachers.

The deliverable D1.2 has served to contextualize this quality model in mobility scenarios. It has been applied to focus the recommendations of the quality model proposed within this document. What is mostly important in relation to this document is that D1.2 showed us how we should understand virtual mobility. Furthermore, this document supports the scenarios identified in D1.2, and helps in the completion of the description for identifying the most important aspects that require monitoring at the mobility scenarios identified.

This proposed model, consisting of five domains, could be used in order to obtain a detailed description for each of the ten families of scenarios, connecting, in each scenario, what is the role that an OCW course has in each of the five virtual mobility phases.

The structure of this document is explained below.

In *Chapter 2* the state of the art research of this documented is provided. This study is classified in three main parts: *OER quality criteria, standards and policies on quality in e-learning and publication of courses; standards and policies on quality in virtual mobility*, and those parts actually represent what types of policies, best practices and standards were taken into consideration when developing our own quality model for successful implementation of OCW. The state of the art study was classified according to the existing work elaborated in areas we have considered affect the objectives of this report.

The proposal of a quality model for successful implementation of OCW for institutions and professors (staff) is detailed in *Chapter 3*.

Finally, in *Chapter 4* we provide some best practices and recommendations on how we understand virtual mobility. These best practices and recommendations are fully adapted to the ten families of scenarios included in D 1.2.

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1 Student mobility is any opportunity for students to work or study abroad whilst undertaking their degree programme – whether undergraduate or postgraduate.  
[http://www.gla.ac.uk/media/media\\_242620\\_en.pdf](http://www.gla.ac.uk/media/media_242620_en.pdf)

## 2. State of the art: analysis of quality approaches to the use of OER, distance learning and virtual mobility

OERs refer to high quality educational material (including curriculum maps, course materials, textbooks, streaming videos, multimedia applications, podcasts, and any other materials that have been designed for use in teaching and learning) that are openly available for use by teachers and students, without an accompanying need to pay license fees. The objective of the OER movement is to offer knowledge for the global community through online platforms where both students and teachers (and in general, learners) would be able to find materials and educational resources<sup>2</sup>.

OpenCourseWare refers to open educational resources that are presented in course format, often including course planning materials, such as syllabi and course calendars, along with thematic content, such as textbooks, lectures, presentations, notes and simulations. Open Educational Resources are materials developed by experienced educators that are available for use, repurposing, and modification (including translation), in whole or in part, by everyone, everywhere in the world<sup>3</sup>.

The main objective of this deliverable is to define guidelines and recommendations for the implementation of OCW by institution in a context of student mobility; and finally to apply those guidelines to the context different mobility scenarios. The approach taken is to determine a set of controls as part of a quality model for the implementation of OCW in virtual mobility.

Given the lack of existence of a quality model in the area of virtual mobility and OCW in general, for the development of this study, we considered various case studies or works in areas considered relevant to that end, which correspond to the main aspects we stated: distance learning or e-learning (when aspiring to implement distance learning programmes), virtual mobility, and OER policy and its implementation. Therefore, this quality model would take into account some acknowledged quality aspects in e-learning, production and reuse of OERs, and at the end, the implementation of mobility programs.

Since the objective of this chapter is to investigate and research standards on how institutional policies can support quality aspects in relation to OER, virtual mobility and e-learning; later the output of this would be to define a new quality model for successful implementation of OCW in the context of (virtual) mobility by HEIs.

For those readers, interested in more details on each reference used to elaborate this chapter, please refer to Annex 1 of this document.

2 UNESCO official web page <http://www.unesco.org/>, Accessed on March 11th 2014

3 <http://www.ocwconsortium.org/about-ocw/>

## 2.1. OER Quality criteria and Policies

Before using the standards related to quality in OERs of the other institutions (explained below in this chapter) and in order to define new guidelines and recommendations for successful implementation of OCW in virtual mobility; it is important to consider first the main characteristics that OERs have.

### 2.1.1. OER/OCW Related Quality models

We have analysed a set of references and documents on OER and related to the aim of this deliverable, that later resulted in various possibilities to organize relevant aspects that should be considered for OER; all of them developed from different points of view (different institutions, authors, objectives, etc...).

The analysed documents reinterpret the concept of OER quality according to different objectives. We considered studies such as the study on quality and pedagogical guidelines for OER use in HE, in which the importance of different aspects of quality were obtained<sup>4</sup>. The objective of this survey was to develop and validate a set of quality and pedagogical guidelines for the use of OERs in HE in which we considered key areas for course design, having a pre-established learning design and methodology, having a motivation and participation strategy justifying how the existing learning methodologies motivate learners to actively participate in the learning process, and how the learning materials, eTutoring and collaborative learning concepts are supported and clearly defined.

In addition, we considered a document, which primary objective is to present a real-world quality model for OCW/OERs<sup>5</sup>, emphasizing technological aspects and interoperability requirements for OERs, in addition to other distribution and licensing models and user interface quality requirements.

It is important to highlight that while these guidelines are specific to OER, they could be applicable to any learning materials. that the target audience are teachers who embrace creating their own OER, in collaboration with their own students. But also institutions that support the development and use of OER, are expected to use and adopt the guidelines presented within this deliverable in their internal quality assurance practices<sup>6</sup>. Teaching and learning processes, information and material content, presentation, product and format and system, technical and technology are the areas that are identified from this work.

When institutions are thinking of OCW quality issues in the context of mobility programs, they automatically need to think of recognition and credit transfer procedures<sup>7</sup>. Therefore, this would be considered in order to better understand the processes and procedures to follow in open recognition with topics such as assessment methods; requirements and standards of resources; credentialisation, certification and recognition and inter-institutional collaboration.

A study which provides four different quality dimensions<sup>6</sup> was also taken into consideration: teaching and learning processes, information and material content; presentation, product and format, system, technical and technology. These dimensions were also considered for the development of this deliverable, because of their applicability to everything related to OER and OERs' quality aspects.

The study on Open Learning recognition is organized into four topics/areas<sup>7</sup>: assessment methods;

4 Lee. W. J. Mark, 2013, Survey on OER quality and pedagogy in higher education <http://openeducationeuropa.eu/es/node/132200>, Accessed on March 11th 2014

5 Tovar E.; Piedra N.; Castro Gil M., 2010, A quality model of OpenCourseWare applied to Engineering courses, 2010 ASEE Annual Conference and Exposition

6 EFQM, 2013, The official EFQM Excellence Model, <http://www.efqm.org/the-efqm-excellence-model>, Accessed on March 11th 2014

7 Kawachi.P, 2013, Open Educational Resources – TIPS Framework (version 1.0), Commonwealth educational media centre for Asia, New Delhi [http://cemca.org.in/ckfinder/userfiles/files/OERQ\\_TIPS\\_978-81-88770-07-6.pdf](http://cemca.org.in/ckfinder/userfiles/files/OERQ_TIPS_978-81-88770-07-6.pdf), Accessed on March 11th 2014

requirements and standards of resources; credentialisation, certification and recognition and inter-institutional collaboration. When institutions are thinking of OCW quality issues in the context of mobility programs, they automatically need to think of recognition and credit transfer procedures. Therefore, recognition for virtual mobility and the related areas were considered in order to understand better the processes and procedures to follow in open learning in general, and open recognition.

During our study, we also considered obtaining a basic understanding about OER and some of the key issues that institutions should consider on open resources<sup>8</sup>. In addition, some of the key issues provided by a study we analysed were to think about the effective use of OERs<sup>8</sup>, which resulted in the creation of related guidelines for this deliverable.

The guidelines for OERs in higher education<sup>9</sup> are the baseline to understanding OERs in HEIs. The objective or the main purpose of the guidelines is to support education, by the creation of educational resources that may be freely accessed, reused, modified, and shared. They outline key issues and make suggestions for integrating OER into HE<sup>9</sup>. These guidelines have been considered for this report, because of their purpose to encourage decision makers in governments and institutions to invest in the systematic production, adaptation and use of OER and to bring them into the mainstream of HE in order to improve the quality of curricula and teaching and to reduce costs.

Furthermore, another interesting study is on the Re-use and adaptation of OERs<sup>10</sup>. The objectives of this report are to explore the current technology landscape with respect to both proprietary as well as Free and Open-source Software (FOSS) technologies; identify techniques, actual and in development, for re-use of OER<sup>10</sup>. This document is considered at all aspects related to the re-use of OERs/OCW, as well as copyright of contents. Namely, the strategic implementation of re-use in HEIs can be segmented into four distinct stages, with a number of activities in relation, such as: capacity building, creation of an institutional repository, quality assurance, recognition and rewards.

We also considered work on the opportunities and challenges of OER<sup>11</sup>, and the objective of such work is to highlight some of the quality assurance opportunities and challenges for OERs. Therefore, we considered this document since it provides some interesting aspects on internal institutional quality assurance mechanisms, as well as required quality controls on learning materials. For example, some of the implications for internal institutional quality assurance that this document provides is the peer review. The spirit of peer review that has a central place in research gets extended to learning resources through OER. Authors of OER become conscious of the fact that their materials are scrutinized and used by a large audience around the world and this pushes them to review and update their materials as necessary. It is also stated that, at the institutional level, the ones that have taken the OER initiative seriously have strengthened the internal institutional quality control.

A journal article on peer-review principles and a case study in post publication quality assurance was considered, which objective is to present a general set of principles for understanding what peer review was in the past and how it should be applied today to different kinds of content for managing quality. The principles stress an analysis not only on the content in materials but also on their context of use. The focuses of this document are open educational resources, and they present a case study of the open education project through connexions' lens system for quality assurance and review<sup>12</sup>.

8 Camiller.F. A, Tannhauser.Anne-Cristin,2012, Open Learning Recognition, EFQUEL <http://efquel.org/wp-content/uploads/2012/12/Open-Learning-Recognition.pdf>, Accessed on March 11th 2014

9 Kelty.M.C., Burrus.S.C., Baraniuk.G.R., 2008 Peer Review A new: Three principles and a case study in post publication quality assurance Proceedings of the IEEE Vol.96, No.6, June 2008 <http://cnx.org/news/news/peer-review-anew-ProclIEEE-june08.pdf>, Accessed on March 11th 2014

10 Butcher.N, 2011, A basic guide to Open Educational Resources (OER) <http://www.col.org/PublicationDocuments/Basic-Guide-To-OER.pdf>, Accessed on March 11th 2014

11 Abeywardena.S. Ishan, 2012, The Re-use and Adaptation of Open Educational Resources (OER) [http://www.col.org/PublicationDocuments/ExplorationOfTechnologiesAvailable\\_OER.pdf](http://www.col.org/PublicationDocuments/ExplorationOfTechnologiesAvailable_OER.pdf), Accessed on March 11th 2014

12 Stella.A, Quality and Quality Assurance in Higher Education: The Opportunities and Challenges of OER,

We also considered the importance of the concept of increased openness in the use and sharing of information to improve higher education. For defining OCW guidelines, it helps us to explore the concept of openness as well in teaching and learning; as well as in research, university administration, certification, accreditation and transparency<sup>13</sup>. An overview of the various constraints that limit access to OER was done, in which the access challenges and solutions identified may justify further exploration and follow-up action – proposals for which can be found in the third part<sup>14</sup>. Such aspects help us to determine some of the possible constraints and/or limitations that might limit access of OERs.

A work which objective is to work towards building a quality consensus between various stakeholders and networks through dialogue and involving them in interactions about how OER should be supporting innovation and quality<sup>15</sup> was also considered. This initiative focuses on quality and innovation as the most important aspects to foster the uptake of OER in HE, it will help us to build better quality in open education, and since it promotes a multi-stakeholder approach to quality it will probably help us in building dialogue and participation and soliciting stakeholder commitment that is needed.

Moreover, some of the most important deliverables identified for this deliverable are quality and innovation guidelines for policy makers, for institutional leaders, for educational professionals and learners.

### 2.1.2. Institutional policies

#### **Case study: Integrating OERs into HEIs (institutional policies guidelines)**

To increase the understanding of OERs within their communities, educators should actively become involved in promoting OERs. Librarians should be preparing documents in relation to OER in order to promote awareness of Open Resources in general by preparing appropriate policy guides as have OER Africa and UNESCO.

Their objective is to encourage decision makers in governments and institutions to invest in the systematic production, adaptation and use of OER and to bring them into the mainstream of higher education in order to improve the quality of curricula and teaching<sup>2</sup>. We considered guidelines for HEIs, and guidelines for academic staff<sup>9</sup>. For the successful implementation of OCW in virtual mobility programs, OER guidelines suggested by UNESCO were taken into account because they indicate how the potential of OER can be harnessed to support quality teaching and learning by higher education stakeholders. Therefore, both guidelines for HEIs and academic staff were used. Having considered all or some of these guidelines, would precisely explain all the crucial factors relating to the use of OER in higher education such as the higher education context, open licensing and the emergence of OER, the transformative potential of OER and the scope of the guidelines.

A toolkit on policy review helped us to identify some of the policy implications of a decision to harness Open Education Resources<sup>16</sup>. The objective behind this toolkit is helping institutions and staff to review their own institutional policy environment and, where necessary, add policy changes that will facilitate collaboration

[http://www.col.org/SiteCollectionDocuments/OER\\_OER\\_and\\_QA\\_Challenges.pdf](http://www.col.org/SiteCollectionDocuments/OER_OER_and_QA_Challenges.pdf), Accessed on March 11th 2014

13 UNESCO, Commonwealth of Learning, 2011, Guidelines for Open Educational Resources (OER) in higher education, [http://www.col.org/PublicationDocuments/Guidelines\\_OER\\_HE.pdf](http://www.col.org/PublicationDocuments/Guidelines_OER_HE.pdf), Accessed on March 11th 2014

14 A report by the Digital Connections Council of the Committee for Economic Development, 2009, Harnessing Openness to Improve research, teaching and learning in Higher Education <http://www.ced.org/reports/single/harnessing-openness-to-improve-research-teaching-and-learning-in-higher-edu>, Accessed on March 11th 2014

15 Access to OERs – Report of a UNESCO OER Community discussion

16 UNESCO and Commonwealth of Learning, 2011, Guidelines for open educational resources (OER) in higher education <http://www.unesco.org/new/en/communication-and-information/resources/publications-and-communication-materials/publications/full-list/guidelines-for-open-educational-resources-oer-in-higher-education/>, Accessed on March 11th 2014

and the development and sharing of OER.

To be successful and sustainable, development of OER cannot be a sideler within an institution or education system. Development of learning resources needs to be integrated into institutional or systemic processes in order to both leverage their potential and to ensure their sustainability. Likewise, policies, particularly around intellectual property rights, remuneration, and promotion, need to be adapted to support and sustain the release of educational materials as OER.

This toolkit provides policy changes needed for institutions to make more effective use of OERs, it also provides some key-steps in how policies should be made (following a policy-making process)<sup>17</sup>. For this deliverable, and when speaking about OCW we consider this reference as very important. In this case, for the development and creation of guidelines for successful implementation of OCW in virtual mobility; institutions should be aware that there might be some policy changes needed to make more effective use of OCW.

So, this would mean that when creating the guidelines of this report, we should consider key aspects such as those suggested by this document: intellectual property rights and copyrights of works. However, not only these kinds of policies are to be taken into consideration, but there are policies such as information and communication technology policies which would clearly define the usage of hardware, software or backups related to OCW. There should be also a process to assure the selection and creation of works and copyright policies. This toolkit helped us in the determination of different areas in which we would start organizing our own guidelines (Chapter 3) for successful implementation of OCW in virtual mobility.

Another very interesting policy advise for universities<sup>1819</sup> has been taken into consideration, in order to analyse the role of national and international policies and strategies in OERs, and therefore providing policy advices for universities. Such a reference, with an aim to convince decision-makers that in order to be successful with OER, they need to formulate evidence-based policies based on looking beyond one's own country, region or continent, beyond the educational sector they look after. This is essential when developing recommendations for OCW in virtual mobility. It will provide OCW policy-makers with valid, in-depth information on policy support of OER for the schools, the university and the college/other sectors. This refines and elaborates recommendations to formulate a set of action points that can be applied to ensuring the realization of successful, lively and sustainable OER communities. One of the fundamental parts that we see in this, are the results obtained analysing various institutional policies. These results help us to find ways of incorporating successful features for the OCW for virtual mobility initiative.

The fact that this reference offers some clear policy constraints related to OERs, these policies could serve when defining our own guidelines for implementation of OCW in virtual mobility. It outlines that policies usually depend on the country where they are implemented in, and when developing the guidelines present in this document, we will consider such aspects. Moreover, since we already mentioned that in some countries policies could be characterized by various indicators, and they usually could vary; the document gives some policy proposals on how to foster development in education, how to reduce regulatory barriers against new types of education such as OCW in this case. All these proposals were considered for this report.

17 OER AFRICA official web page <http://www.oerafrica.org/>, Accessed on March 11th 2014

18 Creative Commons, 2013, OER Africa – What is Creative Commons

<http://www.oerafrica.org/resource/what-creative-commons>, Accessed on March 11th 2014

19 POERUP official web page <http://www.poerup.info/>, Accessed on March 11th 2014

## 2.2. Standards and policies on quality in e-learning and publication of courses

### Case study: Quality criteria for the successfulness of e-Learning programmes

The first thing we considered when analysing recommendations for the successfulness of e-learning programs are certification and quality improvement schemes for e-Learning programmes and institutions. There are professional communities that propose initiatives for institutions interested in evaluating quality issues in the field of e-Learning for Capacity Building<sup>20</sup>. The objective of such communities is to support capacity building organizations to measure how successful their e-learning programmes are. It encourages continuous improvement through peer collaboration. There are assessment kits, such as EFQUEL's assessment kit, which is an accreditation and quality improvement scheme for e-learning programmes and institutions in international Capacity Building. This toolkit allows evaluating organization's e-learning offerings against internationally agreed quality standards<sup>21</sup>.

Such assessment could be useful when implementing OCW in virtual mobility because this toolkit provides an accreditation and quality improvement scheme for e-learning programmes. Since, OCW provides e-learning programmes, the usage of this toolkit, would bring a view to institutions whether their e-learning offerings fulfil internationally agreed quality standards.

Similar as the previous assessment, there are some *technology enhanced learning quality labels for universities and HEIs*, which in this case is a high quality institutional certification for outstanding use of ICT in learning and teaching. It is awarded to universities or institutes, after a process of self-assessment and external peer review. The objective of this assessment for instance, is to offer quality certification for both institutes and institutions for ICT adoption and integration for learning in HE based on broad consensus from several initiatives<sup>22</sup>. The UNIQUe certification could be taken as a reference, since it offers criteria guidelines of continuous iterative innovation in all aspects of pedagogical design and course provision. It focuses strongly on innovation in all its criteria. The end result of a UNIQUe review is not just a quality certification, but also a set of recommendations to improve Technology Enhanced Learning quality at the institution in question. Two types of institutions may apply for these kind of assessments: institutions of higher education and independent institutes operating within institutions of higher education (such as schools, faculties, etc.)<sup>23</sup>.

This certification would help OCW institutions to be certified in quality assurance and to improve technology enhanced learning. Having the above mentioned criteria guidelines would help OCW institutions to define a clear institutional and/or learning context where it is stated the strategy of the institution and the strategy related to e-learning, the commitment to innovation, the openness to community etc. It also provides guidelines on how e-learning institutions would have to choose and define processes and resources for learning and how the quality of the e-learning offerings could be evaluated.

There is a *guide to quality in online learning* which addresses the challenge of how to make online learning a quality experience for students. The objective of this guide is to provide some valuable and widespread experience and recommendations on online education success and by this helping numbers of institutions globally to ensure the quality and financial sustainability of their online offerings<sup>24</sup>. It summarizes the key quality issues in online education such as: strategy and e-learning, the use of e-learning and innovation, resources for learning, etc., in a concise manner, with an annotated reading list to help institutions,

20 Sero Consulting, 2013, POERUP Policy advice for universities (release 1)

<http://openscot.wordpress.com/2013/11/05/poerup-policy-advice-for-universities/>, Accessed on March 11th 2014

21 EFQUEL, 2013, ECBChecklist <http://www.ecb-check.org/>, Accessed on March 11th 2014

22 EFQUEL, 2013, ECB toolkit <http://www.ecb-check.org/criteria-2/>, Accessed on March 11th 2014

23 EFQUEL, 2013 UNIQUe – European Universities quality in eLearning <http://unique.efquel.org/>, Accessed on March 11th 2014

24 EFQUEL official web page <http://efquel.org/>, Accessed on March 11th 2014

academics and professionals in higher education to pursue particular topics further. Those key quality issues are written and outlined in a guidelines document in the form of sixteen frequently asked questions, followed by an additional reading list focused on quality benchmarks and international best practices.

Even though there is a vast literature on quality in higher education, this guide has been considered because it outlines some of the most important benchmarks or quality standards already tested and used in numerous contexts around the world.

Another interesting point of view that this guide outlines is the fact that quality matters should be without doubt considered by institutions, of course; because quality as it is defined here, provides practices and quality benchmarks for online courses. In addition, this guide suggests key areas for professional development and support when preparing an institute for online learning. The areas such as developing methodologies to promote interactive learning experiences, instructional materials, marketing of online courses and everything related to online learning are key areas for OCW.

For OCW this list is useful because it provides guidelines on how OCW courses are considered from students' point of view, and how they judge quality in online learning. Therefore this guide suggests some of the quality factors that students identify as important; so these factors will probably be the same when speaking about OCW<sup>24</sup>.

Similar as e-learning, lifelong open and flexible learning embraces a range of characteristics such as open learning, distance learning, online learning, open accessibility, multimedia support, virtual mobility, etc. A manual that we considered in this context<sup>25</sup>, aims to develop a methodology and supporting resources for the quality assurance of e-learning in higher education. It's called *Quality assessment for e-learning: a benchmarking approach*. The primary objective of the manual is to provide a set of benchmarks, quality criteria and notes for guidance against which e-learning programmes and their support systems may be judged.

The manual, as explained earlier contains benchmark statements with criteria and indicators on quality assessment for e-learning; and therefore, should be seen as a reference tool for the assessment or review of e-learning programmes and the systems which support them<sup>25</sup>.

However, this manual could be useful certainly for staff in institutions concerned with the design, development, teaching, assessment and support of e-learning programmes. The intention is that course developers, teachers and other stakeholders should see this manual as a useful development and / or improvement tool for incorporation in their own institutional systems of monitoring, evaluation and enhancement.

The manual for assessment is organized into six sections covering Strategic management, Curriculum design, Course design, Course delivery, Staff support and Student support. Each section follows benchmarks and indicators on quality.

These benchmarks provide a set of general quality statements covering a wide range of contexts in which e-learning programme designers and others work. By this manual it is intended that the benchmarks will be relevant to virtually all e-learning situations and that's why we consider it when speaking about OCW. These benchmarks may form the base for an institution's quality self-evaluation where the full range of criteria and performance indicators are not judged relevant to the institutional context (e.g. in situations where e-learning developments are confined to a minority of courses or to specialist areas of the institution's work).

Not all the performance indicators will be relevant in all situations of implementing OCW, and several will be seen to cut across more than one benchmark statement. Thus, we will consider all of them, because there is a relationship of these with the families of scenarios described in D1.2 as well. This document also helps us in organizing the areas for the guidelines of this document.

25 Butcher.N, Uvalic-Trumbic.S, Daniel.J, Academic Partnersips, 2013, A guide to quality in online learning <http://www.contactnorth.ca/sites/default/files/tips-tools/A%20Guide%20to%20Quality%20in%20Online%20Learning.pdf>, Accessed on March 11th 2014

## 2.3. Standards and policies on quality in virtual mobility

### Case study: Guidelines on planning and implementation of virtual mobility

Now, let's focus on analysing best practices and standards in virtual mobility. The crucial project on virtual mobility we considered is called Virtual Mobility Collaboratory. The objective of this guide is to help higher education institutions, teachers and institutional departments to get involved in the processes of planning and implementation of virtual mobility. The output of the above mentioned project is the integration kit for virtual mobility: a guide for institutional awareness<sup>26</sup>. It is basically a handbook that could be helpful for institutions that want to embrace Virtual Mobility, because one of its main goals is to promote the potential of Virtual Mobility in Higher education institutions.

According to VMCOLAB<sup>26</sup>, virtual mobility is defined as a set of information and communications technology supported activities, organized at institutional level, that realize or facilitate international, collaborative experiences in a context of teaching and/or learning. The quality assurance handbook for virtual mobility that is offered by this project, introduces a new virtual mobility process through five main phases, and in addition provides guidelines for virtual mobility preparation and implementation. Those processes are: decision making, curriculum designing, virtual mobility organization and communication, assessment and feedback; and finally certification and recognition<sup>26</sup>.

This project is an important one to consider in the context of OCW because it develops a quality assurance approach for virtual mobility. The document suggests guidelines and shows the three possible virtual mobility scenarios including: student virtual mobility, teachers' virtual mobility, and both students' and teachers' virtual mobility. The structure of the document provides on the one hand, guidelines that are common for the three VM scenarios, and on the other hand, some indicators or the activities unique for each scenario. Since this document, is probably the only key document we consider on virtual mobility; such guidelines and indicators, are crucial to consider for this deliverable<sup>26</sup>.

Last but not least, we also considered aspects on networked curricula, and its relation to virtual mobility<sup>27</sup>. Its project team launched a document providing guidelines for organizing networked curricula<sup>28</sup>. The approach of this project is to collect and analyse existing networking curricula in the field of virtual mobility, and this analysis is used to develop guidelines for creating and implementing different forms of networking curricula in Open Distance Education and blended learning. These guidelines are reflected in a handbook called – *NetCu Handbook and Guidelines for organizing networking curricula*. The objective of this publication is to offer a concise, 'hands-on' handbook for all professionals who want to engage in setting up a networked curriculum for education<sup>27</sup>. This handbook helped in the improvement of the description of our mobility scenarios (see deliverable D 1.2 and also Chapter 4 of the present deliverable, for more information about mobility scenarios).

26 Williams.K, Kear.K, Rosewell.J, 2012, Quality assessment for eLearning: a Benchmarking Approach 2nd edition, [http://e-xcellencelabel.eadtu.eu/images/documents/Excellence\\_manual\\_full.pdf](http://e-xcellencelabel.eadtu.eu/images/documents/Excellence_manual_full.pdf), Accessed on March 11th 2014

27 Volungeviciene.A, Dauksiene.E, 2013, VMCOLAB D.2.1 Quality assurance (QA) Handbook for Virtual mobility Version 0.2, <http://files.vocolab.eu/wp-content/uploads/2013/10/VMCo-LABQualityAssuranceHandbook-V02.pdf>, Accessed on March 11th 2014

28 As the NetCU project aims, networked curricula provides basically enhancing and implementing international networked practices in virtual campus building.

## 2.4. Review of the State of the Art: Current knowledge related to OER quality standards

The objective of Chapter 2 was to investigate and research standards that institutions around the world apply in virtual mobility, OER, e-learning and institutional policies related to OER. Our review was organized according to three main domains/categories: OER and OCW quality related models, standards and policies on quality in e-learning and publication of courses; and of course, standards and policies on Quality in Virtual Mobility. Every lesson learnt from this review will be used to define a new quality model for successful implementation of OCW by institutions in the context of virtual mobility.

Furthermore, taken from this review, institutional policies for OERs, usually always treat and focus on issues such as the integration of OERs into HEIs. Taking this into consideration, we can summarize and highlight the importance of intellectual property rights, copyright of works, information and communication technology policies and similar. All the research conducted for this part was used to organize our own guidelines (see *Chapter 4*), and realize that policies might depend on the country where they are implemented.

The outcome of the review of Standards and policies on Quality in e-learning, was to provide us knowledge and understanding of the quality criteria for successfulness of e-learning programmes in general. By having institutions (such as EFQUEL), that offer to other institutes or institutions certification and toolkits to measure how successful their e-learning programs are, we also learned the importance of having continuous improvement and evaluation of programmes' quality. On the other hand, having analysed references in the area of mobility and virtual mobility; helped us identify different phases of mobility, and provided us with an understanding on how virtual mobility phases are usually organized.

Finally, from the review conducted within this chapter, we learnt some of the most important institutional awareness aspects and best practices on virtual mobility, e-learning and institutional policies of OERs, and this is the key point when developing our own guidelines included in this deliverable.

### 3. Proposal of a generic quality model for the implementation of OER in the context of virtual mobility

#### 3.1 Proposed structure of the quality model

All of the quality issues identified in Chapter 2 are categorized following the European Foundation for Quality Management (EFQM) model in order to create quality guidelines for the successful implementation of OCW in virtual mobility. This model serves as a framework for organization of the quality guidelines for successful implementation of OCW in virtual mobility. The reasons behind this are twofold:

- It helps organizations in their drive towards being more competitive
- The easiness to apply the model to any organization, regardless of size or sector.

In our case, this model is perfectly applicable to HEIs that aim to implement OCW in virtual mobility programmes<sup>29</sup>.

The EFQM model is consisted of 9 criteria (Figure 1)<sup>30</sup>:

- Leadership: Excellent organisations have leaders who shape the future and make it happen, acting as role models for its values and ethics and inspiring trust at all times. They are flexible, enabling the organisation to anticipate and reach improvement areas in a timely manner to ensure the on-going success of the organisation.
- Strategy: Excellent organisations implement their Mission and Vision by developing a stakeholder focused strategy. Policies, plans, objectives and processes are developed and deployed to deliver the strategy.
- People: Excellent organisations value their people and create a culture that allows the mutually beneficial achievement of organisational and personal goals. They develop the capabilities of their people and promote fairness and equality. They care for, communicate, reward and recognise, in a way that motivates people, builds commitment and enables them to use their skills and knowledge for the benefit of the organisation.
- Resources: Having resources such as human capital, financial, etc. should be there to support strategy, policies and the effective operation of processes. Such resources ensure that possible environmental and or societal impacts are effectively managed and controlled.
- Processes, services and products: Excellent organisations design, manage and improve processes, products and services to generate increasing value for customers and other stakeholders.
- Results: Excellent organisations achieve and sustain outstanding results that meet or exceed the need and expectations of their customers.

29 Hendrekx.P, Ubachs.G et al., 2012, NETCu Handbook: Guidelines for organising networked curricula [http://www.networkedcurricula.eu/sites/default/files/handbook/NetCu\\_Handbook\\_Final.pdf](http://www.networkedcurricula.eu/sites/default/files/handbook/NetCu_Handbook_Final.pdf), Accessed on March 11th 2014

30 Source: <http://www.exchange2improve.com/>

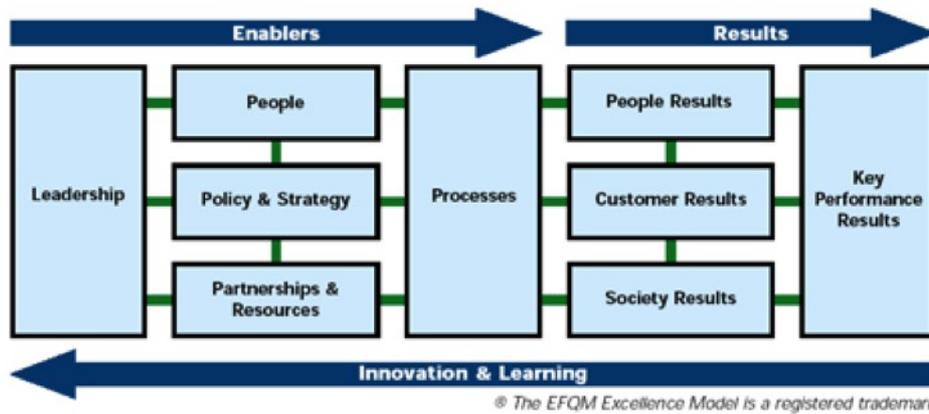


Figure 1: EFQM model and its criteria

In the next section, we explain the process that was followed to adapt the official model proposed by EFQM in order to achieve the objectives of this deliverable.

**Adaptation of the EFQM model:**

When organizations aim to adapt the EFQM model in order to satisfy their needs, it is widely acknowledged that this model usually undergoes a process of adaptation (it usually maintains its 9 criteria adapting different quality controls) needed to the area of the business where it is applied, which justifies the approach we took for D1.3. To simplify the quality criteria and ease of use of the model defined in this deliverable, by institutions; we grouped all criteria related to “results”, as well as those of leadership and strategy (as EFQM says - leaders shape the strategy of excellent organizations) (Figure 2).

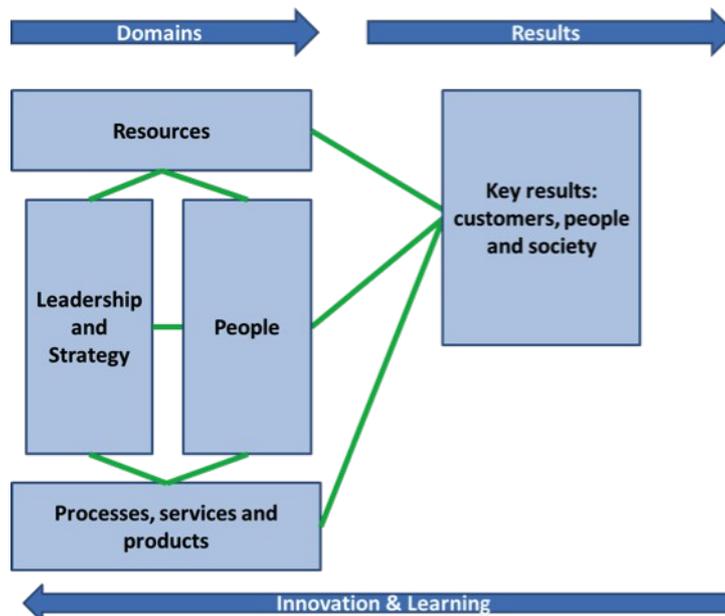


Figure 2: Adaptation of the EFQM model

Moreover, quality controls in the EFQM model are organized in a framework that collects various quality criteria. The controls we defined in the model presented within this deliverable; are organized in a framework in three levels: *domains*, *features* and *indicators*.

- **Domains:** General key areas needed to assure quality of virtual mobility in HEIs, and corresponding to the quality criteria adapted from the EFQM model.

We identified five domains for our model:

1. Leadership and strategy
  2. People
  3. Resources
  4. Processes, services and products
  5. Key results: customers, people and society
- **Features:** Processes that belong to domains, needed to ensure the quality of the virtual mobility programmes' implementation with open educational resources.
  - **Indicators:** Implementation of quality model controls that are recommended to achieve objectives related to features. Indicators were obtained by having analysed related studies, and considering those relevant.
  - **Guidelines:** Recommendations derived from the implementation of controls proposed in the context of Virtual Mobility.

## 3.2 Quality model: rationale of the domains and features

In continuation and as Explained in 3.1, each of the five domains were defined following the EFQM model (Figure 2) of excellence and each domain consists of: rationale of the domain, rationale of the feature and indicators.

### DOMAIN 1 – Leadership and Strategy

The objective of this domain is to propose guidelines and best practices to institutions when implementing their educational mission and vision by developing a stakeholder focused learning strategy. To this end, policies and plans need to be developed and implemented.

#### RATIONALE

According to EFQM, excellent organisations implement their Mission and Vision by developing a stakeholder focused strategy. Policies, plans, objectives and processes are developed and deployed to deliver the strategy. Let's assume that usually, virtual mobility programmes are promoted and endorsed without a clear understanding of the strategic objectives they are intended to serve. For this reason, and to avoid such possible issues; strategic management should be responsible to ensure institutional strategies actually drive to virtual mobility strategy.

This domain is informed by the benchmark study approach called *Quality Assessment for E-learning* developed by the *European Association of Distance Teaching Universities (EADTU)*. In their document they suggest that institutions should have defined policies and management processes that are used to establish strategic institutional objectives, including those needed for virtual mobility. They should offer an institutional strategic plan, which would include the roles e-learning will play in the overall development of the institution<sup>25</sup>. Furthermore, the important role that strategic management has in this context was also highlighted by UNESCO, OER Africa, TIPs, etc<sup>31</sup>. In this regard, they also highlight the need to create and implement specific institutional policies<sup>2</sup>.

In relation to this domain, we would also consider OERs Africa policy tools and guides where they provide key steps needed for the policy-making process. For this reason, strategic management is identified as the first domain area to address when implementing OCW for virtual mobility. When speaking about OCW in the context of virtual mobility programs we identify the following key areas where its involvement would be extremely helpful:

- Meeting the service expectations of students, staff and stakeholders
- Enhancing the quality of students' learning experiences
- Improving access and flexibility of study for students
- Increasing enrolments by targeting new groups of potential students
- Delivering teaching services more efficiently.

By having analysed all of the previously mentioned references, we suggest the following list of features: *the role of virtual mobility in the academic strategy, policies and plans for using virtual mobility, institutional policies review and the policy-making process*. All of these features are explained in more details below.

<sup>31</sup> refer to Chapter 2 for more information on this.

### **FEATURE 1.1 The role of virtual mobility in the academic strategy**

What this feature tries to transmit is the importance of having a virtual mobility role clearly defined within the educational policies and plans.

#### **RATIONALE**

We suggest that the role that virtual mobility and OER play in the overall developing of institutions, need to be understood clearly by all stakeholders.

When considering an implementation of OCW for virtual mobility, there should be an institutional plan which would be presented to both staff and students there should be compatibility to assure compatibility between institutional plans and strategy among different HEI departments., how e-learning and virtual mobility would match student requirements, etc. What is really fundamental here is to ensure that there is a widespread understanding of engagement with the implementation of virtual mobility policies across the institution.

This feature is also introduced by EADTU in their benchmark study: while the TIPS framework highlights also the importance of having a clear understanding of the role of OER for the institution.

### **FEATURE 1.2 Policies and plans for using virtual mobility**

We think that it is important for the institutions to have defined policies and management processes that are used to establish virtual mobility programme. It is assumed that the strategic plan should encompass a vision for the use and development of virtual mobility within and institution and provide a timescale for the achievement of strategic goals<sup>25</sup>.

#### **RATIONALE**

For OCW, in order to do this, in the context of OCW and virtual mobility programs, first and foremost there should be an institution-wide engagement with the development of policies and plans for the achievement and enhancement of virtual mobility. Having a policy and a plan developed for virtual mobility, could assure a strong strategic direction at the highest educational level of the institution. EADTU for instance, also suggests that there should be policies and plans defined by institutions for the overall usage of virtual mobility. Policies on virtual mobility should be designed to provide students with opportunities to study programmes from institutions geographically remote from student´s home base and across national boundaries.

For OCW, it is important to have a policy on virtual mobility, not only because we deal with guidelines for successful implementation of OCW in virtual mobility; but also to embrace academic, professional and social aspects of student mobility. What is especially important to students for example, is to provide an open framework for validation and recognition of skills acquired internationally.

UNESCO, as we already explained previously, provides guidelines for HEIs and academic staff. The policy guidelines they recommend, would allow actually the elaboration of the quality model we define in this document<sup>2</sup>.

It is also suggested by EADTU, that even though not all institution with e-learning or virtual mobility programmes will be in position to conduct fundamental research into these areas, it is part of the institutional management to ensure there is a clear policy through which new research findings, developments and emerging techniques may be identified, evaluated and adopted<sup>25</sup>.

In addition, EFQUEL´s certification for institutions UNIQUE, suggests that innovation in virtual mobility is one key quality criteria, and there should be strong institutional commitment to innovation, especially in online learning<sup>23</sup>.

Therefore, we strongly think that institutions need policies and processes that manage innovation and research in the context of OER and virtual mobility for OERs.

### FEATURE 1.3 Institutional policies review

Various studies analysed for Domain 1, recommend to institutions and staff to review their own institutional policy environment and where necessary apply policy changes that will facilitate collaboration and development and sharing of OERs.

#### RATIONALE

OER Africa's *Policy review and development toolkit* pays a special attention on this area in their document to analyse what should institutions do in order to develop and / or share OERs. According to OER Africa, institutions should make policy changes in relation to Intellectual Property rights and of course, copyright of works; they also highlight the importance of having human resource policy guidelines in place for corresponding staff; and that information and communication technology and materials development and quality assurance policy guidelines are key indicators when dealing with institutional policies<sup>17</sup>.

Since this domain is suggested by OER Africa, it would be perfectly applicable when dealing with OCW in virtual mobility. Institutions that are about to implement OCW in virtual mobility should carefully consider and find a way to evaluate their current policies, and without doubt add some policy changes in order to be suitable to offer a programme for virtual mobility. For OCW in virtual mobility, institutions would need to review and revise their general institutional policies, in order to ensure the effective and sustainable use of OER such as: provision in policy of clarity on Intellectual property Rights and copyright of works, human resources policy guidelines to ensure that the creation of certain kinds of work constitutes part of the job description of staff, etc.

### FEATURE 1.4 The policy making process

The objective of this feature is to explain the steps for institutions developing an educational policy.

#### RATIONALE

For this feature, as part of the domain Leadership and Strategy, OER Africa recommends that the creation of policies should be a responsibility of the strategic management of institutions, and provides practical guidelines on how to design a policy<sup>17</sup>.

For OCW, we should also consider creating guidelines that will recommend to institutions the importance of creating policies, but we will also provide, as defined by OER Africa's toolkit, the process required to establish a policy. Therefore, we would not only recommend that policies should be defined and established by institutions, we would also follow OER Africa's recommendations on policy tools and guides on which steps should be followed in order to create a policy.

### DOMAIN 2 – People

The objective of this domain is to propose practices on how excellent institutions should value their people and create a culture that allows the mutually beneficial achievement of institutional and personal goals.

#### RATIONALE

Having people with skills and promoting and developing these capabilities should be the focus part of every institution. Institutions should promote fairness and equality, care for, communicate, reward and recognize their work, in a way that this motivates people them, builds commitment and enables them to use their skills and knowledge for the benefit of the institution.

All these issues were supported and mentioned in various references by organizations such as Academic Partnerships and EADTU, and the result of considering those references, led us to the following list of features within this domain: *student support, staff support and interactivity and communication*.

### **FEATURE 2.1 Student support**

The expectations, administrative, technological and information, study skills, assessment, counseling is the type of support that students should be able to have provided by the institutions during their virtual mobility programme.

#### **RATIONALE**

Student support to ensure quality in online learning is needed. Some of the key areas that Academic Partnerships summarizes in this regard are: managing expectations, providing information and administrative support, technological support, study skills and assessment and online educational counseling<sup>24</sup>.

EADTU classifies student support in two areas: access to resources (such as: library, helpdesk, student handbook, advice and counseling, etc.) and information (such as: clear information on expectations, etc.)<sup>25</sup>.

The TIPS framework also supports this feature, and suggests that institutions and/or educators should consider providing support to learner's autonomy, independence, learner resilience and self-reliance<sup>21</sup>.

The document Open Learning recognition also explains the importance and the benefits of having recognition of credits in online programmes<sup>7</sup> for OCW; student support would consider both studies.

After the deep analysis of the four references taken into consideration to define this domain, the features we present are as follows: student support, staff support, and interactivity and communication.

### **FEATURE 2.2 Staff support**

The objective of staff support services is to enable all members of academic, administrative and technical staff to contribute fully to OER/OCW e-learning development and service delivery.

#### **RATIONALE**

Staff support is specifically addressed in references such as the Excellence manual on quality assessment provided by EADTU<sup>14</sup>.

POERUP also does a reference to the funding mechanisms for institutions and staff, declaring that there should be funding mechanisms for open educational materials; and highlights the need of providing training services to academic staff within an institution in order to make sure they have the required knowledge<sup>18</sup>.

VMCOLAB provides the best practices of having support unit services and the selection of appropriate technological solutions as important aspects in relation to quality of virtual mobility in general, and academic staff<sup>26</sup>.

For OCW, this would be recommended as well; since quality depends not only from the student or staff support but to every stakeholder related to e-learning and virtual mobility.

### **FEATURE 2.3 Interactivity and communication**

The aim of this feature is to show that interactivity and communication are probably one of the most important aspects related to virtual mobility. Both of them are critical to institutions future success, because they have the potential to engage both educators and students, while also providing motivation and support for both online teaching and learning. Connecting and communicating with their peers is vital to support the overall learning process of students, to the mastery of knowledge, and to the skills obtained by online education.

## RATIONALE

VMCOLAB recommends that interactivity and communication should be done by organizing for example regular virtual meetings; forums or mailing lists should be created. They also suggest that for virtual mobility it would be essential to choose interactivity and communication strategy during the curriculum design phase<sup>26</sup>.

### DOMAIN 3 – Resources

The objective of this domain is to propose to institutions how they should plan and manage internal resources in order to support their strategy, policies and the effective operation of all the processes, plans and policies related to virtual mobility.

## RATIONALE

The usage of technology and media required to deliver OCW, will also be an integral part of its quality implementation in virtual mobility. Both EFQUEL in their certification Open ECBCheck, and Academic Partnerships in their *Guide to quality in online learning* consider this is as an integral part of online learning<sup>21,24</sup>.

Academic partnerships for instance, in their quality guide, suggest that one of the factors that students consider important is the usage of media for communication. This is probably one quality factor that we considered crucial to include in our quality model defined within this chapter. The usage of video and audio materials such as: YouTube, OpenLearn, TEDTalks could bring a course alive and enhance quality in online learning<sup>24</sup>.

ECBCheck in their certification suggests that all the downloadable learning materials should have common formats and acceptable sizes. Virtual learning environments should be accessible through different browsers and operating systems; and that the technology chosen is adequate to support the learning strategies utilized<sup>21</sup>.

VMCOLAB in their handbook for virtual mobility also focuses on having appropriate technological solutions implemented within institutions. In addition, VMCOLAB also suggests that institutions should allow VM grading on the basis of the grading criteria defined<sup>26</sup>.

Since technology and media are crucial in the world of open education we consider them also crucial when implementing OCW in virtual mobility. Therefore, under this domain we introduce four features: *technology requirements and interoperability, user accessibility and user interface considerations, appropriate technological solutions and developers, licensing models and modes of distribution*.

### FEATURE 3.1 Technology requirements and interoperability

The focus on this feature is to provide guidelines and best practices on technology requirements when developing a learning environment for OCW in virtual mobility; and the interoperability standards for educational content.

## RATIONALE

As the *quality model for OCW* by the UPM suggests, interoperability standards refer to achieving interoperability of educational content on a large scale, using standards such as interoperable content and web services. On the one hand, in an OCW interoperable content, content should be packaged for interoperation with variety of teaching and learning systems; while by using OCW with web services, OCW content could be transported across the network among those systems (this usually could be achieved by having a oriented architecture using SOAP<sup>32</sup> standards).

32 SOAP stands for Simple object access protocol, a protocol specification for exchanging structured information in the implementation of Web Services in computer networks.

### FEATURE 3.2 User Accessibility and User interface considerations

This feature aims to provide some guidelines on the key aspects for accessibility in general for the OCW web page for virtual mobility (accessibility referring to the possibility that the OCW content to be accessible to everyone)<sup>33</sup>, as well as the user interface elements that should be taken into consideration when designing the learning environment.

#### RATIONALE

The quality model of OCW applied to engineering courses created by UPM, suggests that the accessibility should be part of quality in e-learning education<sup>34</sup>. UPM participated in a survey study provided by OER in Japan, and was asked to evaluate how easy the OER is for educators and students to use it for the first time (referring to the framework of OER). The elements they focused on were: the importance of having user interface components of the web page consistently arranged, its navigation system, how OER presents information to learners, and whether for the learner it is important how the screen layout is presented. In the excellence model created by EADTU, the accessibility of e-learning platforms for virtual mobility is highlighted as an element of the model itself<sup>25</sup>.

In addition, in the survey on OER quality and pedagogy in HEIs, users were asked to evaluate the importance of having an e-learning framework which is easily accessible and used<sup>4</sup>.

The Guide on quality in online learning suggests that general usability issues are common to most websites and include aspects such as clear navigation and accessibility for users with special needs. They may reflect general human computer interaction concerns or aspects that are specific to the web. This should be certainly considered when dealing with OCW because there are stakeholders that are going to use this learning environment that have different needs<sup>24</sup>.

Media design as suggested by EFQUEL refers to the aspects of the design of the framework of virtual mobility. Aspects such as whether the usability standards of the web page have been met, whether the navigation design of the page allows learners to know about their progress and position in relation to the overall contents are considered<sup>21</sup>.

Moreover, how to design good user interfaces is taken into account, starting with human capabilities (including the human information processor model, perception, motor skills, color, attention, and errors) and using those capabilities to drive design techniques: task analysis, user-centered design, iterative design, usability guidelines, interaction styles, and graphic design principles.

EADTU treats the student user interface as the primary route through which students access learning materials. Poorly designed features of this interface may create irritating barriers to learning achievement<sup>25</sup>.

In addition, the quality model created by the UPM marks out some of the key aspects in designing user interfaces for OCW<sup>34</sup>.

### FEATURE 3.3 Appropriate technological solutions

This feature explains the importance of technology usage and provides guidelines for providing appropriate technological solutions to users of OCW repositories. When referring to technological solutions we could consider solutions such as video/web conferencing technologies used during students' virtual mobility exchange.

<sup>33</sup> Accessibility in this context is ensuring access to the OCW web page for people with special needs, also access in terms different operating systems for example.

<sup>34</sup> Tovar E.; Piedra N.; Castro Gil M., 2010, A quality model of OpenCourseWare applied to Engineering courses, 2010 ASEE Annual Conference and Exposition

## RATIONALE

VMCOLAB in their handbook for virtual mobility focuses on the importance of having the possibility to integrate and create international groups that would be part of the virtual mobility. In addition, they also emphasize the appropriateness of technological solutions such as video/web conferencing technologies and their importance to be used for communication purposes, while they also suggest that the learning environment in general could be an appropriate tool for learning process organization, feedback and evaluation<sup>26</sup>.

### FEATURE 3.4 Licensing models and modes of distribution

Distribution of open courses refers to the model used to make the course content available to its intended course participants. Licensing models refer to how open courses and OER owned by an institution are made available to other institutions, organizations and people.

## RATIONALE

Licensing models define how and when a licensing institution must pay for a course and any other stipulations for access and distribution.

We defined this feature following the *quality model for OCW* developed by the UPM<sup>34</sup>.

### DOMAIN 4 – Processes, services and products

The objective of this domain is to show how processes such as student assessment or joint curriculum design, products such as course delivery and services such as inter-institutional agreements should be managed and designed in order to increase the value for all the related stakeholders.

## RATIONALE

The educational significance and the appropriateness of the content of OER is what we understand by quality of content of study materials. This category includes criteria that reveal to what degree the educational resources allow learners to have engaging learning experiences that provide for mastery of the content, such as: course design ie. the uniformity of language, terminology used, availability of the course syllabus, learning designs and methodology, the easiness of use of the web page, assignments and learning progress which includes availability of assignments (with or without solutions), how evaluation is done, etc..

Quality of content of study materials and course structure is a domain mentioned and analysed by various best practice documents and institutions defining quality recommendations in virtual mobility and e-learning.

For instance, the *Study on quality and pedagogical guidelines for OERs use in higher education*, asks potential users of OERs to evaluate the validity, the educational significance and the appropriateness of the content of OER. Quality of content is used by EFQUEL as well; in their *ECBCheck tool kit*, where it takes part as one of the seven distinct areas of their certification scheme for institutions. They refer to quality of contents as that institutions must ensure that contents are aligned with the learning objectives, that they are clearly presented, that media such as audio, video, images, etc. is used to present contents, etc.<sup>4 21</sup>

Furthermore, VMCOLAB also recommends that having joint curricula design is crucial in order to avoid incompatibilities between HEIs in their teaching and learning programmes; but to also ensure in this context, that the learning can be validated by participating institutions<sup>26</sup>.

For this reason, this domain is chosen to be applied when dealing with OCW for virtual mobility, and would be treated as a guideline because courses offered as OCW courses, must be high-quality courses, that fulfill a set of criteria for quality of open educational resources and open courseware.

By having analysed the three previously mentioned references, we suggest the following list of features: *joint curriculum design, course design, student assessment, course delivery, and inter-institutional agreement*.

### FEATURE 4.1 Joint curriculum design

The aim of this feature is to provide some best practices on the design of the curriculum for virtual mobility, and to provide some key aspects in relation that institutions should be aware of.

#### RATIONALE

This feature focuses on explaining the quality aspects that institutions should consider when designing a curriculum for the VM programme, and the need to have a broad participation in online communities both for students and teachers.

For this reason, we analysed EADTU excellence manual where it is suggested that the production of educational materials as OERs should be integrated into institutional curriculum policies<sup>25</sup>.

In addition, the VMCOLAB project and EFQUEL guidelines, serve as a key reference to define guidelines or indicators (as in our case) on how joint curriculum should be designed<sup>26,21</sup>.

NETCu in their document guidelines for networked curricula, emphasizes some aspects on the design of the curriculum, and provide some additional quality aspects, that we considered within this feature, and defined them as indicators<sup>27</sup>.

For OCW, the design of the curriculum for VM programmes would be an important quality aspect, because by following such recommendations, institutions would probably focus on target audience, their requirements and satisfaction by the VM programme. To continue, joint curricula design is crucial in order to avoid incompatibilities between HEIs in their teaching and learning programmes.

### FEATURE 4.2 Course design

The aim of this feature is to provide quality guidelines on the most important aspects that institutions should consider when designing a course, no matter whether the course is external to the curriculum, such as a teaser course for instance, or is part of it.

#### RATIONALE

Course design is a topic discussed by almost every study that was evaluated when analysing quality issues/aspects both in e-learning and virtual mobility. Different institutions have different understanding of course design in the context of ensuring quality. EFQUEL for example, suggests that there should be a defined educational strategy explaining educational approach, learning models, roles of tutors and mentors in virtual mobility when designing a course. It is also suggested that a course design process should exist when learning materials are prepared.

### FEATURE 4.3 Student assessment

The aim of this feature is to highlight all the aspects on how students should be assessed. These aspects need to be considered by institutions when planning or implementing a virtual mobility programme for OCW.

#### RATIONALE

Student assessment according to the *Guide on quality in online learning* created by Academic Partnerships is classified as a separate benchmark that constitutes quality<sup>24</sup>.

VMCOLAB also advises on having assessment strategies defined within international teaching groups, and that this should be done during the curriculum design phase. It also suggests that institutions should define which assessment methods and criteria will be used<sup>26</sup>.

Furthermore, EFQUEL in their UNIQUe project recommends that institutions should ensure that learning opportunities are clearly defined for students, and that those include a clear statement of intended learning outcomes, content, expectations of learner activities and assessment methods<sup>23</sup>.

In this context, ensuring examination security is probably one of the most important quality aspects for

student assessment. As suggested by Academic Partnerships in their *Guide to quality in online learning*, there must be technologies that ensure examination security in online learning environments, such as web cameras, finger scans, computer identification etc.

Student assessment in terms of OCW is created to elaborate recommendations on how could institutions ensure the knowledge and the skills of the students, obtained during the virtual mobility programme. For this reason, we created guidelines following all of the previously stated references.

#### **FEATURE 4.4 Course delivery**

Course delivery encompasses the Virtual Learning Environment and/or other interfaces through which students receive their course materials and communicate with fellow learners and staff<sup>25</sup>.

#### **RATIONALE**

Course delivery has been suggested by both EADTU, and by EFQUEL in its certification process documentation UNIQUe. Course delivery encompasses the Virtual Learning Environment and / or other interfaces through which students receive their course materials and communicate with fellow learners and staff.

EADTU says that institutions should establish course delivery methods for e-learning. UNIQUe defines course delivery as the virtual learning environment and / or other interfaces through which students receive their course materials and communicate with fellow learners and staff<sup>25 23</sup>.

EADTU also suggests that the selection of a particular system, which may influence teaching developments for many years, should be driven by both educational and technical requirements. For OCW it is the same case. OCW platform is a virtual learning environment through which students receive their course materials and communicate with their colleagues or professors. Therefore, choosing an appropriate platform for course delivery is very important when providing guidelines for quality of content. Promotion and support of all the procedures and practices for the creation and distribution of content online depends on this.

#### **FEATURE 4.5 Inter-institutional agreements**

Inter-institutional agreements between participating institutions in virtual mobility programs via OER/OCW should be formed in order to ensure credit transfer and recognition of credits, collaboration, moderation, assessment between international student groups or similar.

#### **RATIONALE**

For the intercultural experience, such as virtual mobility for example, inter-institutional agreements should be part of the course/programme design. This idea is proposed by the VMCOLAB project.

**DOMAIN 5 – Key results: customers, people and society** The objective of this domain is to outline some of the characteristics that would probably provide real results to the institutions and their virtual mobility programme. Aspects such as the evaluation and review of the overall quality of the programme and certification and recognition of credits are some of the factors that underline the success of VM programmes.

#### **RATIONALE**

Evaluation and assessment are two quality criteria highlighted by various institutions that deal with e-learning and virtual mobility. Namely, EFQUEL in their ECBCheck quality criteria introduces this area and explains that it includes the elements that need to be considered in a programme evaluation in order to ensure continuous improvement. Programme evaluation has to take into consideration a number of factors such as programme design, programme management, learning materials, methodology, eTutoring and performance evaluation. Some of the indicators they outline are as follows<sup>21</sup>:

- The achievement of the learning objectives is systematically and regularly checked throughout the programme

- A systematic evaluation takes place at the end of the programme to evaluate its quality and overall coherence
- Learning materials are periodically reviewed based on the results of evaluations to ensure the programme meets its objectives.

Furthermore, UNESCO suggests that if the institution that is aimed to implement OCW for VM, have already in place some OER practices, those practices should be reviewed periodically.

In the context of OCW and virtual mobility, we certainly consider some of the above-mentioned best practices, and use them to define our own domain (Domain 5) including areas in relation. In addition to this domain, the guide on quality developed by Academic Partnerships highlights an interesting quality aspects, i.e. factors relevant to students to judge quality in online learning<sup>24</sup>.

For OCW and virtual mobility, we considered not only the evaluation and assessment of the quality of the overall programme, but also defined some additional indicators that we consider important for this domain. Therefore, three quality aspects of evaluation and assessment were identified in order to assure the quality of the programme:

- Evaluation and review of programme quality
- Factors relevant to students to judge quality in online courses
- Certification and recognition

### **FEATURE 5.1 Evaluation and review of programme quality**

This feature focuses on explaining to institutions the possible ways on how they could evaluate and review the quality of the study programmes they might be offering currently. To do so, institutions will be recommended to use some already existing evaluation practices to be certified by third parties to assure the quality of their study programmes.

#### **RATIONALE**

Evaluation and review of programme quality is integral in order to achieve quality.

An important recommendation included in this feature is the possibility of institutions to be certified in the courses/programmes they offer. Certification is an essential part in the evaluation and review of programme quality. It could raise educational standards and maybe improve the knowledge of educators and learners; and of course, by having such certification, institutions could establish and offer a programme that leads to continuous improvement for professional development.

Therefore, for institutions that are interested in implementing OCW in the context of virtual mobility; are recommended to evaluate the quality of their programme or courses, following two types of certifications recommended:

- Programme/courses certification
- Institutions certification

EFQUEL for example, offers both types of certificates<sup>21</sup>:

- Open ECBCheck provides a toolset for developing and checking quality of programs and courses
- UNIQUe is a high quality institutional certification for outstanding use of ICT in learning and teaching.

### **FEATURE 5.2 Factors relevant to students to judge quality in online courses**

This feature aims to outline some of the factors that students consider and notice when they have

experience with virtual mobility.

## **RATIONALE**

There are certain aspects that students consider when judging the quality of the learning programme. In the *Guide on quality in online learning* published by Academic Partnerships, it is briefly explained how students contribute in the judgment in the quality of programmes/courses<sup>24</sup>.

For OCW, we would also consider that the student perspective is an important aspect of quality assurance for online learning because at the end of the day they are the most important driving force when taking decision to seek higher education. However, there are studies that show that over 90 percent of students at European universities agree that good study programmes give them additional knowledge and competences as well as broaden their horizons.

Therefore, one of our goals throughout this project, and by providing this feature would be to raise awareness about the understanding of quality from students' point of view. Thus, the indicators provided by the *Guide on quality* can have a positive effect on it and improve the quality of the programme.

## **FEATURE 5.3 Certification and Recognition**

The goal of this feature is to provide guidelines on some of the fundamentals when institutions issue certifications and provide recognition services to students, as a product of their learning experiences in virtual mobility.

## **RATIONALE**

All the students and teachers who have participated in virtual mobility exchange should receive certification and recognition for their professional and academic activities. This is also supported by the VMCOLAB project<sup>26</sup>.

EFQUEL through their ECB Check offers an environment in which members can professionalize their own quality practices up to the point of certification of their programmes or even their whole institution<sup>21</sup>.

### 3.3 Proposed quality model

#### DOMAIN 1: LEADERSHIP AND STRATEGY

##### 1.1 The role of virtual mobility in the academic strategy

##### 1.2 Policies and plans for using virtual mobility

##### 1.3 Institutional policies review

##### 1.4 The policy-making process

#### Domain 1

The objective of this domain is to propose guidelines and best practices to institutions when implementing their educational mission and vision by developing a stakeholder focused learning strategy. To this end, policies and plans need to be developed and implemented.

#### FEATURE 1.1 The role of virtual mobility in the academic strategy

What this feature tries to transmit is the importance of having a virtual mobility role clearly defined within the educational policies and plans.

#### INDICATORS

Institutions should:

- Assure that the virtual mobility strategy is compatible with the educational strategy of the institution<sup>25</sup>.
- Assure that the virtual mobility strategies of different educational departments within an institution are in line with the institutional plans<sup>6</sup>.
- Ensure that resources for the design and implementation of virtual mobility programs are allocated<sup>26</sup>.

#### FEATURE 1.2 Policies and plans for using virtual mobility

We think that it is important for the institutions to have defined policies and management processes that are used to establish virtual mobility programme. It is assumed that the strategic plan should encompass a vision for the use and development of virtual mobility within and institution<sup>25</sup> and provide a timescale for the achievement of strategic goals<sup>25</sup>.

#### INDICATORS

Institutions should:

- Identify a group of key staff responsible for formulating, evaluating and developing institutional policies and plans related to OER and virtual mobility<sup>25</sup>.
- Clearly communicate the policies and plans related to strategic management to all stakeholders<sup>6</sup>.
- Define an explicit policy on virtual mobility where the benefits of virtual mobility are recognized and any possible problems or issues are analysed<sup>2</sup>.
- Have a policy in place to ensure constant curricular innovation; that staff are kept up to date with technological developments and their impact on pedagogical approaches and course content<sup>23</sup>.

- Assure that there is a policy and an agreed set of planned activities related to the improvement of virtual mobility programme<sup>23</sup>.

### **FEATURE 1.3 Institutional policies review**

Various studies analysed for Domain 1 recommend that institutions review their own institutional policy environment and, where necessary, apply policy changes that will facilitate collaboration, development and sharing of OERs.

#### **INDICATORS**

Institutions should:

- Provide Human Resource (HR) policy guidelines regarding whether the creation of certain work (such as learning resources) constitutes part of the job description of staff, and the implications for development, performance management, and remuneration and promotion purposes<sup>17</sup>.
- Create Intellectual Property rights (IRPs) policies defining copyright of works during the course of employment/study and how these may be shared or used by others<sup>17</sup>.
- Develop supplemental Information and Communication Technology (ICT) policy guidelines regarding the access to and use of appropriate software, hardware, the internet and technical support, as well as provision for version control and backup<sup>17</sup> in the context of virtual mobility and OER.

### **FEATURE 1.4 The policy making process**

The objective of this feature is to explain the steps that institutions need to take when developing an educational policy.

#### **INDICATORS**

Institutions should:

- Formulate the policy, get it approved, release it and interpret the policy, put the policy into effect, and finally keep the policy up to date.

## DOMAIN 2: PEOPLE

- 2.1 Student support
- 2.2 Staff support
- 2.3 Interactivity and communication

### Domain 2

The objective of this domain is to propose practices on how excellent institutions should value their people and create a culture that allows the mutually beneficial achievement of institutional and personal goals.

#### **FEATURE 2.1 Student support**

The expectations, administrative, technological and information, study skills, assessment, counseling is the type of support that students should be able to have provided by the institutions during their virtual mobility programme.

#### **INDICATORS**

Institutions should:

- Ensure procedures to meet student expectations are in place: students need to develop as self-regulated learners, with reduced dependence on teachers.
- Inform (via study materials for example) students of the expectations on them in respect of VM skills prior to the start of their programme.
- Provide adequate support and resources to students. Administrative support at study centers facilitates effectively the teaching function, meetings with students and other stakeholders<sup>6 25</sup>.
- Provide appropriate technological solutions such as video/web conferencing technologies that may be used for communication purposes<sup>26</sup>.
- Deliver support regarding the specific types of learning and study skills needed in an online environment. This support includes, for example, time management or study schedules<sup>6 7 24</sup>.
- Provide online educational counseling in a web environment. Well prepared online resources can assist students who might not have access to a counselor<sup>6 7</sup>.
- Offer a digital library to students, which should be easily found among the institution's web pages, provide tutorials to guide new students and/or provide access to personal assistance<sup>6 7</sup>.
- Inform students who have problems to use either tools for interaction, or have other kind of need for support (ie. students with disabilities) about teachers and technical people who can help them<sup>6 26</sup>.
- Make possible that teachers who belong to institutions of different countries participate in the virtual mobility programme, in order to guarantee that different national and cultural perspectives are made available to the learners<sup>25</sup>.
- Students should be provided with an identified academic contact that will provide feedback and support<sup>25</sup>.
- Include information about technical assistance such as hardware and software requirements, links to necessary plug-ins and communicate necessary technical abilities to students.

## FEATURE 2.2 Staff support

The objective of staff support services is to enable all members of academic, administrative and technical staff to contribute fully to OER/OCW e-learning development and service delivery

### INDICATORS

Institutions should:

- Make sure that materials produced through public funds are openly licensed<sup>18</sup>.
- Provide training of academics in order to ensure that competences of teaching staff are developed. Training is required in order to ensure that staff is effective and productive in their roles and responsibilities<sup>18 25</sup>.
- Assure that support unit services are available for all participants of the VM process meaning that each participating institution has to have a technical support unit that participants could consult before or during the VM exchange<sup>26</sup>.
- Ensure that the selection of appropriate technological solutions responds to the most part of competences of teachers and tutors to use certain technologies in communication and learning processes<sup>26</sup>.
- Assure that issues of staff workload, and any other implications of staff participation in VM activities, are taken into account when managing courses or programme<sup>25</sup>.
- Provide the possibility of promotion to academics. Educational research and innovation in VM should be considered in virtual mobility, and should be supported by career developing incentives<sup>25</sup>.
- Communicate to educators and staff a culture about the meaning of Creative Common Licenses (CC)<sup>5</sup>.
- Ensure that HEIs have technical support specialists who are assigned and introduced to all participating institutions/individuals<sup>26</sup>.
- Provide additional support resources for the instructor. Support materials for the instructor may include prepared teacher notes, optional simulated lab materials, extra credit assignments not included in the body of the course content, etc.

## FEATURE 2.3 Interactivity and communication

The aim of this feature is to show that interactivity and communication are probably one of the most important aspects related to virtual mobility. Both of them are critical to institutions future success, because they have the potential to engage both educators and students, while also providing motivation and support for both online teaching and learning. Connecting and communicating with their peers is vital to support the overall learning process of students, to the mastery of knowledge, and to the skills obtained by online education.

### INDICATORS

Institutions should:

- Ensure that interactivity and communication tools are available. Both teachers and local HEIs implement feedback tools to provide feedback in order to track learning process and ensure equal participation<sup>26</sup>.
- Choose interactivity and communication strategy during the curriculum design phase<sup>26</sup>.
- Agree upon students and teachers about the most adequate possible communication possibilities that the institution should offer<sup>26</sup>.

- Ensure that an online support system is available for both students and teachers (help desk, FAQ, automatic registration or other type of support)<sup>26</sup>.

## DOMAIN 3: RESOURCES

### 3.1 Technology requirements and interoperability

### 3.2 User accessibility and user interface considerations

### 3.3 Appropriate technological solutions

### 3.4 Licensing models and modes of distribution

#### Domain 3

The objective of this domain is to propose to institutions how they should plan and manage internal resources in order to support their strategy, policies and the effective operation of all the processes, plans and policies related to virtual mobility.

#### **FEATURE 3.1 Technology requirements and interoperability**

The focus on this feature is to provide guidelines and best practices on technology requirements when developing a learning environment for OCW in virtual mobility and the interoperability standards for educational content

#### **INDICATORS**

Institutions should:

- Ensure that within the institutional policy there is a promotion of interoperability standards that aim to facilitate the dissemination of content, and thus enhancing access to OER and OCW repositories<sup>5</sup>.
- Standardize the usage of protocols for syndication<sup>35</sup>. XML<sup>36</sup> and RSS<sup>37</sup> are standardized protocols, which permit end-users to make use of a site's data in another context. Specialized protocols such as FOAF and XFN extend the functionality of sites or permit end-users to interact without centralized websites<sup>5</sup>.
- Ensure that OCW websites typically include features such as: search, links, authoring, tags, extensions<sup>38</sup>, signals (to extend web page rankings), etc.<sup>5</sup>
- Ensure that the virtual learning environment runs on an adequate server, which guarantees its stability; and that it is accessible through different browsers and operating systems<sup>21</sup>.
- Make all the ICT resources, such as virtual learning infrastructure, available to all participants and ensure that video conferencing and multimedia laboratories are in place and available<sup>26</sup>.

35 Web syndication or syndication in which a web site material is made.

36 XML stands for eXtensible Markup Language and is used to encode documents that is both human and machine readable.

37 RSS stands for Real simple syndication is an XML format to share content through web.

38 Web extensions indicate what exactly the URL of the web is part of (government, institution, etc).

### FEATURE 3.2 User Accessibility and User interface considerations

This feature aims to provide guidelines on the key aspects for accessibility in general for the OCW web page for virtual mobility (accessibility referring to the possibility that the OCW content to be accessible to everyone)<sup>39</sup>, as well as the user interface elements that should be taken into consideration when designing the learning environment.

#### INDICATORS

Institutions should:

- Ensure that there is a universal design for reducing and eliminating barriers to OCW/OER access: accessibility is strongly related to universal design<sup>40</sup> when the approach involves "direct access". This is about making things accessible to all people (whether they have a disability or not)<sup>5</sup>.
- Provide a W3C accessibility of OCW/OER sites<sup>41</sup>. Accessible Web is important in order to provide equal access and equal opportunity to people. In this context, accessibility is a measure of how easy it is to access, read, and understand the content of the OCW website<sup>5</sup>.
- Provide accessibility for users with special needs. Institutions should enable the production of course materials that comply with national and European standards on accessibility, and with users with special needs<sup>25</sup>.
- Ensure that there is a delivery method for course content and a method on how students access it. It is recommended that course formats can also include hybrid courses that utilize the classroom and online delivery<sup>5</sup>.
- Ensure that the user interface components of the webpage are consistently arranged and that the information presented by OCW to the learners is easy to understand<sup>4</sup>.
- Ensure that all of the user interfaces in relation to the virtual mobility web site comply with applicable usability and accessibility standards<sup>24 25</sup>.
- Ensure that techniques for evaluating and measuring interface usability including heuristic evaluation and/or auto-testing to test whether the general standards for usability in web design are fulfilled<sup>5 42</sup>.

### FEATURE 3.3 Appropriate technological solutions

This feature explains the importance of technology usage and provides guidelines for providing appropriate technological solutions to users of OCW repositories. When referring to technological solutions we could consider solutions such as video/web conferencing technologies used during students' virtual mobility exchange.

#### INDICATORS

Institutions should:

- Ensure that the curriculum guidelines clearly indicate technical support available for all participants<sup>26</sup>.
- Ensure that the user generated content is available to future learners<sup>26</sup>.

39 Accessibility in this context is ensuring access to the OCW web page for people with special needs, also access in terms different operating systems for example.

40 Universal design in this context refers to reducing and eliminating barriers to OCW/OER access.

41 W3C World Wide Web Consortium, for more information on accessibility

<http://www.w3.org/standards/webdesign/accessibility>

42 Heuristic evaluation would be a usability inspection method needed to identify usability problems in user interface designs.

- Ensure that learners' ICT skills are adequate in order to participate meaningfully in the virtual mobility programme and ensure that the competence and possibilities to use ICT are being adequate to support communication and learning<sup>6</sup>.
- Provide monitoring activities or develop a process of monitoring in order to deliver effectiveness and assurance of internal institutional process components related to virtual mobility<sup>26</sup>.
- Ensure that the technology chosen is adequate to support the learning strategies (goals)<sup>21</sup>.
- Ensure that there is a technical support unit available within the institutions and that this unit is known by all the stakeholders. This unit should be dedicated for curriculum designing and the virtual mobility organization, and its role should be defined within the curriculum of the VM programme.

### **FEATURE 3.4 Licensing models and modes of distribution**

By distribution of open courses we refer to models used to make the course content available to its intended course participants. Licensing models refer to how open courses and OER owned by an institution are made available to other institutions, organizations and people.

#### **INDICATORS**

Institutions should:

- Ensure that OCW creators develop high quality educational materials using cost-effective tools that will facilitate the delivery of content to the global community of learners<sup>5</sup>.
- Provide licensing models to use, share and re-use learning materials legally. For instance, Creative Commons provides easy and effective tools for OER and OCW creators to share their creative work when they want to<sup>5 10</sup>.
- Ensure that the courses can be distributed for use on virtual campus (Moodle, Blackboard) or through a single institution, through open public websites (EduCommons, Joomla, Wordpress, Wiki), and through broker web sites<sup>5</sup>.
- Ensure that in order to promote a wider re-use of OER, strong advocacy by organizations such as the UNESCO, COL and Creative Commons; as well as to report about the advanced research being conducted on search mechanisms/metadata standards in the new OER landscape<sup>10</sup>.

## DOMAIN 4: PROCESSES, SERVICES AND PRODUCTS

### 4.1 Joint curriculum design

### 4.2 Course design

### 4.3 Student assessment

### 4.4 Course delivery

### 4.5 Inter-institutional agreement

#### Domain 4

The objective of this domain is to show how *processes* such as student assessment or joint curriculum design, *products* such as course delivery and *services* such as inter-institutional agreements should be managed and designed in order to increase the value for all the related stakeholders.

#### **FEATURE 4.1 Joint curriculum design**

The aim of this feature is to provide best practices on the design of the curriculum for virtual mobility, and to provide some key aspects in this regard that institutions should be aware of.

#### **INDICATORS**

Institutions should:

- Provide orientation for the target audience where the learning needs of the target audiences are taken into account<sup>21 25 27</sup>.
- Ensure that the stakeholders involved in the creation of VM programmes in general, are as well involved in the curriculum<sup>26</sup>.
- Ensure that learning outcomes are assessed using a balance of formative and summative assessment appropriate for the curriculum design/or learning objectives<sup>27</sup>.
- Ensure that the curricula is designed to include virtual mobility components that contribute both to the development of subject specific educational outcomes and to the acquisition of more transferable educational skills such as soft skills, for instance<sup>27</sup>.
- Ensure that the teachers and participating institutions share learning outcomes and develop learning resources jointly<sup>27</sup>.
- Ensure that the learning outcomes are jointly recognized<sup>43</sup> and included in the same joint course/program<sup>27</sup>.
- Joint curriculum should be based on identical learning outcomes in all participation institutions<sup>27</sup>.
- Address the needs of the target audience for virtual mobility programmes<sup>27</sup>.
- Have clear policies and rules for joint study programs and joint degrees<sup>27</sup>.
- Build inter-institutional confidence on the basis of quality assurance, problem-solving; IPR

<sup>43</sup> By this we mean the acknowledgment of joint objectives as valid.

management and code of practice is in place and IRP and copyright policies are in place for all learning resources and contributions<sup>27</sup>.

- Ensure that teachers produce learning resources which reflect multicultural balance and are not nationally biased.

### FEATURE 4.2 Course design

The aim of this feature is to provide quality guidelines on the most important aspects that institutions should consider when designing a course, no matter whether it the course is external to the curriculum, or is part of it.

#### INDICATORS

Institutions should:

- Ensure that all staff involved in course design and teaching hold appropriate academic titles within the university structure.
- Develop a process or a method of course design, development and delivery.
- Make course design and delivery guidelines available to staff.
- Implement methodological, organizational and technical support for any staff aiming to develop OER/OCW resources.
- Ensure that all jointly produced resources are accredited in terms of context and academic requirements for later use, and that they consider OCW when developing the joint curriculum design.
- Start the course design process with the learning objectives for each section/topic area. They should work in coordination with the predefined learning objectives and assist in the determination of the most optimal way, how to accomplish the course's learning objectives<sup>34</sup>.
- Before developing and designing OCW course materials, it is recommended that instructors review all the copyright and ownership requirements that are defined by the institution<sup>34</sup>.
- Assessment, pedagogical consideration: Methods and procedures for summative assessment should be carefully planned in the OCW course design process.
- Pre-requirements and academic expectations: institutions should ensure that an OCW course clearly states academic expectations and support. They should explain what it takes to be a successful student such as time management, self- sufficiency, and technical abilities.

### FEATURE 4.3 Student assessment

The aim of this feature is to highlight all the aspects on how students should be assessed. These aspects need to be considered by institutions when planning or implementing a virtual mobility programme for OCW.

#### INDICATORS

Institutions should:

- Ensure appropriate assignment and assessment methodologies promoting quality learning such as: written assignments, participation in online discussions, online quizzes, collaborative work, debates, etc. in order to promote successfulness of the student assessment<sup>23</sup>.
- Ensure that examination security methods are available during the virtual mobility student. Student identity could be assured by using technologies such as: computer identification, web cameras, finger scans, etc.<sup>24</sup>

- Raising student awareness about plagiarism is a key. Institutions should ensure that there are appropriate measures in place to prevent plagiarism; especially where assessments are conducted online, for this, computer software could be used to check for possible plagiarism<sup>24</sup>.

#### **FEATURE 4.4 Course delivery**

Course delivery encompasses the Virtual Learning Environment and/or other interfaces through which students receive their course materials and communicate with fellow learners and staff<sup>25</sup>.

#### **INDICATORS**

Institutions should:

- Ensure that the institution develop course delivery methods based on criteria of pedagogical appropriateness, social sensitivity and cost-effectiveness<sup>23 25</sup>.
- Ensure that the design and the architecture of the institution's technical infrastructure are appropriate for students. This might demand significantly greater capacity and capability than is required to support campus based students or research programmes<sup>25</sup>.
- In the case of OCW, the way courses are delivered is of course through a virtual learning environment, but institutions are suggested that there could be different ways to provision e-learning material (presentation slides, video lectures, etc.)<sup>23 25</sup>.
- Ensure that all relevant current information and notifications are delivered to students through a web-portal; are provided with detailed and written information on each course available, their progress in e-learning is monitored through continuous assessment and made available back to them<sup>25</sup>.

#### **FEATURE 4.5 Inter-institutional agreements**

Inter-institutional agreements between participating institutions in virtual mobility programs via OER/OCW should be formed in order to ensure credit transfer and recognition of credits, collaboration, moderation, assessment between international student groups or similar.

#### **INDICATORS**

Institutions should:

- Ensure that international relations office has approved student application forms for virtual mobility, and that all of the stakeholders involved in the VM programme are previously trained.
- Ensure that inter-institutional agreements for VM are signed, made publicly available and communicated to all stakeholders involved in the VM programme.
- Have a clear policy for joint study programs and degrees in place.
- Ensure that a compliance document with existing norms and regulations is fully implemented when inter-institutional agreements are signed. Virtual mobility implementation, therefore, should be discussed among study organization departments and approved as compliant with other study organization regulations and norms.

## DOMAIN 5: KEY RESULTS: CUSTOMERS, PEOPLE AND SOCIETY

### 5.1 Evaluation and review of programme quality

### 5.2 Factors relevant to students to judge quality in online courses

### 5.3 Certification and Recognition

#### Domain 5

The objective of this domain is to outline some of the characteristics that would probably provide real results to the institutions and their virtual mobility programme. Aspects such as the evaluation and review of the overall quality of the programme and certification and recognition of credits are some of the factors that underline the success of VM programmes.

#### **FEATURE 5.1 Evaluation and review of programme quality**

This feature focuses on explaining to institutions the possible ways on how they could evaluate and review the quality of the study programmes they might be offering currently. To do so, institutions will be recommended to use some already existing evaluation practices to be certified by third parties to assure the quality of their study programmes.

#### **INDICATORS**

Institutions should:

- Ensure that the achievement of the learning objectives is systematically and regularly checked throughout the programme<sup>21</sup>.
- Ensure that a regular evaluation is in place at the end of the learning programme to evaluate its quality and overall coherence<sup>21</sup>.
- Ensure that the learning materials are periodically reviewed based on the results of evaluations to ensure the programme meets its objectives<sup>21</sup>.
- Certification both for institutions and programmes/courses<sup>21</sup>.

#### **FEATURE 5.2 Factors relevant to students to judge quality in online courses**

This feature aims to outline some of the factors that students consider and notice when they have experience with virtual mobility.

#### **INDICATORS**

Institutions should:

- Provide tutorial support using a diverse range of media for communication<sup>21</sup>.
- Establish means for cooperation and communication that take place in the course<sup>21</sup>.
- Ensure technical standards are met (where technical standards are not met, students tend to have a very negative experience of the course)<sup>21</sup>.
- Provide transparency and availability of information about the course and the institution offering the course<sup>21</sup>.
- Make sure to create mechanisms through which students could provide feedback on their overall

satisfaction with the programmes.

### **FEATURE 5.3 Certification and Recognition**

The goal of this feature is to provide guidelines on some of the fundamentals when institutions issue certifications and provide recognition services to students, as a product of their learning experiences in virtual mobility.

#### **INDICATORS**

Institutions should:

- Ensure that academic departments issue a previously agreed academic certificate with participating institutions<sup>6</sup>.
- Ensure that ECTS gained at host institution are transferred and recognized at home institution<sup>26</sup>.
- Ensure that the learning objectives are measurable, clear and not ambiguously written because these are central to the accreditation process<sup>34</sup>.

## 4. Recommendations and best practices for virtual mobility scenarios

The quality model defined in Chapter 3 is used in this chapter as well, in order to elaborate recommendations for the VM scenarios via OCW, in the deliverable D 1.2 *Promoting virtual mobility scenarios through OCW in the EU context*.

The aim of this chapter is to select those recommendations that we considered important in the assessment of indicators in each mobility scenario, that institutions should consider when willing to implement OCW in VM.

When institutions wish to implement OCW for VM, and when such scenario does not correspond to neither of the scenarios we propose within this chapter, those institutions can always repeat the process and identify the most appropriate recommendations analysing the proposed quality model (Chapter 3). The quality model we provide is adaptable to other scenarios if needed.

The result shown here would not present the only possible recommendations, but those considered with a special interest for each scenario. What we have tried is to develop recommendations that correspond to the quality indicators that we considered essential to the successful implementation of each scenario.

The process we followed in order to develop these recommendations was as follows:

- We first tried to identify which of the domains (discussed in Chapter 3) are relevant and could be applied for each scenario. Once we identified the domains applicable to each virtual mobility scenario, we tried to analyse each feature per domain (features that are of particular interest for the scenarios), and decided which ones could be used for the purpose of each scenario.
- For each feature, we select the most appropriate quality indicators contextualizing the scenario for which the recommendation is written.

### Scenario 1: TEASER COURSE

*OCW as a helpful tool for students choosing their future university.*

Since this scenario is related to providing teaser courses during students' virtual mobility exchange, it would be important to consider these types of courses when designing the overall strategy of the virtual mobility programme (Domain 1, Feature 1.1 and 1.2). In addition, since these courses should be offered to students in order to help them choose their future university; we considered the Domain 2 – People and developed specific recommendations specifically related to the feature 2.1 of this domain – Student support. The Domain 4 is considered in this case because it contains the actual processes such as the feature 4.1 Joint curriculum design and feature 4.2 Course design from which we will develop recommendations for teaser courses. Last but not least, Domain 5 (specifically course evaluation) would be applicable too. The experiences that students will have in teaser courses might influence their decisions as to whether to apply for university placement at a particular institution or not, therefore developing recommendations related to feature 5.2 Factors relevant to students to judge quality in online courses will be considered. Therefore, it would be in the interest of a course designer in particular and institutions in general to enable feedback mechanisms in teaser courses.

#### Domain 1 – Leadership and Strategy

Since the objectives of the domain leadership and strategy are for institutions to establish strategic policies and management processes in order to achieve institutional objectives, it would be recommended to consider having teaser courses for students as part of the institutional policy.

It is recommended that institutions:

- Have policies and plans for using virtual mobility in which the institution would make sure there are teaser courses offered to students before enrolling to the university, and that these would be included in the institutional policies and plans related to OER in virtual mobility.
- Assure that the virtual mobility strategy in relation to teaser courses is compatible with the overall educational strategy of the institution.
- Ensure the review of institutional policies when willing to design and offer teaser courses.
- Ensure that there is a policy in place to ensure a regular innovation in the curriculum when providing teaser courses.
- Provide support and promotion (where needed) for procedures and practices related to the creation and distribution of content online.
- Assure that there is a policy and an agreed set of planned activities related to the improvement of the teaser courses.
- Assure there is a research/scholarship and innovation policy which support the development of new educational approaches related to teaser courses.
- Review the institutional Human Resources policy guidelines in order to verify whether the creation of such work constitutes part of the job description of staff, and the implications for development, performance management, and remuneration and promotion purposes.

## Domain 2 – People

It is recommended that institutions:

- Provide student support during the experience of teaser courses for virtual mobility such as: offering appropriate technological solutions such as video/web conferencing, adequate support and resources, online education counseling in a web environment by having prepared for example well-prepared online resources.
- Provide to students identified academic contact that will provide feedback and support in relation to the teaser course.
- Provide training of academics in order to ensure that competences of teaching staff for the teaser courses is developed.
- Guide students effectively through educational resources via well-designed teaching and learning pathways; offer effective support to students (whether that be in practical sessions, tutorials, individual counseling sessions or online).
- Provide assessment and critical feedback to students on their performance (ultimately leading to some form of accreditation).

## Domain 4 – Processes, services and products

It is recommended that institutions:

- Include teaser courses within the curriculum design for virtual mobility and ensure that such courses must be created considering open licenses such as Creative Commons.
- Design and delivery of course guidelines are available to staff in relation to teaser courses.
- Ensure that appropriate methodologies to assess the outcomes of the teaser courses are in place and that those promote the quality of virtual mobility.

- Ensure that appropriate teaser course delivery methods, based on criteria of pedagogical appropriateness, social sensitivity and cost effectiveness, are defined.
- Ensure that the objectives related to teaser courses are measurable, clear and not ambiguously written.
- Provide academic expectations. This means that institutions should clearly communicate the academic expectation and support for teaser courses.
- Ensure that all staff involved in the course design holds appropriate academic titles within the university structure. This could include the review whether they have the same career advancement prospects as general staff, whether they have the same rights with respect to accessing resources and funds for research and personal development, etc.

### **Domain 5 – Key results: Customers, People and Society**

It is recommended that institutions:

- Ensure learning materials on teaser courses are periodically reviewed based on the results of evaluations to ensure the course meets its objectives.
- Provide tutorial support such as means for cooperation and communication during the course.
- Ensure feedback mechanisms in teaser courses are created and available, through which students could provide feedback on their overall satisfaction with the programme.
- Ensure that the learning objectives related to teaser courses are clear and measurable because they are essential to the accreditation process.

### **Scenario 2: LANGUAGE COURSE**

*OCW as a support for language learning.*

Similar as in Scenario 1, without doubt, language courses would provide support to students in order to improve their language skill, so we will develop recommendations considering the feature Student support of the Domain 2. In the same way, Domain 4 was also chosen to be applicable for this scenario because it helps in the creation and improvement of language processes to generate increasing value for students. Having in mind this domain, the key features from which we developed recommendations are the features 4.2 Course design, and 4.4 Course delivery.

### **Domain 2 – People**

It is recommended that institutions:

- Provide support regarding the specific types of learning and study skills needed in the virtual mobility online environment. This support could include, for example, time management, additional tutorial hours or study schedules.
- Have support unit services and the selection of appropriate technological solutions as important aspects in relation to quality of the language courses.
- Ensure that there are quality standards for producing and using educational contents for the sake of language courses.
- Ensure there is an interactivity and communication strategy chosen for the language courses during the curriculum design phase.

### **Domain 4 – Processes, Services and Products**

It is recommended that institutions:

- Include the language courses as part of the curriculum design for virtual mobility and ensure that such courses are created considering open licenses such as Creative Commons.
- Take into account the learning needs of the target audience of language courses during virtual mobility.
- Ensure that learning outcomes are assessed using a balance of formative and summative assessment appropriate to the curriculum design.
- Ensure that course design and delivery guidelines in relation to language courses are available to stakeholders involved in the VM programme.
- Ensure that all staff involved in the course design holds appropriate academic titles within the university structure. This could include the review whether they have the same career advancement prospects as general staff, whether they have the same rights with respect to accessing resources and fund for research and personal development, etc.

### Scenario 3: BRIDGING COURSE

*OCW as a support to address gaps in prior knowledge.*

Bridging courses should be part of the overall Leadership and strategy of the VM programme within institutions. Therefore, Domain 1 is applicable here, and when creating the guidelines for bridging courses a special attention was given to the following features consisting this domain: Feature 1.1 – The role of virtual mobility in the academic strategy; Feature 1.2 – Policies and plans for using virtual mobility and Feature 1.3 – Institutional policies review. The goal for having bridging courses should be clearly defined and communicated to stakeholders, as well as policies and plans should be in place for the same, in order to justify their benefit.

For this scenario, the Domain 4 was chosen to be the starting point when defining recommendations, because it considers some of the most important aspects that institutions should consider when designing new courses. Features 4.2 Course design and 4.4 Course delivery are essential here and we specifically used those to elaborate recommendations for bridging courses.

#### Domain 1 – Leadership and strategy

It is recommended that institutions:

- Have policies and plans for using virtual mobility in which the institution would make sure there are bridging courses offered to students before enrolling to the university, and that these would be included in the institutional policies and plans related to OER in virtual mobility.
- Assure that the virtual mobility strategy in relation to bridging courses is compatible with the overall educational strategy of the institution.
- Ensure the review of institutional policies when willing to design and offer bridging courses.
- Ensure that a policy is in place to ensure a regular innovation in the curriculum when providing bridging courses.
- Provide support and promotion (where needed) for procedures and practices related to the creation and distribution of content online.
- Assure there is a policy and an agreed set of planned activities related to the improvement of the bridging courses.
- Assure there is a research/scholarship and innovation policy which support the development of new educational approaches related to bridging courses.

- Review the institutional Human Resources policy guidelines in order to verify whether the creation of such work constitutes part of the job description of staff, and the implications for development, performance management, and remuneration and promotion purposes.

#### **Domain 4 – Processes, Services and Products**

It is recommended that institutions:

- Include in the virtual mobility curriculum design bridging courses to students.
- Ensure there are course delivery methods destined to bridging courses based on criteria of pedagogical appropriateness, social sensitivity and cost-effectiveness.
- Ensure that such courses must be created considering open licenses such as Creative Commons.
- Ensure that all staff involved in the course design holds appropriate academic titles within the university structure. This could include the review whether they have the same career advancement prospects as general staff, whether they have the same rights with respect to accessing resources and fund for research and personal development, etc.

#### **Scenario 4: CULTURAL COURSE**

*OCW as an aid to integration through an opening on the culture and way of life, breaking the emotional barriers.*

An often-underestimated aspect has to do with the emotional side of the exchange: the student has to adapt to another culture. The receiving university could offer culture courses, designed to facilitate cultural integration and the way of life in the destination.

For this scenario, Domain 1 is applicable because of the need to have recommendations related to cultural courses when they implement their educational mission and vision. To this end, it would be important to consider the role of the cultural course, establish policies and plans for its usage (features 1.1 and 1.2), etc.

Domain 2 has been also added; because it is important to consider the type of support both student and staff should have by institutions related to cultural courses. The feature 2.1 is a result why domain 2 is applicable, because indeed cultural courses are courses that provide support to students. The last domain we consider applicable, is the Domain 4, specifically because of the need to consider such courses when designing the joint curriculum (feature 4.1).

#### **Domain 1 – Leadership and Strategy**

It is recommended that institutions:

- Consider including cultural course to virtual mobility students within the policies and plans for using virtual mobility.
- Ensure that all the policies and plans related to cultural courses are communicated to both students and staff.
- Ensure that the institutional plans for these courses are in line with different educational individual departments.
- Ensure there is a policy on virtual mobility where the benefits of having and enrolling to courses related to cultural integration are recognized.

#### **Domain 2 – People**

It is recommended that institutions:

- Provide adequate support and resources needed to facilitate the cultural integration of students such

as building relationships between teachers and students, include students to local groups where they share experiences with other students, etc.

- Provide guidelines stating the roles of the stakeholders involved in the VM programme, as well as their responsibilities during the overall cultural integration process.

#### **Domain 4 – Processes, Services and Products**

It is recommended that institutions:

- Motivate students by providing them some prior information and knowledge for getting into a new learning environment culture. They should use OERs as the best possible way in order to help in their cultural integration; and by that become motivated for new learning.
- Ensure that cultural courses are created considering open licenses such as Creative Commons.
- Include in the virtual mobility curriculum design cultural courses to students.
- Ensure there are course delivery methods destined to cultural courses based on criteria of pedagogical appropriateness, social sensitivity and cost-effectiveness.
- Ensure that all staff involved in the course design holds appropriate academic titles within the university structure. This could include the review whether they have the same career advancement prospects as general staff, whether they have the same rights with respect to accessing resources and fund for research and personal development, etc.

#### **Scenario 5: CONTEXT TO EXISTING COURSES**

*OCW as a help to make explicit context to existing courses.*

This scenario would facilitate student´s future learning because more than one students could have access to various OCW courses on the same topic, in order to obtain different perspectives on that topic. In order to do so, of course courses such as these should form part of the overall institutional strategy. That´s why we chose to include Domain 1 when elaborating recommendations for Scenario 5. It would be of a special importance to consider recommendations taking into consideration Feature 1.2 Policies and plans for using virtual mobility and 1.2 The role of virtual mobility in the academic strategy.

Domain 2 has been also considered for this scenario, because by having courses that provide or create context to another existing courses students are offered the possibility to broaden their knowledge in their areas of interest.

In addition, Domain 4 is considered because it is important to create course design and delivery recommendations for this scenario (feature 4.2 and 4.4).

#### **Domain 1 – Leadership and Strategy**

It is recommended that institutions:

- Consider the role of having courses that facilitate the ‘ ‘context to existing courses’ ’ defined and included in the overall academic strategy.
- Review the institutional Human Resources policy guidelines in order to verify whether the creation of such work constitutes part of the job description of staff, and the implications for development, performance management, and remuneration and promotion purposes.
- Create policies on copyright works created for OCW in virtual mobility during the content of existing courses of study, and how these may be shared or used by others.
- Review the institutional Human Resources policy guidelines in order to verify whether the creation of such work constitutes part of the job description of staff, and the implications for development,

performance management, and remuneration and promotion purposes.

## Domain 2 – People

It is recommended that institutions:

- Allow the collaboration and communication between professors from related universities in order to facilitate better integration for the student prepared for a virtual mobility programme.

## Domain 4 – Processes, Services and Products

It is recommended that institutions:

- Integrate OCW learning content that is elaborated from different points of view (the same material elaborated by more than one professor) into the curriculum design.
- Include in the virtual mobility curriculum design course that provide context to other existent courses to students and ensure that such courses are created considering open licenses such as Creative Commons.
- Ensure there are course delivery methods destined to such courses based on criteria of pedagogical appropriateness, social sensitivity and cost-effectiveness.
- Ensure that all staff involved in the course design holds appropriate academic titles within the university structure. This could include the review whether they have the same career advancement prospects as general staff, whether they have the same rights with respect to accessing resources and fund for research and personal development, etc.

## Scenario 6: OPEN STUDY COMMUNITY

*OCW as a facilitator of interaction and collaboration between students, between teachers and between institutions.*

For students and for staff it would be fundamental to offer/have open study communities where they would be able to share experiences and improve their knowledge by having open education materials available to them always. Therefore we consider the Domain 2, especially the feature 2.1 Student support to be applicable for this scenario. In addition this type of scenario would be also support to staff, and therefore Feature 2.2 is considered as well.

Resources and related aspects such as availability of required resources should be taken into consideration in order to implement such a community. Since Domain 3 considers such aspects, we applied recommendations from the same; taking into consideration specifically features 3.1 and 3.2.

## Domain 2 – People

It is recommended that institutions:

- Provide support regarding the specific types of communication and interaction skills needed in the open study community.
- Provide an online library that would be easily found among institution's web pages, and make sure it should provide tutorials to guide new students and / or access to personal assistance.
- Provide support to students who need assistance in the usage of tools for interactions, or with disabilities. Identify teachers and technical people who can help them and guide them.
- Provide the possibility to distribute courses for use on virtual campus or through a single institution, through open public websites.
- Ensure there are guidelines for interactivity and communication, and make sure that this is done in a

way that both teachers and local HEIs implement feedback and provide feedback tools for learning on track learning process and ensure equal participation.

- Assure that the all communication possibilities that facilitate the open study community are agreed upon both students and teachers.

### Domain 3 – Resources

It is recommended that institutions:

- Ensure that open study communities use an adequate server, and that this server is available when needed, and accessible through different browsers.
- Provide common formats for the downloadable materials, acceptable sizes and ensure that these do not compromise the speed for loading the pages.
- Ensure that the user interfaces of the open study community are easy to understand and use.
- Ensure there is accessibility to these communities for users with special needs, by having complied with national and European standards on accessibility, and with user with special needs.

### Scenario 7: CREDIT TRANSFER

*OCW for transparency of curricula and transfer of credits.*

Credit transfer protocols and/or methods should be included and considered carefully when designing the overall strategy of the virtual mobility programme (Domain 1, feature 1.1). Since, credit transfer could be assumed as a product that institutions provide to students; therefore we decided that the Domain 2 would be as well suitable to use it in the creation of recommendations (Feature 2.1).

Since the objective of Domain 5 is to consider aspects such as the evaluation and review of the overall quality of the VM programme, we certainly consider credit transfer to directly influence such quality. Therefore, this domain is probably the most important domain to include for this scenario. For this reason, we included recommendations elaborated considering feature 5.1 and 5.2.

### Domain 1 - Leadership and Strategy

It is recommended that institutions:

- Identify a group of key staff responsible for formulating, evaluating and developing institutional policies and plans related to curricula and transfer of credits for OCW.
- Review the institutional Human Resources policy guidelines in order to verify whether the creation of such work constitutes part of the job description of staff, and the implications for development, performance management, and remuneration and promotion purposes.
- Ensure that e-learning offerings are covered by an equivalent credit/module system to the university 's offerings; and that appropriate procedures are in place to ensure transparency and recognition of all the institution 's credits and qualifications.

### Domain 2 – People

It is recommended that institutions:

- Communicate clearly to students and staff regarding credit transfer policies and plans.
- Develop open frameworks for validation and recognition of skills acquired informally and online. Students who gained international competences should be supported and formally recognized by the European higher education.

- Define which learning outcomes of the OCW virtual mobility programme will be shared between/ among participating teachers and how many credits will these learning outcomes correspond to.

### **Domain 5 – Key results: Customers, People and Society**

It is recommended that institutions:

- Ensure that a regular evaluation is in place of the policies and plans for transfer of credits in order to evaluate its quality and coherence.
- Ensure that ECTS gained at host institution are transferred and recognized at home institution.
- Estimate for the ECTS during the virtual mobility exchange, what potential it has to be transferrable to other different context.
- The first target group to consider is when students do virtual mobility process. According to VMCOLAB, this target group is named Student virtual mobility. During student virtual mobility international groups should be formed, international agreements between institutions should be signed, the hosting institutions should have a complete student virtual mobility policies designed, assessment forms, academic certificates, credit transfer recognition forms etc.

### **Scenario 8: LIFELONG LEARNING**

*OCW as a facilitator for a professional adaptation and evolution in a context of a perpetual changing world.*

Lifelong learning without doubt is a support to people: both to students and educators (Domain 2, features 2.1 and 2.2).

In addition, in order for an institution to deliver and guarantee a lifelong learning, it must ensure availability and provisioning of resources and processes. By considering Domain 3 and 4 we developed recommendations focusing on this scenario. Domain 4 was considered, because of the fact that many HEIs should have lifelong learning departments; which are probably the most essential part to consider when evaluating VM programme´s quality.

### **Domain 2 – People**

It is recommended that institutions:

- Provide to students full access to the institution´s online library where they could be able to access online resources and tutorials before, during and after the virtual mobility experience.
- Ensure interactivity and communication such as students, teachers and local HEIs implement feedback ad provide feedback tools for learning on track, and for the overall learning process and ensure equal participation.
- Offer communication possibilities to students and teachers, and that these are agreed upon between them.

### **Domain 3 – Resources**

It is recommended that institutions:

- Ensure that issues with usability of the web page are avoided, and that the framework for lifelong learning includes aspects such as clear navigation and accessibility for users with special needs.
- Ensure that the technology chosen is adequate to support the learning strategies utilized, specifically with reference to the technology infrastructure requirements for students that are involved in a distance learning virtual mobility.
- Ensure that the user interface components of the OCW framework for lifelong learning are

periodically reviewed, that the information presented by OCW to the learners is easy to understand.

- Ensure there is a promotion of interoperability standards that aim to facilitate the dissemination of content, by enhancing access to OER and OCW repositories<sup>44</sup>.
- Ensure there is a policy or a method defined on how course content is delivered, and that students are communicated on how to access it.
- Provide universal design<sup>45</sup> for eliminating or eliminating barriers to OCW/OER access. This kind of accessibility would be strongly related to universal design and it is about making online content accessible to all people.
- Provide ICT solutions that ensure equal access to all virtual mobility participants, allowing networking and sharing learning content for all participants.

#### Domain 4 -Processes, Services and Products

It is recommended that institutions:

- Developed virtual mobility programme that really takes into account the lifelong learning needs of the target audience.
- Ensure that learners of OER/OCW have access to the Internal Quality System of the Institution in relation to complaints and appeal to learners.
- Ensure that the curriculum is designed to include virtual mobility that contributes both to the development of subject specific educational outcomes and to the acquisition of more transferable educational skills.
- Recognize the learning outcomes of courses and used in a joint course/programme as part of the lifelong learning.
- Ensure that all staff involved in the course design holds appropriate academic titles within the university structure. This could include the review whether they have the same career advancement prospects as general staff, whether they have the same rights with respect to accessing resources and fund for research and personal development, etc.

#### Scenario 9: VIRTUAL MOBILITY

*OCW as a complete alternative solution for physical/blended VM and on campus/face-to-face education.*

This is probably the most obvious scenario regarding its applicability to domains. Clearly, virtual mobility should be part of the leadership and strategy of the institution (Domain 1), and it would be essential to elaborate guidelines for such scenario, taking into considerations the features 1.1 and 1.2 of this domain.

Furthermore, it is impossible to deliver and create it without people (students, staff and educators – Domain 2, features 2.1 and 2.2), processes are required in order to successfully carry it out; and finally there should evaluation and results in order to judge its quality (feature 2.3).

#### Domain 1 – Leadership and Strategy

It is recommended that institutions:

44 Interoperability standards refer to achievement interoperability of educational content on a large scale, using standards on two ways: (a) Interoperable Content: OCW content is now packaged for interoperation with a variety of teaching and learning systems, according to standards. (b) Web Services: OCW content can now be transported across the network amongst those systems; by means of a service, oriented architecture developed using SOAP standards.

45 Accessibility is strongly related to universal design when the approach involves "direct access". This is about making content accessible to all people (whether they have a disability or not).

- Establish clearly defined policies and plans for using virtual mobility where the role of virtual mobility in the academic strategy would be outlined; as well as the objectives of the same would be clearly defined.
- Review their institutional policies if they would like to adapt virtual mobility to be part of the educational strategy of the institution.
- Ensure that they develop a virtual mobility strategy and that this is compatible with the educational strategy of the institution.
- Provide human resource policy guidelines regarding the creation of certain work (such as: learning resources) constitutes part of the job description of staff, and the implications for development, performance management and remuneration and promotion purposes.
- Ensure Intellectual Property Rights (IPRs) and copyright of works created during the course of employment and how these may be shared or used by others.
- Define Information and Communication Technology (ICT) policy guidelines regarding the access to and use of appropriate software, hardware, the internet and technical support.
- Develop an explicit policy on virtual mobility where all the benefits of it are recognized, any possible problems or issues are analysed; and proposes for their mitigation is done appropriately where required.
- Ensure there is a research/scholarship and innovation policy which supports the development of new educational approaches to virtual mobility and a planned programme of activities in support of this policy.
- Ensure that when defining the virtual mobility policy they first formulate it, get it approved, release it and interpret it. After that they should put into effect and keep it up to date.
- Review the institutional Human Resources policy guidelines in order to verify whether the creation of such work constitutes part of the job description of staff, and the implications for development, performance management, and remuneration and promotion purposes.

## Domain 2 – People

It is recommended that institutions:

- Inform (via study materials) of the expectations on them in respect of virtual mobility skills prior to the start of their programme.
- Ensure that adequate support and resources are available to students (appropriate administrative support at study centers, appropriate technological solutions, support regarding specific types of learning and study skills, etc )
- Provide online educational counseling placed in a web environment. Well prepared online resources can assist students who might not have access to a counselor.
- Provide training of academics in order to ensure that the staff is effective, productive in their roles and responsibilities.
- Deliver the open course to the intended course participants, and ensure there is an interactivity and communication methods between participants made available.
- Ensure that faculty staff aim to develop high quality OCW educational materials and cost-effective tools that will facilitate the delivery of content to the global community of learners.

## Domain 4 – Processes, Services and Products

It is recommended that institutions:

- Provide a joint curriculum design for virtual mobility purposes which will be focused on maximum flexibility for the learner.
- Ensure that the curricula is designed to include virtual mobility components that contribute both to the development of subject specific educational outcomes and to the acquisition of more transferable educational skills.
- Provide curriculum designing based on identical learning outcomes in all participation institutions, and that these institutions have clear policies and rules for joint study programs and joint titles.
- Ensure that all staff involved in the course design holds appropriate academic titles within the university structure. This could include the review whether they have the same career advancement prospects as general staff, whether they have the same rights with respect to accessing resources and fund for research and personal development, etc.

### **Domain 5 – Key results: Customers, People and Society**

It is recommended that institutions:

- Evaluate and review the quality of the virtual mobility programme. EFQUEL provide two types of certification toolsets for checking quality of programs and courses, as well as for the outstanding use of ICT in learning and teaching. Therefore it is recommended for institutions to consider these certifications when evaluating the quality of their virtual mobility programmes.
- Ensure there is a provision of tutorial support using a diverse range of media for communication.
- Ensure there is a cost-value assessment and expectations that students bring to a virtual mobility course (students need to perceive that the learning experience and benefits are adequate in terms of the cost of value added services such as tutoring, assessment services, etc. of the online course).

### **Scenario 10: PROFESSIONAL TRAININGS**

*OCW as a link between the Higher Education system and companies.*

Similar as in other scenarios, in order to offer new trainings (such as: professional courses) they should be led by institution's leadership team and strategy to decide whether it would bring pedagogical and institutional benefits (Domain 1). It is of a special interest to provide guidelines that would consider the role that such training would have in the VM programme and the academic strategy (feature 1.1); and the policies and plans in place when institutions aim to offer such trainings (feature 1.2).

Professional trainings, when needed would serve as a support both to staff and students, therefore certain activities are required in order to successfully deliver them.

### **Domain 1 – Leadership and Strategy**

It is recommended that institutions:

- Ensure there are policies and plans for using and providing professional trainings during the virtual mobility programme.
- Ensure that within the policies and plans of VM the role and the possible learning outcomes of these professional trainings are described and included.
- Assure that the virtual mobility strategy in relation to professional strategy is compatible with the overall educational strategy of the institution.
- Ensure the review of institutional policies when willing to design and offer professional trainings.

- Ensure that a policy is in place to ensure a regular innovation and review in the curriculum when providing professional trainings.
- Provide support and promotion (where needed) for procedures and practices related to the creation and distribution of content online.
- Assure there is a policy and an agreed set of planned activities related to the improvement of the professional trainings.
- Review the institutional Human Resources policy guidelines in order to verify whether the creation of such work constitutes part of the job description of staff, and the implications for development, performance management, and remuneration and promotion purposes.

## Domain 2 – People

It is recommended that institutions:

- Provide relevant information to staff and students on expectations, outcomes and objectives of the professional trainings provided to them during the VM programme.
- Ensure procedures to meet student expectations on these professional trainings are in place.
- Communicate and inform students of the expectations on them in respect of the possible skills required for the professional trainings.
- Provide adequate support, appropriate technological solutions and support regarding the specific types of learning and study skills needed during the professional trainings, both to students and staff.

## Domain 4 – Processes, Services and Products

It is recommended that institutions:

- Include the professional training into the curriculum design of the virtual mobility programme and ensure that such courses are created considering open licenses such as Creative Commons.
- Provide educational strategy including educational approach, learning models and roles of tutors and mentors in virtual mobility when designing professional trainings or courses.
- Ensure that teachers that produce learning resources such as professional trainings, that they combine them for joint curriculum. All the learning resources they produce should reflect multicultural balance and are not nationally biased.
- Ensure that all jointly produced resources are validated in terms of context and academic requirements for later use; and that they consider OCW related professional courses or trainings, when developing the joint curriculum.
- Ensure that all staff involved in the course design holds appropriate academic titles within the university structure. This could include the review whether they have the same career advancement prospects as general staff, whether they have the same rights with respect to accessing resources and fund for research and personal development, etc.

#### **4.1. Concluding remarks**

The scenarios described in this study do not have to be the only ones considered, but have been designed as a source of inspiration to institutions that wish to design institutional policies for OCW in virtual mobility.

In this sense, the proposed quality model can be adapted easily to accommodate those recommendations considered as the most appropriate for the initiative that institutions might be particularly interested in.

Although all the recommendations might seem to be appropriate to apply, our intention is to only show those that may be of importance or a higher interest for the chosen mobility scenario.

However, if anyone is interested in communicating new scenarios, other than those that are designed in deliverable D 1.2 those can send their suggestions and comments to [edmund@opencourseware.eu](mailto:edmund@opencourseware.eu).

## Annex 1 – State of the Art (Complete)

### OER quality criteria references

Name	Study and pedagogical guidelines for OER use in higher education – Japan Society for Promotion of Science
Objective	Highlight quality and pedagogical guidelines for Open Education Resources in HE.
What does this reference offer?	<ul style="list-style-type: none"> <li>Quality of content We were asked to evaluate the validity, the educational significance and the appropriateness of the content of OER. Some of the things to evaluate were: whether the content is accurate, whether it is appropriate to the learners `knowledge, skills and abilities; whether it is developed through rigorous academic `processes and whether it accords with copyright laws. From this aspect, we certainly considered that everything related to the validity and appropriateness of the content of OER is highly important; and in relation with the feasibility we consider that it is moderate or low. The second aspect to consider is the potential effectiveness as a teaching-learning tool where we were asked to judge whether OER is likely improving teaching and learning of students.</li> <li>Potential effectiveness as a teaching learning tool Some of the elements to consider here were whether the teaching-learning objectives of OERs are easily identified, whether OERs can be readily integrated into current curriculum, the importance of using multimedia components for effective presentation and similar.</li> <li>Ease of use Last but not least, we were asked to evaluate how easy the OER is for educators and students to use it for the first time. Taking into consideration the importance and feasibility of having user interface components of the web page consistently arranged, its navigation system, how OER presents information to for learners, and whether for the learner it is important how the screen layout is presented. We answered, that all of these aspects are highly important for educators and students; and that the feasibility is sometimes moderate or high depending of the case. Finally, the pedagogical guidelines for OERs according to this study are: <ul style="list-style-type: none"> <li>Pedagogical Strategies We were asked to evaluate the usefulness of the following strategies: <ul style="list-style-type: none"> <li>Using OER to offer relevant real-world tasks or problems for new learning</li> <li>Using OER to help students recall, relate, or apply prior knowledge and experience for new learning</li> <li>Using OER to gain students `attention or develop motivation for new learning</li> <li>Using OER to present new learning content</li> <li>Using OER to add visuals or multimedia components to learning materials</li> <li>Using OER to provide supplementary or further study materials</li> <li>Using OER to promote application of new knowledge in various problem-solving context</li> <li>Using OER to offer practice test items</li> <li>Using OER to promote students `reflection on their own learning</li> <li>Using OER to promote student `s discussion and debate to construe their own learning</li> </ul> </li> </ul> </li> </ul>
How this study is	This survey classified in four main quality criteria would be fundamental when

<p>applicable to OCW?</p>	<p>implementing OCW in virtual mobility. Since it is aimed at developing and validating a set of quality and pedagogical guidelines for the use of Open Educational Resources in higher education, this set would be applicable to OCW, since it provides an essential perspective on quality criteria for implementing OCW.</p> <p>When dealing with the implementation of OCW in virtual mobility; this study highlights the importance of having quality of content in place for OCW, meaning that the content of materials must be appropriate to learner’s skills and abilities. Furthermore, it suggests that it is important to evaluate (through surveys such as this for example) the potential effectiveness of OCW and using multimedia for effective presentation of topics for example. In addition, we should be very aware of the easiness of use of the web page for OCW, we should collect users’ opinion on how they find the navigation of the web page, whether it is user friendly, easy to manage etc.</p>
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<p>Name</p>	<p>Licensing of OERs – Creative Commons</p>
<p>Objective</p>	<p>Creative Commons provides copyright licenses and tools that give to institutions, individuals etc, a standardized way to keep their copyright while allowing certain uses of their work (meaning that some rights are anyhow, reserved for them).</p>
<p>What does this reference offer?</p>	<ul style="list-style-type: none"> <li>• Creative Commons - Three layers of licensing Creative common public copyright licenses incorporate a unique and innovative “three-layer” design. Each license begins as a traditional legal tool, in the kind of language and text formats that most lawyers know and love. It is called the Legal Code layer of each license.</li> </ul> <p>But since most creators, educators, and scientists are not in fact lawyers, there are also licenses available in a format that normal people can read — the Commons Deed (also known as the “human readable” version of the license). The Commons Deed is a handy reference for licensors and licensees, summarizing and expressing some of the most important terms and conditions. Commons Deed is basically a user-friendly interface to the Legal Code beneath, although the Deed itself is not a license, and its contents are not part of the Legal Code itself.</p> <p>The final layer of the license design recognizes that software, from search engines to office productivity to music editing, plays an enormous role in the creation, copying, discovery, and distribution of works. In order to make it easy for the Web to know when a work is available under a Creative Commons license, it offers a “machine readable” version of the license — a summary of the key freedoms and obligations written into a format those software systems, search engines, and other kinds of technology can understand.</p> <p>Creative Commons developed a standardized way to describe licenses that software can understand called CC Rights Expression Language (CC REL) to accomplish this. Taken together, these three layers of licenses ensure that the spectrum of rights isn’t just a legal concept. It’s something that the creators of works can understand, their users can understand, and even the Web itself can understand.</p>
<p>How this study is applicable to OCW?</p>	<p>This survey would provide us assistance in the generation of recommendations related to copyright of works and licensing of learning materials and content.</p>

<p>Name</p>	<p>UNESCO Guidelines for Higher Education institutions</p>
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Objective	<p>Their purpose is to encourage decision makers in governments and institutions to invest in the systematic production, adaptation and use of OER and to bring them into the mainstream of higher education in order to improve the quality of curricula and teaching and to reduce costs.</p>
What does this reference offer?	<ul style="list-style-type: none"> <li>• Guidelines for governments Guidelines for governments according to UNESCO vary widely from country to country. However, governments usually play an important role when setting policies for HEIs. It is suggested that they should:             <ul style="list-style-type: none"> <li>- Support the use of OER through their policy-making role in higher education</li> <li>- Consider adopting open licensing frameworks</li> <li>- Consider adopting open standards</li> <li>- Contribute to raising awareness of key OER issues</li> <li>- Promote national ICT/connectivity strategies</li> <li>- Support the sustainable development and sharing of quality learning materials</li> </ul> </li>   <li>• Guidelines for HEIs HEIs play a fundamental role in supporting their teaching staff in the creation of effective teaching and learning environments for students and providing creation of effective teaching and learning environments for students. When developing courses and learning resources, they should attempt to design correct these materials because it would encourage engagements of the students; and in addition, when institutions publish good quality courses online, it can attract new students to the institution. For this reason, it is suggested that HEIs should:             <ul style="list-style-type: none"> <li>- Develop institutional strategies for the integration of OER - Provide incentives to support investment in the development, acquisition and adaptation of high quality learning material</li> <li>- Recognize the important role of educational resources within internal quality assurance processes</li> <li>- Consider creating flexible copyright policies</li> <li>- Undertake institutional advocacy and capacity building</li> <li>- Ensure ICT access for staff and students</li> <li>- Develop institutional policies and practices to store and access - Review institutional OER practices periodically</li> </ul> </li>   <li>• Guidelines for academic staff Academic staff is considered by UNESCO since they are completely involved in assuring the quality of teaching and learning delivered to students. Teachers usually face challenges such as: changing teaching environments, access to high quality material, legal requirements, high student expectations, etc. Therefore they have some kind of a responsibility to assure the quality of content using in teaching and learning programmes, including OER. For this reason, much of the quality of OER will depend on which materials academic staff chooses, and it is suggested for them to:             <ul style="list-style-type: none"> <li>- develop skills to evaluate OER</li> <li>- consider publishing OER</li> <li>- assemble, adapt and contextualize existing OER</li> <li>- develop the habit of working in teams</li> <li>- seek international support for OER skills development</li> <li>- encourage student participation</li> <li>- promote OER through publishing about OER</li> <li>- provide feedback about, and data on the use of, existing OER - update knowledge of IPR, copyright and privacy policies</li> </ul> </li>   <li>• Guidelines for student bodies It is suggested by UNESCO that students should understand the issues of OER, encourage their members to publish work as OER, take an active role in assuring the quality of OER through social networks, encourage</li> </ul>

	<p>student participation in activities to support OER.</p> <ul style="list-style-type: none"> <li>Guidelines for quality assurance accreditation bodies and academic recognition bodies</li> </ul> <p>Assurance bodies and academic recognition bodies are specially important because of its relation to mobility of students, researchers, and teachers and similar. Quality is a primary responsibility of HEIs; and academic recognition bodies ensure the recognition of qualifications by the HEIs.</p> <p>Therefore, it is suggested that both quality assurance bodies and recognition bodies should develop understanding of OER, and its relation and impact in quality assurance and recognition. Moreover, they should engage in general or copyright related debates on OER, they should consider the effect of OER in quality assurance and recognition and of course, they should accept OER as good practice.</p>
<p>How this study is applicable to OCW?</p>	<p>For successful implementation of OCW in virtual mobility programs the OER guidelines suggested by UNESCO should be incorporated since they indicate how the potential of OER can be harnessed to support quality teaching and learning by higher education stakeholders including.</p> <p>Having considered all or some of these guidelines, would precisely explain all the crucial factors relating to the use of OER in higher education such as the higher education context, open licensing and the emergence of OER, the transformative potential of OER and the scope of the guidelines.</p> <p>For OCW, the guidelines dedicated to HEIs and academic staff would be probably very useful. On the one side, the guidelines for higher educational institutions could be used to discuss the results of our own guidelines (Chapter 3), ie. to what extent institutions reinforce or correspond to the suggested guidelines provided by UNESCO.</p> <p>On the other hand, at a glance, in the view of the families of scenarios we defined in D 1.2, and the experiences a student could have according to those scenarios; could be used and could contribute so some of the guidelines for academic staff suggested by UNESCO (such as: working in teams, international support for OERs, etc.).</p>

<p>Name</p>	<p>OER Africa – OER Policy review and development toolkit</p> 
<p>Objective</p>	<p>It is designed to help institutions and staff to review their own institutional policy environment and where necessary add policy changes that will facilitate collaboration and the development and sharing of OER.</p>
<p>What does this reference offer?</p>	<p>OER Africa owns and offers a development toolkit called ‘‘OER Policy review and development toolkit’’ which purpose is to help users to identify some of the policy implications of a decision to harness Open Education Resources (OERs). It is designed to help users to review their own institutional policy environment and where necessary institute policy changes that will facilitate collaboration and the development and sharing of OERs.</p>

	<p>This toolkit:</p> <ul style="list-style-type: none"> <li>• examines key critical issues that need to be addressed using actual and modified examples.</li> <li>• provides a platform for interaction between individuals and institutions in identifying policy challenges</li> <li>• provides finding appropriate solutions through an engagement with a community of practice</li> </ul> <p>The primary target audience for this space is educational decision-makers at African universities who have the responsibility of reviewing or developing institutional or faculty policy frameworks to facilitate development and sharing of OER. The toolkit examines critical OER policy-related issues that need to be addressed by, or may be of interest to, a range of stakeholders: students, staff, institutions, government and/or quality assurance bodies and others. The toolkit will also be of interest to African government representatives, potential partners of OER Africa, researchers interested in OER in Africa and general-interest users.</p> <p>To be successful and sustainable, development of OER cannot be a sidliner activity within an institution or education system. Development of learning resources needs to be integrated into institutional or systemic processes in order to both leverage its potential and provide for its sustainability. Likewise, policies, particularly around intellectual property rights, remuneration, and promotion, need to be adapted to support and sustain licensing of educational materials as OER.</p> <p>The potential of OER includes facilitating collaborations between educators and students at different institutions, as well as establishing a new economic model for procuring and publishing learning materials. Ultimately, a key to its success will be to demonstrate that, in the medium- to long-term, OER will help over-stretched educators to manage their work more effectively, rather than adding new work requirements to their job descriptions. This toolkit is a document organized in the following sections: •</p> <ul style="list-style-type: none"> <li>• Policy changes needed for institutions to make more effective use of OER •</li> <li>• Student considerations for OER- friendly policy</li> <li>• Staff considerations for OER-friendly policy</li> <li>• Institutional considerations for OER-friendly policy</li> <li>• Government considerations for OER-friendly policy</li> <li>• Policy implications of the use of OER in Open and Distance Learning and e-Learning, including issues related to cross-border provision</li> <li>• Policy tools and guides</li> <li>• OER Policy forum</li> </ul>
<p>How this study is applicable to OCW?</p>	<p>Certainly everything that is developed by and for OER is applicable and should be considerate when implementing OCW. In this case, for the development and creation of guidelines for successful implementation of OCW in virtual mobility; institutions should be aware that there might be some policy changes needed to make more effective the use of OCW.</p> <p>So, this would mean that when dealing with OCW there is intellectual property rights and copyrights of works created that must be respected and clearly defined trough institutional policies in place. However, not only these kinds of policies are to be taken into consideration, but there are policies such as information and communication technology policies which would clearly define the usage of hardware, software or backups related to OCW. There should be also a process to assure the selection and creation of works and copyright policies.</p>

	<p>This toolkit would probably help us in the determination of different areas in which we would start organizing our own guidelines (Chapter 3) for successful implementation of OCW in virtual mobility: they roughly coincide with the survey and with the principal highlights we considered in regards to OER. It could also serve as a helpful reference in order to identify possible weaknesses of the current higher educational situation in Europe.</p>
<p>Name</p>	<p>POERUP – Policies for OER Uptake</p> 
<p>Objective</p>	<p>First and foremost, to analyze the role of national and international policies and strategies, and therefore providing policy advices for universities. POERUP aims to convince decision-makers that in order to be successful with OER, they will have to formulate evidence-based policies based on looking beyond one’s own country, region or continent, beyond the educational sector they look after.</p>
<p>What does this reference offer?</p>	<p>Policy-makers including regional, national and European decision-makers are the main target group for this Deliverable. Therefore, this document provides to policy-makers with valid, in-depth information on policy support of OER for the schools, the university and the college/other sectors.</p> <p>This study is based on comparing in-depth European case-studies to select non-European ones that will refine and elaborate recommendations to formulate a set of action points that can be applied to ensuring the realization of successful, lively and sustainable OER communities.</p> <p>This document is organized in various sections each of these analyzing different policies or case studies such as: the Bologna process, policies in higher education, UNESCO declaration, OPAL, and it also provides some policy constraints and proposals institutions should be aware of when changing or creating policies.</p> <p>Policy advice for universities document review:</p> <ul style="list-style-type: none"> <li>• Policy constraints as an evidence base for OER</li> <li>• Policy proposals</li> </ul>
<p>How this study is applicable to OCW?</p>	<p>Since this document provides some balanced research results based on a feedback received from different stakeholder groups it could be taken as a literature when writing the guidelines for successful implementation of OCW. One of the fundamental parts that we see in this document are the results obtained by analyzing various institutional policies, and these results could help us to find ways of incorporating successful features for the OCW for virtual mobility initiative. The fact that this document provides some clear policy constraints related to OERs, these policies could serve when defining our own guidelines for implementation of OCW in virtual mobility, because policies really depend on the country where they are implemented in. Moreover, since we already mentioned that in some countries policies could be characterized by various indicators, and they usually could vary; the document gives some policy proposals on how to foster development in education, how to reduce</p>

	regulatory barriers against new types of education such as OCW in this case. All these proposals could be welcome to consider for D1.3.
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**Standards and policies on quality in e-learning and publication of courses**

Name	ECBCheck certification and quality improvement scheme  
Objective	This project supports capacity building organizations to measure how successful their e-learning programmes are and allows for continuous improvement through peer collaboration and bench learning.
What does this reference offer?	<p>In order to achieve the previously mentioned objective, EFQUEL offer the so-called Open ECBCheckQuality Assessment Toolkit. It is a new accreditation and quality improvement scheme for e-learning programmes and institutions in international Capacity Building. This toolkit allows evaluating organization's e-learning offerings against internationally agreed quality standards.</p> <p>In order to allow this measurement, a three level approach for certification is suggested:</p> <p>Level 1: Organizations may become members of a professional community to demonstrate their interest in quality by signing a declaration of intent (Annex 1).</p> <p>Level 2: In a second level, member organisations can actively get involved into quality development and professionalization of their quality practices. They may get involved into the sharing and adoption of best practices and aggregating these into benchmarking and bench learning processes together with other organizations from the field. They also have the possibility to use and adopt the provided ToolKit for a self-assessment to identify strengths and areas for improvement within single programmes or the whole institution.</p> <p>Level 3: In a third level, organisations who are also interested in a more formalized review of their practices can undergo a structured certification process that, if successfully completed, will lead to the awarding of a label. This process is based on an extensive self-assessment supported by the ToolKit provided before.</p> <p>ECBCheck tool kit review For the successful implementation of OCW, it would be a really interesting and maybe essential part to check quality of programs and courses. For this reason, Open ECBCheck toolset could be used for developing and checking this quality. ECBCheck tool is an excel toolkit composed of 5 steps or sections.</p> <ul style="list-style-type: none"> <li>• Information about the programme Institutions should provide basic information on the programme or course they like to assess.</li> <li>• Instructions on how to use the toolkit This section includes the exact evaluation method process used to evaluate institutional programmes or courses.</li> <li>• Criteria overview This section includes the overall structure of the toolkit for courses/programmes.</li> </ul> <p>Seven distinct areas are identified here:                  Part A: Information about + organization of programme                  Part B: Target Audience Orientation                  Part C: Quality of Content</p>

	Part D: Programme/ Course Design Part E: Media Design Part F: Technology Part G: Evaluation & Review
How this study is applicable to OCW?	The quality assessment toolkit could be useful when implementing OCW in virtual mobility because this toolkit provides an accreditation and quality improvement scheme for e-learning programmes. Since, OCW provides e-learning programmes, the usage of this toolkit, would bring a view to institutions whether their e-learning offerings fulfill with internationally agreed quality standards. As a result, the ECB Checklist would probably be useful when classifying areas in order to organize the guidelines for this report.

Name	UNIQUE – Technology enhanced learning quality label for universities and HE institutions  
Objective	Quality certification for both institutes and institutions for ICT adoption and integration for learning in HE based on broad consensus from several initiatives.
What does this reference offer?	<p>The UNIQUE offers criteria of continuous iterative innovation in all aspects of pedagogical design and course provision. It focuses strongly on innovation in all its criteria. The end result of a UNIQUE review is not just a quality certification, but also a set of recommendations to improve Technology Enhanced Learning quality at the institution in question.</p> <p>the UNIQUE process is structured in six stages:</p> <ul style="list-style-type: none"> <li>• Inquiry</li> <li>• Application</li> <li>• Eligibility</li> <li>• Peer assessment</li> <li>• Peer review</li> <li>• Awarding body</li> <li>• Continuous quality improvement</li> </ul> <p>Two types of institutions may apply for UNIQUE: institutions of higher education and independent institutes operating within institutions of higher education (such as schools, faculties, etc.).</p> <p>To check whether application is eligible criteria such as evidence of activities, abilities to conduct evaluation and administrative check is performed within the application. Once the secretariat has performed this check, the institution applicant is informed of the decision. The key stage of this process is the phase of self-assessment or peer-assessment. By this stage, institutions ensure that university’s management understands what is expected and how best to proceed.</p> <p>This self-evaluation process is designed to help the university management gain a clearer understanding of its strategic position by assessing its strengths and weaknesses, by measuring the principal constraints and opportunities determined by its environment, and by looking realistically at the coherence between its ambition and its resources.</p> <p>The UNIQUE criteria guidelines</p> <ul style="list-style-type: none"> <li>• Learning/Institutional context</li> </ul>

	<ul style="list-style-type: none"> <li>Learning resources</li> </ul>
How this certification is applicable to OCW?	<p>The certification proposed by UNIQUE would help OCW institutions to be certified in quality assurance and to improve technology enhanced learning. Having the above mentioned criteria guidelines would help OCW institutions to define a clear institutional and/or learning context where it is stated the strategy of the institution and the strategy related to e-learning, the commitment to innovation, the openness to community etc.</p> <p>It also suggests that guidelines on how e-learning institutions would have to choose and define processes and resources for learning and how the quality of the e-learning offerings could be evaluated. Therefore, as well as ECB, UNIQUE could really help in organizing the areas of the guidelines for successful implementation of OCW.</p>

Name	<p>A guide to quality in online learning</p> 
Objective	<p>To distil some valuable and widespread experience on online education success into a compact readable account and by this helping numbers of institutions globally to ensure the quality and financial sustainability of their online offerings.</p>
What does this guide offer?	<p>This guide summarizes the key quality issues in online education in a concise and accessible manner, with an annotated reading list to help institutions, academics and professionals in higher education to pursue particular topics further. Those key quality issues are written and outlined in a guidelines document in the form of sixteen frequently asked questions, followed by an additional reading list focused on quality benchmarks and international best practices.</p> <p>Guide review</p> <ul style="list-style-type: none"> <li>Common aspects that constitute quality in online learning</li> <li>Common aspects to assure quality by institutions</li> </ul> <p>First and foremost, to assure quality institutions must have:</p> <ul style="list-style-type: none"> <li>Vision</li> <li>Commitment</li> <li>Leadership</li> <li>Sound planning</li> <li>Embrace Partnerships involved</li> </ul> <ul style="list-style-type: none"> <li>Instructional design, learning materials, and course presentation. • Using media to enhance quality in online learning (video, graphics, audio, animation, etc)</li> <li>Ensuring examination security</li> <li>Common aspects to ensure quality by teaching and facilitation</li> </ul>
How this quality guide is applicable to OCW?	<p>Even though there is a vast literature on quality in higher education, this guide has been considered because it outlines some of the most important benchmarks or quality standards that were tested and used in numerous contexts around the world. In relation, this guide references a previously explained program called Quality Matters, so that this program could be used by institutions providing online courses.</p> <p>Quality matters should be without doubt considered by institutions that would like to</p>

	<p>implement OCW for virtual mobility, because it provides practices or benchmarks for online courses. In addition, this guide suggests key areas for professional development and support when preparing an institution for online learning. The areas such as developing methodologies to promote interactive learning experiences, instructional materials, marketing of online courses and everything related to online learning are key areas for OCW.</p> <p>Another fundamental part of this guide is the fact that institutions usually have issues when dealing with resources for developing quality in online learning. The same thing is for sure applicable to OCW because Academic Partnerships references a portal from Canada (Ontario Online Learning Portal) where top ten cost resources for online learning are defined. For OCW this list would be helpful because institutions when implementing OCW should base their decisions about resource allocation for the development of online learning cost estimates etc. Additionally to this, students attending OCW courses would need to provide their own perspective, and this is an important aspect of quality assurance. Therefore this guide suggests some of the quality factors that students identify as important; so these factors would probably be the same when speaking about OCW.</p> <p>This guide would help us in organizing and classifying the guidelines for D1.3, and would also probably help us in improving the description of the families of scenarios.</p>
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<p>Name</p>	<p>Quality assessment for e-learning: a benchmarking approach EADTU</p> 
<p>Objective</p>	<p>The primary purpose of the manual is to provide a set of benchmarks, quality criteria and notes for guidance against which e-learning programmes and their support systems may be judged.</p>
<p>What does this manual offer?</p>	<p>The manual contains benchmark statements with criteria and indicators on quality assessment for e-learning; and therefore, should be seen as a reference tool for the assessment or review of e-learning programmes and the systems which support them.</p> <p>However, this manual could be useful certainly for staff in institutions concerned with the design, development, teaching, assessment and support of e-learning programmes. The intention is that course developers, teachers and other stakeholders should see this manual as a useful development and / or improvement tool for incorporation in their own institutional systems of monitoring, evaluation and enhancement.</p> <p>It is organized in six sections covering Strategic management, curriculum design, course design, course delivery, staff support and student support. Each of these sections follows with a similar format: i) benchmarks, ii) performance indicators, and iii) guidance notes.</p> <p>E-xcellence manual on quality assessment for e-learning</p> <ul style="list-style-type: none"> <li>• Strategic management</li> <li>• Curriculum design</li> <li>• Course design</li> <li>• Course delivery</li> <li>• Staff support</li> <li>• Student support</li> </ul>

How this quality guide is applicable to OCW?	<p>The manual for assessment is organised into six sections covering Strategic management, Curriculum design, Course design, Course delivery, Staff support and Student support. Each section follows benchmarks and indicators on quality.</p> <p>These benchmarks provide a set of general quality statements covering a wide range of contexts in which programme designers and others work. By this manual it is intended that the benchmarks will be relevant to virtually all e-learning situations and that's why we consider it when speaking about OCW. These benchmarks might usefully form the basis for an institution's quality self-evaluation where the full range of criteria and performance indicators are not judged relevant to the institutional context (e.g. in situations where e-learning developments are confined to a minority of courses or to specialist areas of the institution's work). Not all the performance indicators will be relevant in all situations of implementing OCW, and several will be seen to cut across more than one benchmark statement. Thus we would not consider all of them, but there is a relationship of these with the families of scenarios described in D1.2 and their own descriptions. Would help us in organizing the areas for the guidelines of this document.</p>
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### Standards and policies on quality in virtual mobility

Name	Virtual Mobility Collaboratory – Quality assurance handbook for VM  
Objective	To facilitate to higher education institutions (HEI), teachers and institutional departments on how they could get involved easier in the processes of planning and implementation of virtual mobility.
What does this manual offer?	<p>The output of the above mentioned project is the VMCOLAB integration kit for virtual mobility: a guide for institutional awareness. It is basically a document, a handbook that could be helpful for institutions that want to embrace Virtual Mobility, because one of its main goals is to promote the potential of Virtual Mobility in Higher education institutions.</p> <p>According to VMCOLAB, virtual mobility is defined as a set of information and communications technology supported activities, organized at institutional level, that realize or facilitate international, collaborative experiences in a context of teaching and/or learning. (Include definition reference)</p> <p>The quality assurance handbook for virtual mobility that is offered by this project, introduces a new virtual mobility process through five main phases, and in addition provides guidelines for virtual mobility preparation and implementation.</p> <p>These five processes contain in the VM process are explained briefly below. Virtual mobility process as defined per VMCOLAB</p> <ul style="list-style-type: none"> <li>• Decision making</li> <li>• Curriculum designing</li> <li>• Virtual mobility organization and communication</li> <li>• Preparation for virtual mobility organizations</li> <li>• Course / program delivery</li> </ul>

	<ul style="list-style-type: none"> <li>• International teaching groups</li> <li>• Assessment and feedback</li> <li>• Certification and recognition</li> </ul>
How this quality guide is applicable to OCW?	<p>This project is an important aspect to consider related to OCW because it develops a quality assurance approach for virtual mobility, institutional awareness of virtual mobility potential, integrates virtual mobility in institutional academic contexts and similar.</p> <p>The document basically suggests guidelines and shows the various types of virtual mobility institutions could provide, including: student virtual mobility, teachers virtual mobility and both. The same guidelines are used for the three different scenarios, but the indicators or the activities for each are different. For this reason, we consider this to be interesting way to present our own families of scenarios defined in D1.2. Those tables where VMColab presents guidelines for virtual mobility could be reutilized and instead of using types of virtual mobility, could be used for the ten families of scenarios. Having this type of representation for the families of scenarios would help us to reflect the phases to be done by students for the families of scenarios, and this way, we would be able to analyze which activities among scenarios are common between them.</p> <p>In addition, it was already explained that this document suggests five phases, or five different quality indicators: decision making, curriculum designing, VM organization and communication, assessment and feedback and certification and recognition. This model consisting of five phases could be used in order to obtain a detailed description for each of the ten families of scenarios, connecting, in each scenario, what is the role that an OCW course has in each of the five Virtual mobility phases.</p> <p>The VMColab Project suggests a classical quality model based on criteria grouped in common areas to each of the phases of the VM model. We could evaluate each of these criteria in order to select or prioritize virtual mobility quality criteria and with special highlight to our ten families of scenarios. This would justify the definition of guidelines for successful implementation of OCW.</p>

Name	<p>NetCU – Networked Curricula and virtual mobility</p> 
Objective	<p>The objective of this publication is to offer a concise, ‘‘hands-on’’ handbook for all professionals who want to engage in setting up a networked curriculum for education.</p>
What does this handbook offer?	<p>Curriculum design is a complex process due to the different possible goals, partnerships, formats and models institutions usually have. NetCu suggests a design process which should be a key aspect for success of virtual mobility programs. This design process is consisted of the following elements/steps:</p> <ul style="list-style-type: none"> <li>• The initial academic committee This document suggests that there should be an academic committee organized and chosen responsible for organizing and formally scheduling the networked curricula process.</li> <li>• Design meeting Meetings should be held in order to discuss the overall curricula design process and aspects such as: academic aspects, technological aspects, management aspects, quality control. Etc.</li> </ul>

	<ul style="list-style-type: none"> <li>• Scheduling of activities Every activity related to the program design must be scheduled, and clear sharing of roles and responsibilities between stakeholders is essential for the progress of the program.</li> <li>• Change management approach and changing procedures An official change management approach is required in order to faster adapt every possible change that the program might face. When we speak about changes we refer on changes in the program goals, students requirements, organization changes, etc.</li> </ul> <p>An interesting thing about this process, and what could be possibly applied to OCW is the fact that program networked curricula plays an important role when teaching on distance, each institution should consider that there is a process to follow when designing networked curricula.</p>
<p>How this document is applicable to OCW?</p>	<p>This handbook would probably help us in the improvement of the description of mobility scenarios included in deliverable D 1.2; as well as in the elaboration of recommendations and guidelines for using these mobility scenarios within VM programmes.</p>