



D1.2 Promoting virtual mobility scenarios through OCW in the EU context

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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)
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Website

<http://opencourseware.eu>

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Abstract

The present deliverable (D1.2: Use OCW scenarios in the EU context) is one of the results of a European project funded by the Lifelong Learning Programme of the European Union, called 'OpenCourseWare in EU HE context: How to make use of its full potential for virtual mobility'.¹

The deliverable is part of work package 1 of the same project, titled 'Pedagogic and cultural issues: analysing successful models for the promotion of virtual mobility through OpenCourseWare'. The main objective of this work package is to develop scenarios for the promotion of virtual mobility by using OCW in an EU environment. For this we will need to understand the different models that could be used for virtual mobility by using OpenCourseWare (OCW) in an EU environment. We will also focus on identifying new scenarios for the promotion of virtual mobility, and their requirements. Later, we will create guidelines to facilitate the successful implementation of OCW and to support directors of education in using OCW for virtual mobility. The main goal of this deliverable is to present OpenCourseWare scenarios for virtual mobility that will be applicable in an EU context.

We provide a detailed description of the processes that we followed in order to obtain virtual mobility scenarios. The description includes information about the various workshops we held as well as about additional research activities.

The results obtained through these processes were used to describe mobility scenarios for OCW. The typology to categorize each scenario includes a motto, a description, the phase it occupies in the institutional and the student mobility cycle, and the related quality aspects.

In order to explain the mobility scenarios in a graphical manner, we created virtual mobility cycles for students and institutions together with examples of real-world mobility scenarios. These were obtained from students and staff at the Polytechnic University of Madrid.

1 <http://www.opencourseware.eu/>

Abbreviations

BEST – Board of European Students of Technology

VM – virtual mobility OCW – OpenCourseWare

HEIs – higher education institutions EU – European Union

OER – open educational resources

1. Introduction

This document is one of the outputs of the project titled 'OpenCourseWare in the European Higher Education Context: how to make use of its full potential for virtual mobility', which is funded by the Lifelong Learning Programme of the European Union. The focus of the project is the creation of preconditions for a strong European OCW framework and, as a consequence, the removal of obstacles to collaboration between European HEIs (higher education institutes) and therefore an increase in real student mobility.

An analysis of existing research, models and best practices for the promotion of virtual mobility was carried out with the objective of developing scenarios for the promotion of virtual mobility by using OCW in an EU environment. The results of this analysis are available in the report (D1.1)² titled 'Analysis of successful modes for the implementation and use of OCW and OER in higher education. The virtual mobility case'. The research revealed a lack of best practices examples for virtual mobility amongst the surveyed OER/OCW initiatives. We therefore had to develop and validate our own mobility scenarios and best practices.

Furthermore, two international workshops were held, one in Berlin, the other in Cambridge (UK). These were followed up by a few brainstorming sessions and presentations, which led to the list of mobility scenarios (D1.2)³ presented in this document.

Finally, the mobility scenarios will be used to elaborate deliverable D1.3: 'Institutional guidelines and recommendations for successful implementation of OCW in the context of virtual mobility'. These guidelines, which will be targeted at HEIs, are essential to help facilitate the implementation of OCW in HEIs.

2 <http://ried.utpl.edu.ec/?q=es/node/864>

3 <http://www.opencourseware.eu/report>

2. The process of obtaining the families of scenarios for virtual mobility

The process of obtaining/developing the families of scenarios for mobility in this document comprised four steps (see Illustration 1). By 'scenarios', we mean narratives describing what people do when they are engaged in particular activities.

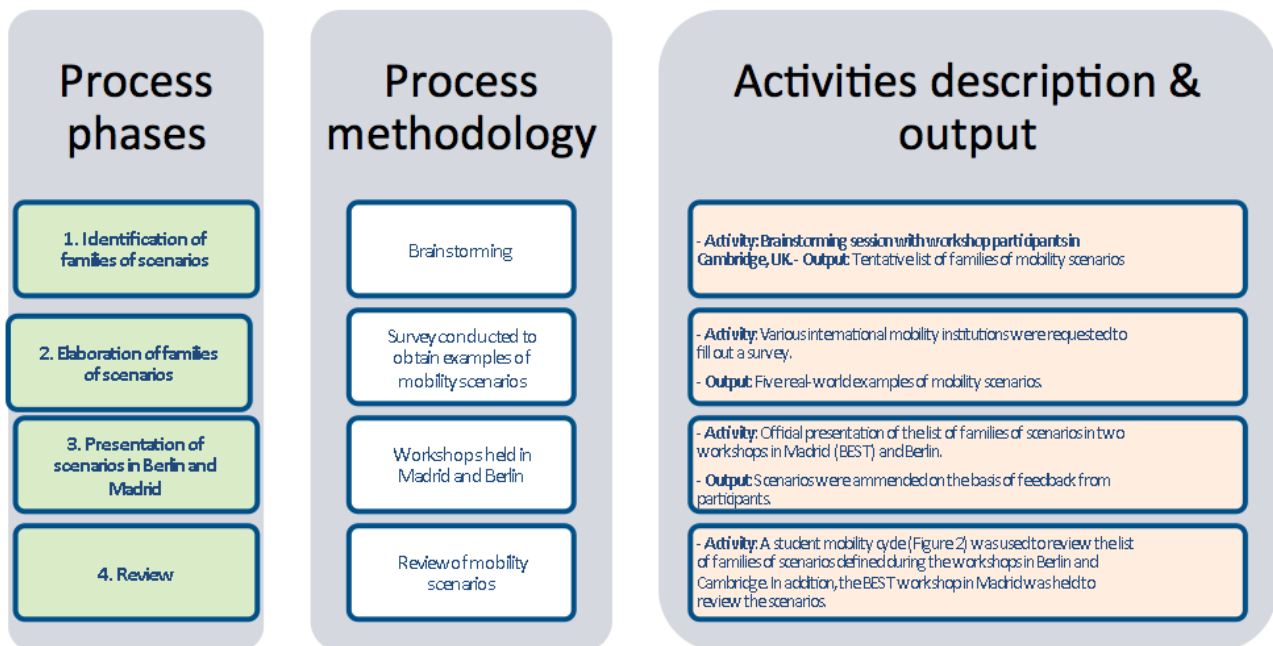


Illustration 1: Families of mobility scenarios – process description

1. Identification of families of scenarios

The starting point in defining the list of mobility scenarios was a workshop held in Cambridge (UK) in April 2013. The aim of the workshop was to develop scenarios for the promotion of virtual mobility by using OCW in an EU environment. A brainstorming session with the participants led to the present list of families of mobility scenarios. During the workshop, 13 families of mobility scenarios were defined. We later reduced the number by three, because in our view, the 10 remaining scenarios cover every aspect of student virtual mobility. The results from D1.1 were used to start discussions on mobility scenarios during the brainstorming session.

2. Elaboration of families of scenarios

A survey was conducted (see Appendix A) with representatives of various HEIs in order to obtain descriptions of specific examples (actual and potential) of OCW/OER mobility scenarios. The results were used to categorize the mobility scenarios according to the families defined in this document. The survey specifically targeted persons responsible for internationalization and mobility at HEIs. Five real-world mobility examples were obtained through the survey. These are briefly described in section 4.2.

3. Presentation of scenarios: workshops in Madrid and Berlin

Two additional workshops were held in order to present and obtain feedback on the mobility scenarios and on the first draft of the guidelines.

1. Workshop in Berlin: 'Guidelines for the use of OCW in virtual mobility', November 2013

The main objective was to officially present and discuss with the participants the previously defined list of mobility scenarios, and to obtain feedback on the draft version of guidelines for the implementation and use of OCW in the context of virtual mobility. During this workshop, feedback from the participants was obtained and an additional explanation of the types of mobility scenarios was given.

2. Workshop in Madrid with the BEST (Board of European Students of Technology) group in June 2013

4. Review

Participants reviewed the mobility scenarios during the workshop in Madrid (BEST). The review process resulted in the Student Mobility Cycle (Illustration 2). One of the main objectives of the cycle is to show how OCW can encourage students to perform mobility periods outside their home institutions.

3. Cycles of OER scenarios that enhance mobility

The final list of families of mobility scenarios comprises 10 scenarios: teaser course, language course, bridging course, culture course, course content, open study community, credit transfer, lifelong learning, professional training and virtual mobility. To make these OER scenarios helpful to each audience, we have tailored them to a typical cycle of an Erasmus mobility exchange:⁴ before, during and after. We also point to OER scenarios as a virtual alternative to physical mobility.

1. OCW scenarios for students

The Student Mobility Cycle comprises five phases:

Phase 1: Choose

Phase 2: Prepare

Phase 3: Adapt

Phase 4: Sustain Phase 5: Capitalize

In addition, OER can be used as a virtual alternative to physical mobility.

4 The Erasmus Programme is an EU exchange student programme that was launched in the late 1980s. More information is available at http://www.erasmusprogramme.com/the_erasmus.php

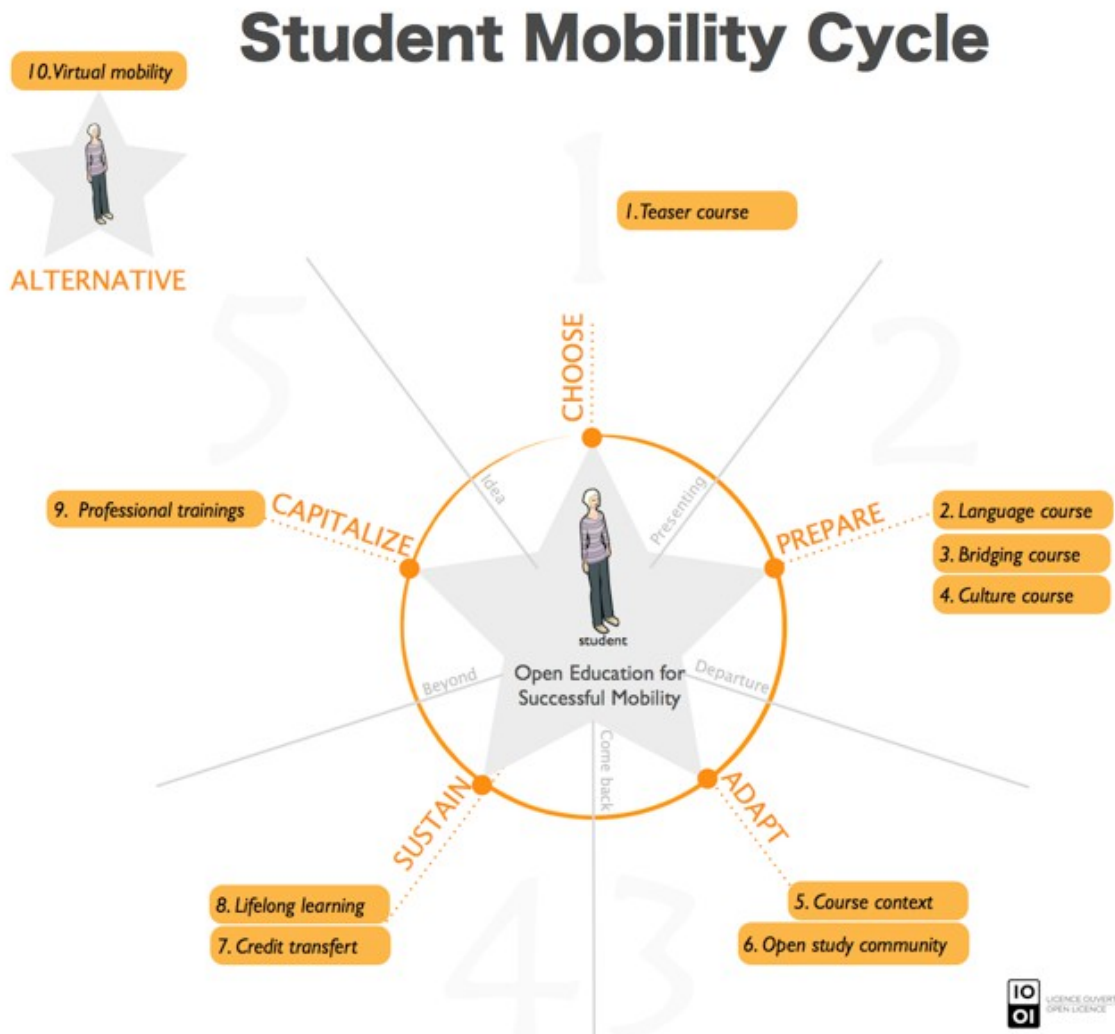


Illustration 2: Student Mobility Cycle

It all starts with the idea of wanting to study abroad. In the first phase, before going abroad, students have to choose a university. An open teaser course⁵ (Scenario 1) would be useful in this context, as it could help each student make the best decision. The open teaser course introduces the course and its teacher, pedagogical methodology, technical tools and environment (for example, the place where the course is given).

In the second phase, the students choose the most appropriate university for their exchange, submit their applications, get accepted and prepare for the exchange by improving their language skills. An open language course (scenario 2) will help them to do so. Recommended open courses can also help students to address specific knowledge gaps (scenario 3). For students, OCW can provide additional context to a course

⁵ We define 'open teaser course' as an introductory video that provides information on what the course will be about.

at the host university (scenario 4). Many courses at host institutions also refer to local contexts and previous courses. In particular, open courses focusing on local culture can help students to overcome cultural barriers (scenario 5). When such courses are openly available and incorporate different cultural approaches, they can help students to make the right interpretations. The ability to join open study communities online, via forums and blogs, can help students to overcome isolation and any biased interpretation of the learning materials (scenario 6).

In the next phase, when the students have returned to their home university after the exchange, the availability of open courses at the host institution can help validate learning at the home institution. Certification of what students have learned abroad is easier when these course materials are available online, because they can easily be reviewed for accreditation (scenario 7). This will prove important for continued lifelong learning, for which the original student exchange laid the foundations (scenario 8). OpenCourseWare can also play a positive role in professional training courses. When the course materials are open, these courses also become available to unemployed people who want to develop new skills, or to existing employees who would like to sharpen their existing skills (scenario 9). Of course, all these scenarios also come into play when one does an alternative virtual mobility cycle (scenario 10).

2. OER scenarios for institutions

Both the Teacher Mobility Cycle and the Institution Mobility Cycle contain five phases:

- Phase 1: Promote
- Phase 2: Select
- Phase 3: Support
- Phase 4: Certify
- Phase 5: Incubate

In addition, OER can be used as a virtual alternative to physical mobility.

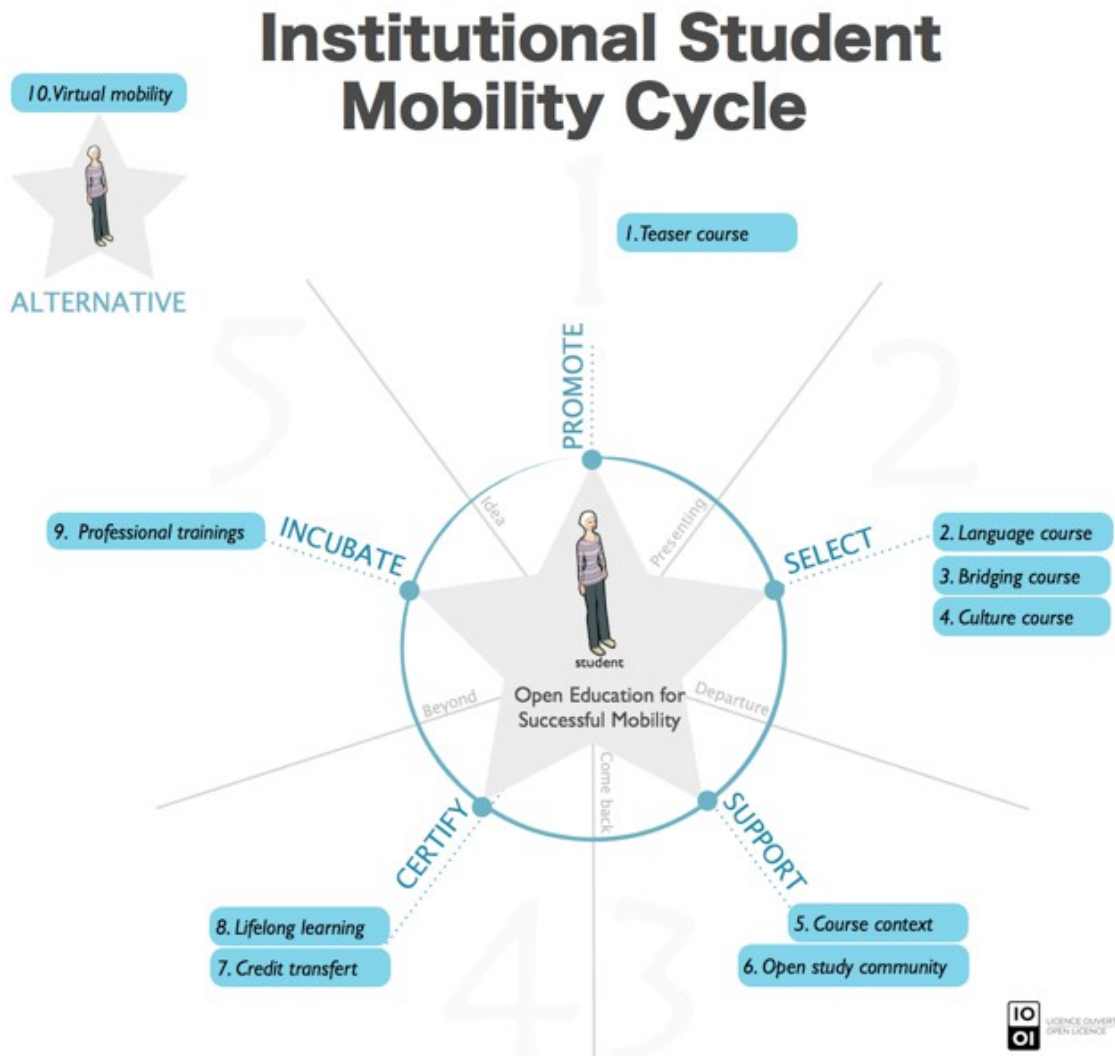


Illustration 3: Institutional Student Mobility Cycle

For a teacher or an institution, mobility can be analysed as an annual project that has goals, actions, meanings, a budget and analytics, and that can be improved year by year as a cycle approach in five phases with specific actions. Here, we look at how OCW can enhance the process in each phase.

In the first phase (promote), it is all about marketing, namely attracting more students. At this point, communication from the host institution mostly centres on profiling the host institution and its environment. We propose to create some open teaser courses (scenario 1) such as those that we now see in all MOOCs.⁶ As open teaser courses could attract more students than hoped for, institutions need to select student profiles for which mobility at their institution will be more effective for both the students and the institution. Teachers tend to select students on the basis of their diplomas and grades. Good grades, however, might not denote a high level of adequacy. The level of adequacy depends on previously acquired knowledge in

⁶ For example, here is a storytelling course teaser: <https://iversity.org/courses/the-future-of-storytelling>

specific subject areas. Looking at the curriculum of students can help. However, access to the courses themselves through OpenCourseWare could be an effective way to detect a lack of knowledge in some areas that could affect the student's success at the host institution. If the teacher detects a lack of knowledge, he or she could recommend or require the student to take an OCW on the specific concept in order to bridge the knowledge gap (scenario 3). Another problem that teachers often encounter with students performing mobility periods is their inadequate language skills, which could compromise the students' success at the host institution. The institution could recommend or require students to take a language course (scenario 2). Cultural differences across countries could also be the cause of student failure. Here, open cultural courses are part of the solution (scenario 4).

The third phase begins when students are at the host institution. Teachers often explain concepts using examples based on cultural facts in a way that is effective only if the teacher and the student share the same culture. The result is that students from abroad often cannot understand specific concepts. In that way, OCW can provide context to a course (scenario 5). Online communities of students organized around specific courses, such as open study communities (scenario 6), can also be very helpful.

The next phase is when students are back in their country. Collaboration between students and teachers can continue via OCW, thus creating a community of lifelong learners when the students become teachers or researchers at their home university (scenario 8). At the level of institutions, collaboration between universities can develop through transferring credits and double degrees (scenario 7).

For institutions, OCW can offer mobility solutions without requiring great investments (scenario 9). Another form of mobility is collaboration between universities and the world of industry whereby OCW is used in professional training courses (scenario 10).

The Student Mobility Cycle presented in this document will be used to structure another deliverable from this European project, namely *The Student Mobility Handbook*.

Deliverable D1.3 – 'Institutional guidelines and recommendations for successful implementation of OCW in the context of virtual mobility' – is structured as outlined in the Institutional Student Mobility Cycle: promote, select, support, certify, incubate and virtual alternative to physical mobility.

4. Mobility Scenarios

Although the scenarios described in this document are applicable to both institutions and teachers, the overall focus of each family of scenarios is on the student.

Legend

Typologies for the scenarios:

1. Motto – the general purpose of the scenario
2. Description – a brief description of the scenario
3. Student perspective – how the scenario is related to students
4. Institutional perspective – how the scenario is related to institutions
5. Quality – quality aspects to consider for each scenario

Scenario 1: Teaser Course

Motto: OCW to promote courses and help students choose them

Description: Courses can be offered as a promotion or as an introduction that communicates the content's level of difficulty or information about the institution before students officially enrol.

Student perspective: The student is able to compare universities. Open courses enable the student to make an informed decision based on transparent criteria such as the level of the course, the required knowledge, the teaching methodologies and the technical tools used as well as the learning environment to be expected. Having access to the full course (via OCW) enables the student to obtain much more information than is the case with a typical ECTS information card.⁷

This scenario belongs to the CHOOSE phase of the Student Mobility Cycle.

Institution perspective: Before going abroad, the student has to choose an appropriate university. An open teaser course (scenario 1) would be useful in this context. It could help students to make their best decision.

The open teaser course shows the course and its teacher, pedagogical methodology and technical tools.

This scenario belongs to the PROMOTE phase of the Institutional Mobility Cycle.

Quality: Since this scenario is related to providing teaser courses during students' virtual mobility exchange, it would be important to consider creating these kinds of courses when designing the overall strategy of the virtual mobility programme. Institutional leadership is required when new courses are offered to students, and resources such as appropriate technological solutions or course design aspects need to be considered.

⁷ 'Erasmus Faces Demand and Management Problems – LERU - University World News', n.d.
<http://www.universityworldnews.com/article.php?story=20130613140106852>.

Scenario 2: Language course

Motto: OCW as support for language learning

Description: Courses to acquire the communication skills in the relevant language in order to fulfil the admission criteria of the host university.

Student perspective: In many cases, admission to a foreign university involves minimal language competency requirements. The language requirements for exchange students are highly regulated and the required tests are often expensive. Open language courses can be a useful tool to prepare for these requirements. They can also help the student to prepare for the stay abroad. In particular, the availability of the full text of the courses from the field of study can help students to assess whether they will be able to follow the courses in this target language.

This scenario belongs to the PREPARE phase of the Student Mobility Cycle.

Institution perspective: When students have chosen the best university for their Erasmus exchange, submitted their application and been accepted, they can decide to prepare for the exchange by improving their language skills. An open language course will probably help them to do so.

This scenario belongs to the SELECT phase of the Institutional Mobility Cycle.

Quality: Language courses would undoubtedly provide real support to students because they would be able to improve their language skills and vocabulary. Therefore, from an institutional perspective, student support during virtual mobility is a key quality aspect.

Scenario 3: Bridging course

Motto: OCW as a support to fill gaps in prior knowledge, both as a formal requirement at host institution and as a personal initiative

Description: The programme committee of a host university often adds extra mandatory courses to a student's programme in order to fill gaps in the student's prior knowledge.

Student perspective: Open courses can be helpful in this context in two ways: when the student has taken open courses, the host institution can more easily check the content of the prior knowledge acquired. Furthermore, the accepting institution could offer specific open courses online specifically targeting knowledge gaps identified as frequently occurring.

This scenario belongs to the PREPARE phase of the Student Mobility Cycle.

Institution perspective: By providing open courses to bridge students' knowledge gaps, institutions could improve student's knowledge in specific areas.

This scenario belongs to the SELECT phase of the Institutional Mobility Cycle.

These courses could be a mandatory part of the incoming students' programme, or the students could decide for themselves that they might perform better by filling a perceived knowledge gap beforehand, by taking an open course.

Quality: Appropriate resources and/or services would be needed for managing quality aspects; for example, including these courses in the virtual mobility curriculum design or ensuring there are delivery methods for bridging courses. In addition, this would also require some form of evaluation of the newly acquired knowledge.

Scenario 5: Context to existing courses

Motto: OCW as a tool to make explicit the context of the course

Description: Students often face difficulties because courses refer to other local courses or to local practices that are not easily accessible. By providing cultural keys, OCW can help make explicit these contexts. The possibility for students from different universities to remix the content of OCW will offer a broader perspective on the subject.

Student perspective: When students are following courses at their host university, they will often stumble upon references to other local courses that local students might have taken but that are not directly accessible to the exchange students. These are contextual elements that are important for a correct understanding of the course content and that need to be clarified. Good OCW is so designed that it makes explicit the dependencies of the open course on other materials and ideally refers to other open content to resolve these contextual issues. More broadly, courses are always also embedded in cultural practices and unspoken local conventions that are part of the local learning community. Students are helped by open courses that make explicit this cultural context.

This scenario belongs to the ADAPT phase of the Student Mobility Cycle.

Institution perspective: Many courses at host institutions refer to local contexts and previous courses at the host institution. This means that institutions should provide OCW learning materials that have been elaborated by more than one professor and by more than one university. This method would facilitate students' future learning because it would allow them to access materials created by people and institutions with different points of view.

This scenario belongs to the SUPPORT phase of the Institutional Mobility Cycle.

Quality: This scenario would facilitate a student's future learning because more than one professor and university would collaborate in the course elaboration, and thus the student would be able to access materials created by people and institutions with different points of view. In order to do so, such courses should form part of the overall institutional strategy and leadership. Student support in this context is highlighted as a quality aspect. Communication and collaboration between staff from related universities would be essential in order to facilitate students' better integration in the virtual mobility programme.

Scenario 6: Open study community

Motto: OCW as a facilitator of interaction and collaboration through online communities

Description: The interaction between students in online communities within OCW courses could reduce dropout rates and lead to better results.⁸

Student perspective: Native students can go online and help those students who are following the same course but are not native speakers of the local language.

This scenario belongs to the ADAPT phase of the Student Mobility Cycle. We can extract useful information from these interactions and convert it into didactic materials.

Institution perspective: When all of the previously described courses are openly available they could help students make the right interpretations. The ability to join open online study communities, with forums and blogs, can help them overcome isolation and biased interpretation of the learning materials.

This scenario belongs to the SUPPORT phase of the Institutional Mobility Cycle.

Quality: For students and for staff it would be fundamental to offer an open study community where they can share experiences and improve their knowledge. In this context, institutions must ensure that technological aspects, user interfaces and usability designs are suitable for such purposes.

⁸ 'Interestingly, the act of building social capital alone motivated some learners to persist in the learning ecosystem. As they solved problems, helped someone, participated in discussions and other learning related activities, they leveled up, won medals, achievements, fans, and built social capital.' 'Openstudy | Innovating Education', n.d. <http://preetharam.wordpress.com/tag/openstudy/>.

Scenario 7: Credit transfer

Motto: OCW for transparency of curricula and transfer of credits gained abroad Description: Such courses facilitate the signing and the formalization of student learning agreements⁹ with total confidence.

Student perspective: The signing of the learning agreement covers the programme of study that a student will follow at another institution and involves recognition of the credits related to that programme by the home university. When we have access to the content of the curricula and if materials are open, the educational assessment of credits awarded is much more accurate and objective.

This scenario belongs to the SUSTAIN phase of the Student Mobility Cycle.

Institution perspective: When the student has returned to his home university after the exchange, certification/validation of what the student has learned abroad is easier when these course materials are available online, so that they can easily be reviewed for accreditation.

This scenario belongs to the CERTIFY phase of the Institutional Mobility Cycle.

Quality: It would be important to include and consider credit transfer protocols carefully when designing the overall strategy and leadership of the virtual mobility programme. Since this could represent a product that the institution provides to its students, this product is a support for students.

9 More on learning agreements: <https://www.shef.ac.uk/erasmus/incoming/before/learningagreement>

Scenario 8: Lifelong learning

Motto: OCW to facilitate professional adaptation and evolution in the context of a perpetually changing world.

Description: Open courses such as those offered by OCW are an essential contribution to lifelong learning.

Student perspective: After graduates have become active in the labour market, their knowledge needs to be continuously updated: they have to learn throughout their lives. Although there are already several options when it comes to formal learning (learning with an accreditation as a result) in or outside a company, there might well be situations in which it is better to take non-formal courses such as open courses. This gives course takers the chance to update their knowledge and to read and learn about state-of-the-art research results concerning their field.

This scenario belongs to the SUSTAIN phase of the Student Mobility Cycle.

Institution perspective: Everything that is described in this document will prove important for continued lifelong learning, for which the original student exchange laid the foundations.

This scenario belongs to the CERTIFY phase of the Institutional Mobility Cycle.

Quality: Lifelong learning is highly beneficial to both students and educators. However, in order for an institution to enable lifelong learning opportunities, there must be certain resources and learning processes available.

Scenario 9: Virtual mobility

Motto: OCW as an alternative mobility solution

Description: Virtual mobility can lower barriers to physical mobility.

Student perspective: Students might not want to participate in mobility programmes for personal or financial reasons, especially in times of economic crisis or downturn. Virtual mobility allows more people to take advantage of a distance learning experience and share knowledge with students from other places and cultures, which will broaden their horizons and knowledge. Moreover, the combination of virtual and face-to-face education is increasingly common, allowing students who are pursuing mobility periods to attend virtual sessions that are held at their homes or universities. It is also possible that a student from one university can follow online lessons taught at other universities.

According to the Student Mobility Cycle, this scenario is an ALTERNATIVE scenario of virtual mobility.

Institution perspective: Of course, all these scenarios also come into play when one does an alternative virtual mobility cycle.

According to the Institutional Mobility Cycle, this scenario is an ALTERNATIVE scenario for virtual mobility.

Quality: It is clear that virtual mobility should be part of the leadership and strategy of the institution. It is impossible to deliver and create it without people (students, staff and educators). However, processes are required in order to implement it successfully. Finally, there should regular evaluations in order to judge the quality of virtual mobility programmes.

Scenario 10: Professional training courses

Motto: OCW as a link between the higher education system and companies

Description: For this scenario, it is particularly important to highlight the importance of having a professional recognition or acknowledgement that could be obtained through professional certifications. These professional certifications could be obtained through, for instance, massive open online courses (moocs).¹⁰

Student perspective: Professional training courses are usually available for employees in the direct context of their current job. In most cases, a fee must be paid by the employer or employee. Open professional training courses offer some distinct advantages: they are also available to those who are currently unemployed but need to keep up with developments in their field or acquire new skills, as well as to employees who have different tasks but feel that they need extra training in neighbouring fields.

This scenario belongs to the CAPITALIZE phase of the Student Mobility Cycle.

Institution perspective: OpenCourseWare can also play a positive role in professional training courses: when the course materials are open, these courses also become available to unemployed who want to reorient their skills or to employees that want to study some new field on their own initiative.

This scenario belongs to the INCUBATE phase of the Institutional Mobility Cycle.

Quality: In order to offer new training courses (such as professional courses), they should be led by the institution's leadership team and strategy to decide whether it would bring pedagogical and institutional benefits.

Professional training courses would serve as a support to both staff and students, and the key aspects of processes should be taken into consideration in order to successfully deliver them.

10 Courses aimed at unlimited participation and open free access. More information : <http://www.educause.edu/library/massive-open-online-course-mooc>

Real-world examples of mobility scenarios

As explained in the description of the overall process of obtaining these families of scenarios, and in order to better understand the families of scenarios, we surveyed various HEIs that have experience of mobility. We obtained some concrete examples representing some of the abovementioned families of scenarios. These examples were initially written as narrative texts. Later, the level of appropriateness to represent virtual mobility examples as a narrative text was measured through feedback from various students. After a detailed review of the students' feedback, we concluded that it would not be sufficient to use only a narrative description of the scenarios and that an additional, graphical representation of the scenarios could lead to better understanding. As a result, additional formats, such as comics and interaction diagrams, were used to complete the description of mobility scenarios. To create the comics, special software called ToonDoo¹¹ was used.

The students were generally satisfied with the comic. They all thought it was a good idea to represent the different uses of OCW, even though it must never be forgotten that they should only be used as a complementary tool and never as a substitute for text descriptions of each mobility scenario.

Since this evaluation was positive, it was decided that presenting the examples through the usage of comics was suitable for this purpose.

Credit transfer (Scenario 7) – OCW for transparency on curricula and transfer of credits

The first example was obtained from a person who has experience of credit transfer programmes:

Mario is the ECTS coordinator at the Computer Science College – UPM, Spain. He is in charge of the evaluation of the courses that PPM students can take at host institutions, in order to approve them and to include them in the learning agreement.

He always has the same problem. It is often not possible to know in advance the content of the courses the students want to take at the host institution because this information either is not available on the website or is not up to date. If the information is not available, then at best the learning agreement will need to be changed later, and at worst the course will not be validated at UPM.

However, Mario discovered that some universities have their course materials open, which allows him to check the materials before students start their classes. It also allows the coordinator to sign the students' learning agreement with total confidence.

The OCW materials thus help Mario to improve the future recognition of the courses the students take at host institutions.

Moreover, Mario has started collaborating with others in his field. They are planning to create an international research group in the near future.

11 More information on this software : <http://www.toondoo.com/>



Illustration 4: A comic representing a scenario for credit transfer mobility programme

Virtual mobility (Scenario 9) – OCW as an alternative to physical mobility

The second example was obtained from a person with experience of virtual mobility:

Oskar studies Computer Science and Mathematics at the Technische Universität Dresden (TUD). He found out that Universidad Politécnica de Madrid (UPM) offers OCW courses in several areas of interest. He decided to follow one of these courses as a self-learner. He got in contact with the professor.

When Oskar finished the course, he was very satisfied with the experience and was confident that his knowledge had improved. What he valued most was the opportunity to continue communicating with his colleagues and even professors in order to share experiences and knowledge.

Oskar then started thinking about spending a study period abroad and, as he can speak Spanish and had a good OCW experience, he thought of applying to UPM as an ERASMUS student. He was informed by his home university that there is an agreement between TUD and UPM, so he decided to apply for the exchange for the following semester.

Oskar was admitted to UPM as an ERASMUS exchange student. He followed the courses at UPM but also needed to follow a course at his home university. As his university also offers OCW courses, he decided to follow one of the self-educating courses at TUD while staying at UPM. He combined both activities during his stay in Spain.

At the end of the semester, Oskar had successfully completed the UPM courses and had his course validated because he passed an assessment at TUD during which he demonstrated mastery of knowledge obtained through the OCW course at TUD. When he got home, he had his courses validated, both the UPM and the OCW ones.



Illustration 5: A comic representing a scenario for virtual mobility

Bridging course (Scenario 3) - OCW as a support to fill gaps in prior knowledge

Elena studies Computer Science at the Universidad Politécnica de Madrid (UPM). She was interested in taking a very specific course at UPM, but to register for the course it is mandatory to have deep knowledge in a particular area, and she had only a few credits in the topic. She was worried because at the time it was not possible for her to fulfil this requirement at home.

Elena had no time to acquire the requested knowledge during formal lectures in order for her to be admitted to UPM. She then discovered that UPM offers OCW courses in the field that she needed to improve in. She thought that if she took this course in parallel to her studies, she would get the knowledge and the credits required by UPM. She checked whether she would be admitted at UPM by taking this OCW course. The answer was positive.

Elena therefore used OCW as a self-teaching course and combined her formal studies at her home university with this OCW course in order to finish in summer just in time for the application deadline at UPM.

Elena sent her application to UPM, including the results of the OCW course. She was eager to get admitted, although she was a bit nervous – until she got the letter telling her she'd been accepted and could take the course she wanted.

Back in Germany, Elena had a level of knowledge about the topic and thus got a high mark for the course.



Illustration 6: A comic representing a scenario for bridging

Teaser course (Scenario 1) – OCW as a helpful tool for students choosing their future university

Last, but not least, the fourth example represents an example of a person with teaser course scenario experience:

As a student at a foreign university, I had the opportunity to do an OCW teaser course on artificial intelligence. The course consisted of various independent modules created by professors. The modules enabled students to see real-world examples of what can be done with artificial intelligence. We were also introduced to the field by the coordinator of this subject. This OCW was the main reason I was motivated to enrol for this subject, because previously I didn't have any knowledge of what artificial intelligence is all about.

Language course (Scenario 2) – OCW as a support for language learning and vocabulary building

Finally, the last example we obtained is from a person with experience of a language course.

Juan studies Computer Science at the Universidad Politécnica de Madrid (UPM). He has always liked the Italian language, so he decided to study in Rome during the final year of his undergraduate studies. He was worried, however, that his Italian was not good enough to complete the courses that he needed to do in order to graduate.

As Juan did not have enough time to take courses that have a pre-determined schedule and demand attendance, he decided to take some OCW Italian courses offered by the university he was going to study at the following year. During the summer, Juan concentrated on learning the language by gradually working his way through the various levels of the materials that make up the courses. By the time he was ready to travel to Italy, he was feeling confident, calm and assertive, as he knew that because of what he had learned, the linguistic limitations would be minimal.



Illustration 7: A comic representing a scenario for language learning

5. Conclusion

Given the absence of best practices of mobility using OER/OCW, we had to identify the student mobility scenarios described in this document from scratch.

European HEIs will find the mobility scenarios presented in this document very useful. The scenarios were created in order to highlight the potential of open educational resources. In order to identify these opportunities, two points of view were taken – the institutional and student mobility cycles – and some related quality aspects for each scenario was provided.

These mobility scenarios are intended for staff in international higher educational offices, to inspire the new mobility scenarios. These mobility scenarios will help HEIs to reflect upon real virtual mobility examples that will further facilitate the implementation of virtual mobility.

In addition, we will be able to contextualize the elaboration of guidelines that institutions could follow in order to successfully implement virtual mobility programmes.

APPENDIX

eForm used to collect the proposals of scenarios for mobility

The Universidad Politécnica Madrid (UPM) participates in a project on 'OpenCourseWare in the European Higher Education Context – how to make use of its full potential for virtual mobility' (<http://www.opencourseware.eu/>). One of the main objectives of this project is to develop successful scenarios for the promotion of virtual mobility by using OCW in an EU environment.

For this, we need to understand different models that could be used for virtual mobility by using OCW in an EU environment. We will also focus on the identification of new scenarios for the promotion of virtual mobility, and their requirements. We aim to create guidelines that will facilitate successful implementation of OCW and support Directors of Education in using OCW for virtual mobility.

For this reason, we would like to kindly ask you to fill out the form below before 24 November. When filling out the form please take into account the following:

- The purpose of the form is to gather descriptions of specific cases (actual and potential) of OCW/OER scenarios
- To do this, please read the attached document "Families of scenarios" and if you are aware of any existing cases or can think of any potential ones for any of the families of scenarios, please fill out the form.
- The form is used to categorize the scenarios according to the families defined in the document
- In addition, the document 'Description of scenarios' provides a concrete example, which details an OCW/OER case that can guide you in how to develop your case (We are asking you to only describe the scenarios. You are not required to do the comic or the sequence diagram showed in the document).
- Finally, please make a brief assessment of the outlined scenario.

To describe more than one case, you will need to fill out and submit a new form.

We really appreciate your cooperation.

If you experiences any problems with viewing or filling out/submitting this form in the email, you can fill it out online via the following link: <https://docs.google.com/spreadsheets/viewform?fromEmail=true&formkey=dERjc0E1NFBMNmRjVvx6QW5sQTc1RFE6MQ>

Description of OER/OCW scenarios

Name and Surname * ...

Contact Email * ...

Institution * ...

Choose the category for the scenario to describe ...

Describe the case for the chosen scenario

Valoración

This scenario is : * Real * Potential