

Editorial

As the European Union (EU) strives to develop the most competitive, knowledge-based economy in the world, the exchange of knowledge has been recognized as a critical priority. Mobility, in all senses, is crucial in pursuing this goal and several initiatives, such as the Erasmus Program, which facilitates student exchanges among European universities, have helped to expand mobility in the EU. Yet, time and money constraints still render physical mobility out of reach for many segments of European society. However, non-traditional methods such as “distance learning” and “virtual learning” have emerged as promising complements to physical mobility. Moreover, beyond enhancing the connections between European Higher Education Institutions (HEIs), virtual mobility removes some of the barriers to inclusion for socially, economically or physically disadvantaged groups for whom traditional methods of mobility are often inaccessible.

The EU’s aspirations for mobility are not limited to course contents and “cultural exchange” has long been also a priority of the EU. Indeed, Erasmus Program, which the European Commission has funded for the past 3 decades, strongly emphasizes the cultural aspect of learning processes. Therefore, a primary question for the expanding field of digital learning is how to integrate cultural learning in virtual mobility frameworks. This is one of many issues facing this burgeoning field and there are also other vital questions: How can the institutions, teachers and students of HEIs be encouraged to engage with virtual mobility? What are the current challenges and opportunities in virtual mobility?

The “UbiCamp: Integrated Solutions to Virtual Mobility Barriers” project was developed in response to these questions. It was funded by the European Commission Erasmus Multilateral Programmes and coordinated by the University of Oviedo (Spain) in partnership with Yaşar University (Turkey), Southampton University (United Kingdom), Vytautas Magnus University (Lithuania) and Università Telematica Pegaso (Italy) between 2012 and 2014. The name “UbiCamp” was derived from the phrase “Ubiquitous Campus”, which describes a decentralized model of virtual mobility. The UbiCamp project aimed to make virtual mobility a more accessible opportunity for teachers, students and institutions in higher education by providing comprehensive and experience-based solutions to major barriers and difficulties in the field.

To this end, a “Virtual Mobility Practical Framework” that defines quality criteria for the implementation of different elements of virtual mobility in HEIs was constructed. In it, organizational elements (recognition of the teaching/learning experience, institutional agreements, virtual mobility session organization requirements, etc.), technological elements (minimum technological standards of learning resources in order to make them re-usable, accessible, etc.), pedagogic/didactical elements (requirements for didactical preparation of study curriculum for virtual mobility and assessment methodologies for virtual mobility), and cultural elements (learning resources to enhance intercultural exchanges during virtual mobility processes) were defined. In addition, each partner university created and tested open educational resources (OERs) on different topics. Each OER, whether a language course, country guide, country-focused game or quiz, virtual tour, or visitor’s guide to local traditions, media or entertainment, included an innovative approach to cultural exchange.

Special Issue on Virtual Mobility and Distance Learning in the European Union

The UbiCamp project was primarily an attempt to raise awareness about virtual mobility among HEIs. To multiply their impact, the project results were disseminated widely at both national and European levels. A final conference entitled “A New Generation of Education in Europe: From Distance Learning to Virtual Mobility” was organized by Yaşar University in Turkey on March 4th, 2015. This special journal issue includes peer-reviewed papers from this conference. The selected articles explain the theoretical background of virtual mobility and discuss the virtual mobility process based on the UbiCamp project experience.

Raquel Menéndez Ferreira, Aquilino A. Juan Fuente, and Ramón Pérez Pérez discuss the results of the UbiCamp pilot virtual mobility exchange. In their study, they analyze the strengths and weaknesses of virtual mobility in European university education systems based on questionnaires administered in the pilot testing process of the UbiCamp OERs. The authors contrast the expectations and motivations of students and teachers before and after the experience.

Based on his UbiCamp experience, Lorenzo Fiorito sought to explore the creation of a network for massive open online courses. The aim of his paper is to identify advantages and limitations in virtual mobility processes, and to share some ideas for making virtual mobility the customary way of cooperation among European universities.

Özlem Ozan and Yasin Özarıslan share their experience of developing a virtual learning language course both as a topic in and off itself but also as a means of cultural exchange. They argue that foreign language teaching has been neglected in virtual mobility and present their findings from their Turkish language module development process.

Finally, İsmail Özler and Hasan Çakır analyse how governmental organizations can use distance education for in-service training. In their study, they discuss whether distance education is used effectively in governmental organizations based on a document analysis process of their strategic plans.

We hope this special issue will provide encouragement for the development of virtual mobility possibilities in higher education as well as an important contribution to the related literature. More information on the UbiCamp project and the tools developed through it are available at the project website - ubicamp.eu.

On behalf of Journal of Yaşar University
Guest Editor Assoc. Prof. Dr. Gökay OZERİM

Distance Teaching of Turkish as a Foreign Language: Case of UbiCamp Project

Yabancı Dil Olarak Uzaktan Türkçe Öğretimi: UbiCamp Proje Örneği

Yasin OZARSLAN, Yasar University, Turkey, yasin.ozarslan@yasar.edu.tr
Ozlem OZAN, Yasar University, Turkey, ozlem.ozan@yasar.edu.tr

Abstract: Distance teaching of Turkish as a foreign language (DTTFL) was a neglected issue until recently. However, the number of people, who wants to learn Turkish at a distance, is increasing around the world due to increasing importance and use of open and distance education. In the present study, as one of the distance teaching experience, Learn Turkish Module, which was prepared and applied by Yasar University under the Umbralle of UbiCamp Project, will be mentioned. Firstly the current situation of DTTFL will be provided. After that design, production and delivery process of Learn Turkish Module will be shared.

Keywords: Teaching Turkish to Foreigners, Content Development, Distance Teaching, Distance Learning, UbiCamp.

Öz: Yakın zamana kadar Türkçenin yabancı dil olarak uzaktan öğretimi ihmal edilen bir konuyken açık ve uzaktan eğitimin artan önemi ve kullanımı nedeniyle uzaktan Türkçe öğrenmek isteyen sayısı artmaktadır. Bu çalışmada, UbiCamp Projesi şemsiyesi altında Yaşar Üniversitesi tarafından hazırlanan ve uygulanan uzaktan öğretim deneyimlerinden biri olan "Learn Turkish (Türkçe Öğren)" uygulamasından söz edilecektir. Çalışmada öncelikle uzaktan yabancı dil olarak Türkçenin öğretimi hakkında mevcut durum ortaya konulacak ve sonrasında "Türkçe Öğren" uygulamasının tasarımı, üretim ve sunum süreci deneyimleri paylaşılacaktır.

Anahtar Sözcükler: Yabancılarla Türkçe Öğretme, İçerik Geliştirimi, Uzaktan Öğretim, Uzaktan Öğrenim, UbiCamp

1. Introduction

Enormous expansion in distance language learning opportunities has emerged over the last decade. Rapid developments in information and communications technology, together with societal changes, have increased awareness of and demand for distance education (White, 2003). Teaching Turkish to foreigners has gained importance as well. Foreigners get more interested in Turkish, and teaching Turkish as a foreign language has been gaining momentum, especially in the last decade, as a consequence of government policies in the field. Distance teaching of Turkish as a foreign language is a great opportunity to reach a wide audience and introduce Turkish culture. However, there is very limited academic study on distance teaching of Turkish (Adıyaman, 2001; Mutlu and Özöğüt Erorta, 2008; Pilancı, 2009, Pilancı, et. al., 2015). Therefore, the aim of this paper is to share content development experience for distance teaching of Turkish.

The paper is consisted five sections. First part is introduction. Second part covers distance learning environment as a foreign language teaching platform. Third part focuses on DTTFL. Fourth part is UbiCamp Project as a case of DTTFL. This part have subtitles as Content of Learn Turkish Module, Instructional Design of Learn Turkish Module, Production Process of Learn Turkish Module, and Delivery of Learn Turkish Module. Final part is conclusion.

2. Distance Learning Environment as a Foreign Language Teaching Platform

The traditional model of education is that learning and teaching take place in close proximity, at a particular point in time. However, in distance education the focal point of learning is no longer the classroom but has shifted to the home, or the workplace, or a study context (White, 2003). Distance education mainly serves learners who cannot attend face-to-face programs for one or another reason. Distance education is planned learning, which occurs in a different place and time from teaching, requires special techniques for course design and instruction, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements (Moore and Kearsley 1996).

The distance language teaching programs have been increasing due to the increasing importance and use of open and distance education, which provide rich learning environments, flexible time and gather students from different geographical areas (Pilancı, et. al., 2015). Effectiveness, technological aspects, and autonomy are the main streams in the research of distance language education courses in general (Ekmekçi, 2014). For instance, Sole and Hopkins (2007) focuses on four language skills, designing appropriate assessment strategies, and learners' contribution to the

educational context. White (2006) states there is a shift from the delivery of the content to facilitating transactions between, learners, teachers, and native speakers. Holmberg et al. (2005) emphasizes learner autonomy, learner support, development of intercultural competence, course design and learning environments.

3. Distance Teaching Turkish as a Foreign Language (DTTFL)

Teaching Turkish to foreign people in Turkey mainly takes place in universities. Turkish Education Centers (TOMER) are the leaders in this field. The coordination of this issue is done by the Yunus Emre Institution in abroad. According to the statistics of Yunus Emre Institution (2009), which was founded by the Prime Minister in 2009, and of the Department of Turks Abroad (2014), there is a demand for learning Turkey Turkish especially in the Balkans, the Middle East, Far East and Africa region. In this context Yunus Emre Institution is doing Turkish teaching face to face in various countries, but it is difficult to meet the demands of learning Turkish all over the world trough face to face education and to reach every individual who wants to learn Turkish in this way. At this point distance education emerges as an alternative solution. However, Turkish teaching standards required for the creation of effective distance learning is not yet formed. Furthermore, there are not any content configurations taking into account the individual differences and learning readiness even though it is demanded by the centers, who teach Turkish as a foreign language. There is very limited academic knowledge for effective distance teaching of Turkish. Although Anadolu, Ankara, and Hacettepe Universities have experiences on distance teaching of Turkish, it is not enough to develop a common ground in the field.

4. UbiCamp Project as a case of Distance Teaching of Turkish as a Foreign Language

UbiCamp Project attempts to respond to the need to overcome the usual barriers for virtual mobility (VM) within higher education institutions in the European Union. UbiCamp is the acronym of "Ubiquitous Campus", which is a model of Virtual Mobility that allows the integration of new institutions through a decentralised model. Within UbiCamp project which Yasar University is a part of, lectures are given in various subjects to students in different universities in EU countries, via online learning programmes. In this context, these lectures presented online are supported with cultural elements by every country (<http://www.ubicamp.eu/>). In this regard, "Learn Turkish" module was placed in the course, which was provided by Yasar University, to introduce Turkish culture to foreign students.

4.1. Content of Learn Turkish Module

The module is limited to basics of A1 level of foreign language teaching steps of "The Common European Framework of Reference for Languages: Learning, Teaching, Assessment". After completing A1 level learners will be able to meet the most basic needs of daily life, introduce himself, understand the introduction of somebody, distinguish the sounds of the alphabet and use in speech, use number when they need in daily life. The CEFR (Council of Europe, 2016) states four kinds of language activities as reception, production, interaction and mediation. Reception focuses on listening and reading. Production and interaction focuses on speaking and writing. Mediation focuses on translating and interpreting. Learn Turkish Module was just focused *reception* level of those since aim of it is to introduce the Turkish language as a part of Turkish Culture. The content of this module was provided by a lecturer, who is a specialist in teaching Turkish to foreigners, as follows.

- The Turkish Alphabet
- Let's Pronounce The Words
- Specific Sounds in Turkish
- Greetings
- Numbers
- Colors
- Clothes and Accessories
- Shopping Dialogs
- Days, Months and Seasons

4.2. Instructional Design of Learn Turkish Module

This content was enriched by Yasar University Open and Distance Learning Centre. Learning contents was delivered via learning management system administered by Open and Distance Learning of Yasar University as shown in

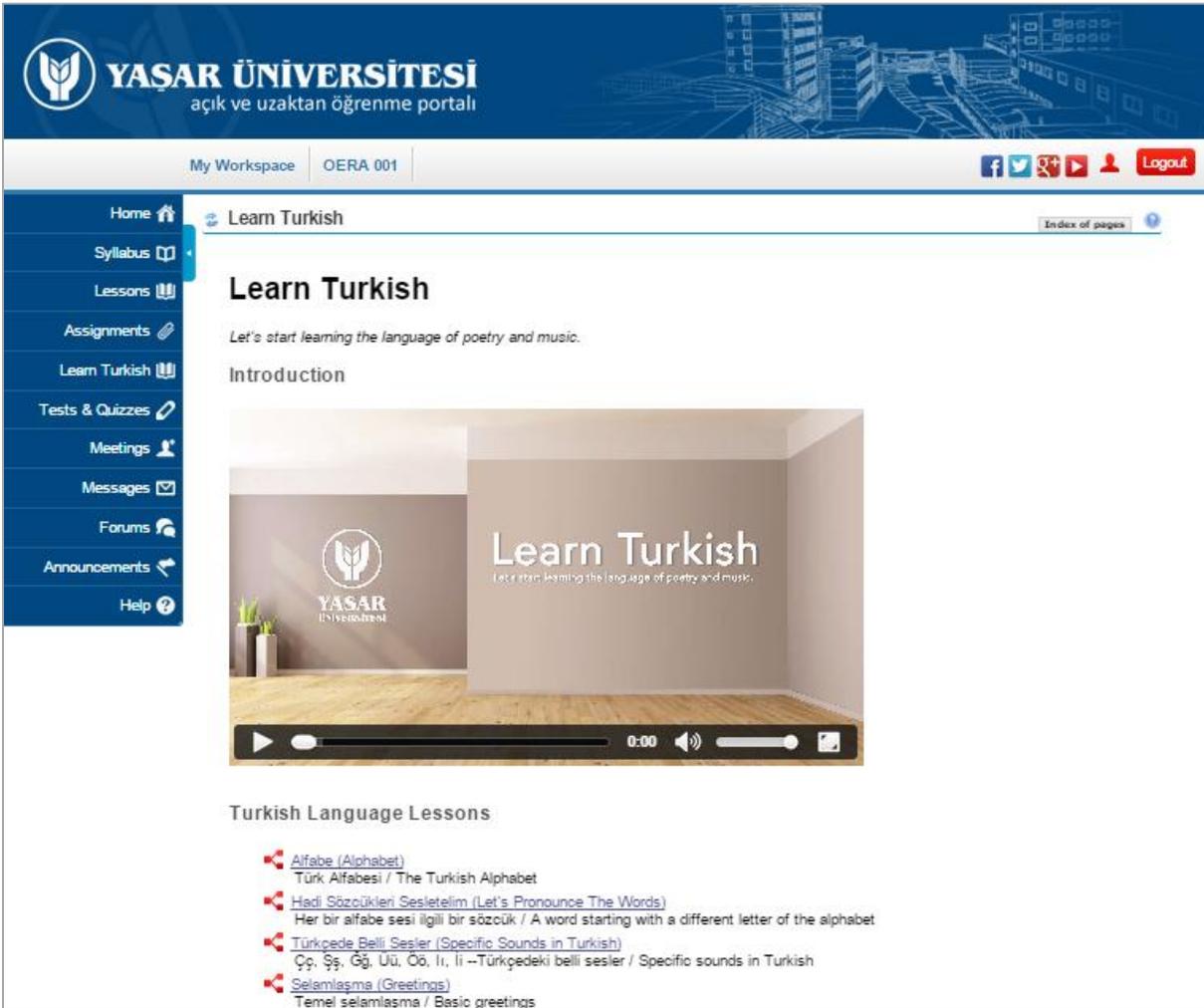
Screenshot 1. Learn Turkish Module were accessible to students, who were involved in programme. Each student logged in system with their user name and password.

Analysis, design, development, implementation, and evaluation (ADDIE) model was used as instructional design model (Morrison et al., 2010). An entertaining educational scenario was designed to increase student engagement. In this context, each topic was supported by visuals, animations, audio, games and virtual agents. Each topic had three parts as *video lecture*, *exercise* and *game*.

Video lectures were 5 to 10 minutes short videos to explain the topic. In video lectures, virtual agents were preferred as lecturers instead of humans to increase student's interest. Four types of video lecture were produced. First, presentation style video lecture with a virtual lecturer, as shown in Screenshot 2. Second, dialogue style. In dialog style video lectures, virtual and human agents discusses the topic. Screenshot 3 shows dialogue of virtual and human agent. Third, conversation style video lectures, in this type, two virtual agents have a conversation about the topic, as shown Screenshot 4. Fourth, multimedia style video lectures. In this type, an animations was used to explain the topic instead of agents.

Permanent vocabulary learning and retention can be improved by using different exercises. They are essential and beneficial for vocabulary learning (Hashemzadeh, 2012). Therefore exercises, which were focused on to improve listening and reading skills, were placed in the module. Listen and Repeat (as shown Screenshot 6), Listen and Match (as shown Screenshot 7), Listen and Choose (as shown Screenshot 8), Ordering Dialog (as shown Screenshot 9), Listen, Drag And Drop (as shown Screenshot 10) and Listen and Write (as shown Screenshot 11), exercises were provided to students.

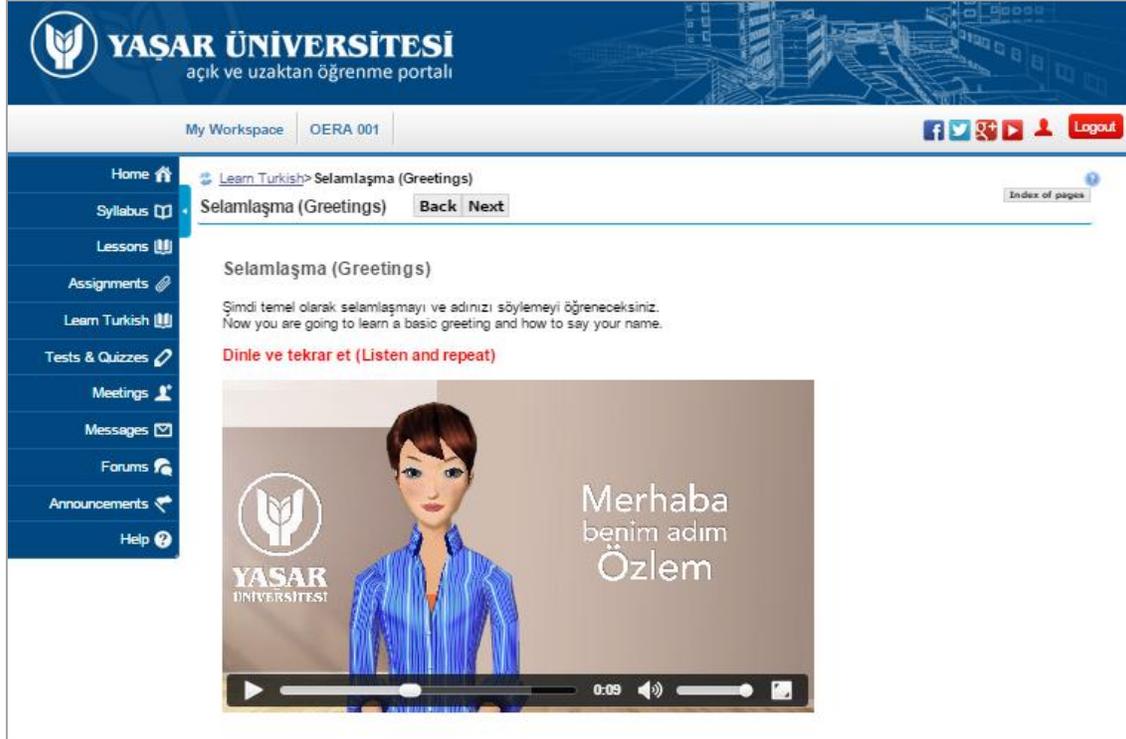
Games were used to improve writing skill. Hangman Game, as shown Screenshot 12, and Puzzle Game, as shown Screenshot 12, were preferred since they are very common in Turkish Culture as well as in other cultures.



The screenshot displays the 'Learn Turkish' module interface on the Yasar University website. The header includes the university logo and name, 'açık ve uzaktan öğrenme portalı', and user information 'My Workspace OERA 001'. A navigation menu on the left lists various options like Home, Syllabus, Lessons, Assignments, Learn Turkish, Tests & Quizzes, Meetings, Messages, Forums, Announcements, and Help. The main content area is titled 'Learn Turkish' and includes an introduction video player. Below the video, there is a section for 'Turkish Language Lessons' with a list of topics: 'Alfabe (Alphabet)', 'Hadi Sözcükleri Sesletelim (Let's Pronounce The Words)', 'Türkçede Belli Sesler (Specific Sounds in Turkish)', and 'Selamlaşma (Greetings)'. Each lesson title is accompanied by a small red icon.

Screenshot 1. "Learn Turkish" learning environment

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University



Screenshot 2: Presentation style video lecture with a virtual lecturer.

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University



Screenshot 3: Dialog style video lecture, virtual and human agents discusses the topic.

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

YASAR ÜNİVERSİTESİ
açık ve uzaktan öğrenme portalı

My Workspace OERA 001

Home Learn Turkish > Alışveriş Diyalog (Shopping Dialog) Index of pages

Syllabus Alışveriş Diyalog (Shopping Dialog) Back Next

Lessons

Assignments

Learn Turkish

Tests & Quizzes

Meetings

Messages

Forums

Announcements

Help

Alışveriş diyalog (Shopping dialog)

- Hoş geldiniz literally means Welcome in English. There are some fix expressions in Turkish and Hoş bulduk is one of them. It is the response to Hoş geldiniz.
- Buyurun has different meaning depending on the context. Here in a store, it means "How can I help you?"

Diyalogları dinleyin (Listen to the dialogs)

0:07

- Ne kadar?
- Kaç para?

Screenshot 4: Conversation style video lecture, two virtual agents have a conversation on the topic.
Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

YASAR ÜNİVERSİTESİ
açık ve uzaktan öğrenme portalı

My Workspace OERA 001

Home Learn Turkish > Selamlaşma (Greetings) > Günler, Aylar ve Mevsimler (Days, Months and Seasons) Index of pages

Syllabus Günler, Aylar ve Mevsimler (Days, Months and Seasons) Back Next

Lessons

Assignments

Learn Turkish

Tests & Quizzes

Meetings

Messages

Forums

Announcements

Help

Günler (Days)

01 Pazartesi, 02 Salı, 03 Çarşamba, 04 Perşembe, 05 Cuma, 06 Cumartesi, 07 Pazar
01 Monday, 02 Tuesday, 03 Wednesday, 04 Thursday, 05 Friday, 06 Saturday, 07 Sunday

Dinle ve tekrar et (Listen and repeat)

Pazartesi

1

0:08

Screenshot 5: Multimedia style video lecture
Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

YASAR ÜNİVERSİTESİ
açık ve uzaktan öğrenme portalı

My Workspace OERA 001

Learn Turkish > Alfabe (Alphabet)

Alfabe (Alphabet) Back Next

Alfabe (Alphabet)

The Turkish alphabet contains 29 letters. 8 of them are vowels and 21 of them are consonants. Vowels play a great role in word forma

Dinle ve tekrar et (Listen and repeat)

ALFABE / ALFABET

Dinle ve tekrar et / Listen and repeat

1:46

Screenshot 6: "Listen and Repeat" exercise

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

Rengarenk (Colourful)

Renklerle adlarını eşleştir (Match the colours with the words)

LEARN TURKISH Alıştırma/Exercise

Dinle and eşleştir (Listen and match) 1 / 5

KIRMIZI

MAVİ

YEŞİL

Onayla / Submit

Screenshot 7: Listen and match exercise

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

Kıyafetler Alıştırma (Exercises on Clothes)
Resimlerle sözcükleri eşleştirin (Match the words with the pictures)

LEARN TURKISH Alıştırma/Exercise

Dinle ve Seç / Listen and Select **1 / 5**

GÖMLEK

Dinle / Listen

Onayla / Submit

Screenshot 8: Listen and choose exercise

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

Alışveriş Alıştırma (Exercises on Shopping)
Aşağıdaki diyalogu sıraya koyunuz (Put the dialogs in order)

LEARN TURKISH Alıştırma/Exercise

Aşağıdaki diyalogları sıraya koyunuz (Put the dialogs in order) **1 / 3**

Satıcı/Seller : Hoş Bulduk.

Emre : Hoş Geldiniz.

Emre : 50 lira.

Satıcı/Seller : Bu kemer ne kadar?

Dinle / Listen

Onayla / Submit

Diyalogları dinleyin
Listen to the dialogs

Screenshot 9: Ordering dialog exercise

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

Alıştırma 4 | Exercise 4
Dinle ve duyduğunu kutunun içine sürükle (Listen and drag what you hear into the box)

Şimdiki alıştırma rakamlar duyacaksınız. Duyduğunuz rakamları sırasıyla kutunun içine sürükleyiniz.
In this exercise you are going to hear numbers. Drag each number into the box in the order you hear them.

LEARN TURKISH Alıştırma/Exercise

Dinle ve duyduğunu kutunun içine sürükle / Listen and drag what you hear into the box 1 / 5

Bırak / Drop

Screenshot 10: Listen, drag and drop exercise

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

LEARN TURKISH Alıştırma/Exercise

Dinle ve duyduğunu yaz / Listen and write what you hear into the text box 1 / 1

+ =

+ =

+ =

+ =

Cevapları sayısal olarak yazınız.

Screenshot 11: Listen and write exercise

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

Alıştırma 3 | Exercise 3
Dinle ve duyduğunu yaz (Listen and write what you hear)

Şimdiki alıŖtırmada sözcükler duyacaksınız. Duyduğunuz sözcüğü sanal klavyeden harfleri sürükleyerek yazınız.
In this exercise you are going to hear some words. Type the words you hear by dragging the letters from the pop-up keyboard into the blank areas.

LEARN TURKISH Alıştırma/Exercise
Dinle ve duyduğunu yaz / Listen and write what you hear **2 / 5**



Dinle / Listen

— — — — —

A B C Ç D E F G Ğ H
I İ J K L M N O Ö
P R S Ş T U Ü V Y Z

Screenshot 12: Example of the game Hangman

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

Sözcük Avı (Word Puzzle)
Bu oyunda bir bulmaca göreceksiniz. Yanda verilen sözcükleri bulunuz.
In this game you are going to see a puzzle. Find the words given in the puzzle.
Verilen sözcük ve söz öbeklerini bulmacada bul. (Find the given words and phrases in the puzzle.)

LEARN TURKISH Alıştırma/Exercise
Sözcük avı / Word puzzle

A	B	N	Z	Ü	C	Ü	Z	A	B
F	A	R	Ü	Z	E	Y	T	İ	N
A	E	A	R	A	B	A	L	Z	E
P	P	T	R	A	B	G	Z	Ü	A
Ç	A	K	U	O	İ	Ü	Ğ	Ş	U
A	A	T	F	S	F	V	S	İ	Ç
K	H	N	A	D	Z	Ü	C	N	A
A	D	Y	R	T	F	A	E	B	K
P	A	T	E	T	E	V	P	U	Y
R	A	B	A	M	Ö	S	Ç	A	T



ARABA

ARABA

Screenshot 13: Puzzle Game

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

4.3. Production Process of Learn Turkish Module

Yasar University Open and Distance Learning Centre (YU-ODLC) undertook the responsibility of development and delivery of processes the course. YU-ODLC has a strong technical infrastructure and working with experts in field of instructional design. It contains 6 work offices as Administration and Planning Office, Content Development Office, Technology Development Office, Support Office, Visual Design Office and Post-Production Office. It is also a 240 m² studio, which is containing a Video Shooting Studio, Directing Room, Sound Studio, Make-Up and Dressing Room. Multiple-camera setup, green box technology and led lighting are used for video shootings in YU-ODLC. Necessary software and hardware are available for interaction and interface development, content enrichment and voice processing. Centre has been providing several online courses, such as 10 institutional basic courses and YOK Compulsory Lessons (Turkish Language and AİTT), since 2010.

In the process of preparing UbiCamp Learn Turkish module, firstly subject contents are taken from the expert. Then, instructional design was proceeded. After that video lectures were shot with green box technology as shown in image 14. After shootings of video lectures, sounds were recorded in sound recording studio as shown in image 15.



Image 14: Green box shooting within center

Source: Reproduced with permission from *The Center for Open and Distance Learning of Yasar University*



Image 15: Sound recording studio

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

At next stage, contents are edited by using Adobe Creative Cloud (Adobe Photoshop, Adobe Illustrator, Adobe Premiere and Adobe After Effects) software systems in postproduction studio as shown in Image 16. Exercises, games and interactions were developed by using Adobe Flash and Articulate Storyline software systems.



Image 16: Postproduction Studio

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

4.4. Delivery of Learn Turkish Module

At the last stage, usability test were conducted and content are delivered via learning management system (<http://e.yasar.edu.tr>) as shown in Image 17.

The screenshot shows the LMS interface for 'OERA 001: EU Education Programmes and Project Management'. The main content area features a large image of a hand writing on a document. Below the image, the course is identified as 'EU Education Programmes and Project Management' by 'Assist. Prof. Dr. Ayşelin YILDIZ'. The interface includes a sidebar with navigation options like Home, Syllabus, Lessons, Assignments, Learn Turkish, Tests & Quizzes, Meetings, Messages, Forums, Announcements, Schedule, Resources, Statistics, Site Info, and Help. The main content area also displays 'OERA 001: Recent Announcements', 'OERA 001: Calendar' (showing a calendar for November 2014), and 'OERA 001: Message Center Notifications'.

Image 17: <http://e.yasar.edu.tr>

Source: Reproduced with permission from The Center for Open and Distance Learning of Yasar University

As mentioned earlier, “Learn Turkish” module was placed in a course, which was produced and delivered by Yasar University under umbrella of UbiCamp Project, to introduce Turkish culture to foreign students. Therefore, studying this module was not obligatory. Students were free to study this module. It was open from September to May 2015. 347 visits occurred to module and 4372 events was triggered by 8 students from 5 different countries.

5. Conclusion

The distance language teaching programs have been increasing due to the increasing importance and use of open and distance education around the world (Pilanci et al, 2015). It provides rich learning environments and flexible time, as well as ability to gather students from different geographical areas. Although, there is a wide variety in the studies of language teaching, especially teaching English as a second and foreign language, the literature in the field of teaching Turkish as a foreign language is limited. Instructional design process of teaching Turkish as a foreign language differentiate teaching English as a foreign language since Turkish is a member of Ural-Altai language family. The languages in this language family are agglutinative languages. Affixes have certain systematic and function. Besides, vowels have a certain systematic of use. This feature requires more exposure to the hearing Turkish words. Therefore, listening exercises are very important to practice vowel harmony of Turkish.

Games offer students a fun-filled and relaxing learning atmosphere (Chen, 2005) for especially writing exercises.

When the distance language teaching programs are examined, it can be seen that these programs are developed and implemented by teams from different disciplines (Pilanci, et. El., 2015). Capability of interdisciplinary studies are need to be improved to design rich, meaningful online contents for teaching Turkish as a foreign language.

REFERENCES

- Adıyaman, Z., (2001). *Uzaktan Eğitim Yoluyla Yabancı Dil Öğretimi*. The Turkish Online Journal of Educational Technology, 1 (1): 92-97.
- Chen, I-Jung (2005). *Using Games to Promote Communicative Skills in Language Learning*. The Internet TESL Journal, 11(2). Retrieved: <http://iteslj.org/Techniques/Chen-Games.html>
- Council of Europe (2016). *The Common European Framework of Reference (CEFR) for Languages: Learning, teaching, assessment*. Retrieved: 2016-06-01. <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=0900001680459f97>
- Ekmekçi, E. (2014). *Distance-education in foreign language teaching: evaluations from the perspectives of freshman students*. Procedia - Social and Behavioral Sciences 176 (2015) 390 – 397
- Hashemzadeh, M., (2012). *The Effect of Exercise Types on EFL Learners' Vocabulary Retention*. Theory and Practice in Language Studies, 2 (8), pp. 1716-1727.
- Holmberg, B., Shelley, M. and C. White (2005). *Distance Education and Languages Evolution and Change*. Clevedon: Multilingual Matters LTD
- Moore, M. G. and G. Kearsley. 1996. *Distance Education: A systems view*. California: Wadsworth
- Morrison, G. R., Ross, S. M., Kalman, H. K. and J. E. Kemp (2010). *Designing Effective Instruction* (6th Ed.). USA: John Wiley & Sons
- Mutlu, M.E., Ö. Özöğüt Erorta (2008). *Uzaktan Dil Öğretiminde Yeni Öğrenme Ortamları: Anadolu Üniversitesi Türkçe Sertifika Programları Örneği*. I. Uluslararası Eğitim ve Kültür Bağlamında Avrupalı Türkler Kongresi konferansı. Cilt – 1, 344-352 pp., Anvers, Belçika,
- Pilancı, Hülya. (2009). *Uzaktan Türkçe Öğrenen Yabancıların Türkçeyi Öğretimi Aracı Olarak Kullanabilme Yeterlikleri*, Journal of Language and Linguistic Studies, 5 (2): 49-61.
- Pilancı, H., Çalışkan, H., Aydın, C.H., Karadağ, N., Söker, N., Saltık, O., Kip Kayabaş, B., (2015). *Uzaktan Türkçe Öğretim Programı (TSP): Hazırlık, Uygulama, Sorunlar ve Çözümler/ Distance Turkish Teaching Program (TSP): Preparation, Application Processes, Problems And Solutions*, TURKISH STUDIES -International Periodical for the Languages, Literature and History of Turkish or Turkic-, ISSN: 1308-2140, (Prof. Dr. Şefik Yaşar Armağanı), Volume 10/11 Summer 2015, ANKARA/TURKEY, www.turkishstudies.net, DOI Number: <http://dx.doi.org/10.7827/TurkishStudies.8583>, p. 1277-1296
- Sole, C. R. & Hopkins, J. (2007). *Contrasting Two Approaches to Distance Language Learning*, Distance Education, 28(3), 351-370, DOI: 10.1080/01587910701611369.
- White, C. (2006). *Distance learning of foreign languages*. Language Teaching, 39, pp 247-264 doi:10.1017/S0261444806003727.
- White, C. (2003). *Language Learning in Distance Education*. Cambridge: Cambridge University Press.
- Yunus Emre Enstitüsü (2009). *Yunus Emre Bülteni* http://www.yee.org.tr/media/_bulten/pdf/eylul_2009.pdf
- Yurtdışı Türkler Başkanlığı (2014). *Kurumsal Mali Durum ve Beklentiler Raporu*. http://www.ytb.gov.tr/documents/ytb/files/image/genel/2014_Kurumsal_Mali_Durum_ve_Beklentiler_Raporu.pdf

From Virtual Mobility to MOOCs: Drawing On UbiCamp Experience To Set Up A Network For Massive Open Online Courses

Lorenzo FIORITO, Pegaso Online University, Italy, lorenzo.fiorito@unipegaso.it

Abstract: Online course and MOOCs are revolutionising education worldwide, as a radical shift is taking place in education as concerns delivery modes, from face-to-face classes to online patterns. Distance education, both in Virtual mobility mode and by means of the MOOCs, offers students the opportunity of learning and gaining experience in international environments, without moving from their home or study place. The aim of this paper is to explore the possibility of transferring the experience made in the UbiCamp project, which implemented a Virtual mobility experience among seven universities, into a MOOC network, by identifying the advantages as well as the limits of this modality of e-learning. This will give the universities the opportunity to experiment new and effective ways to expand the online offer, and to combine the two modes of learning for the student (face-to-face interactions and self-paced online tuition), to make this a more and more regular way of cooperation among HEIs.

Keywords: UbiCamp Project, Virtual Mobility, MOOCs, Distance Learning, University Networking

1. Introduction

My aim in this paper is to explore the possibility of transferring the experience of a project called UbiCamp regarding Virtual Mobility among seven European universities, into a MOOC network.

In a first part of this paper I will describe the UbiCamp project as is was, the activities and the results. Then I will describe the state of the art of MOOCs, Finally I will illustrate the proposal to developing UbiCamp experience into a MOOC. I'll outline reasons to make UbiCamp into a MOOC and the advantages of choosing Pegaso University platform to distribute the courses.

2. Virtual mobility

The main aim of UbiCamp was to provide students with an innovative method that could at the same time respond to the multifaceted demands of virtual mobility. Although 'Virtual Mobility' is not yet a widely-spread concept, the European Commission, along with national agencies is positively promoting Virtual Mobility, mainly funding dedicated projects, previously in the framework of programmes like SOCRATES/Minerva, Erasmus, and with the eLearning programme and Lifelong Learning Programme, currently within Erasmus + (Vriens, M; Achten M. Van Petegem, W., Op.de Beeck, I., 2010).

The European Commission suggests a broad definition of VM "Virtual mobility:

"Cross-border e-learning (i.e. when a student follows distance learning courses offered by a higher education institution abroad). Virtual mobility can be useful in promoting and complementing physical mobility. Virtual mobility can play an important role in the internationalisation strategy of an institution (Mapping University Mobility Project, 2015)".¹

Virtual Mobility is an alternative to the courses attended by students abroad in physical mobility, which is often an all too short experience, and can overcome language and cultural barriers, also fostering and maintaining "social" relations, which are an important issue of exchange programmes.

It is important to highlight that, as students in Higher Education can attend courses in another institution outside their own country for a limited time, without leaving their home, VM consents a form of mobility for all, especially when scarce funding opportunities reduce the possibility of physical mobility. From this point of view, MOOCs can be considered a democratized access to knowledge of which everyone can benefit.

2.1 Main issues of VM

In dealing with Virtual Mobility, we have to take into account many facets in order to implement a broad strategy to overcome the existing hindrances. There is a number of issues HEI's need to address in order to increase recognition

¹ http://ec.europa.eu/education/ects/users-guide/glossary_en.htm

and to further implement distance education and virtual exchanges.

These mainly concern organisation (credit recognition, institutional agreements, tests and exams validation, etc) and technology issues, as for the common ICT standards to adopt to make it possible to access and (re)-use online resources, etc. Finally, the challenge concerns how to adapt the study subject to multi-institutional, multi-cultural learning, and how to deal with the sociocultural and linguistic topics as to the country the students visited virtually.

3. The project UbiCamp

The project UbiCamp “Integrated Solution to Virtual Mobility Barriers” was an Erasmus Multilateral Project carried out by seven universities, where the students attended other universities’ course in Virtual Mobility.

VM is a kind of mobility that substitutes, or complement, the real mobility, whose innovative model is based on a common framework for carrying out student virtual exchanges, to be assessed not only from an academic point of view but also for the sociocultural aspect. Most importantly, “the model designed within UbiCamp project defines the minimum requirements for VM recognition in students and lecturers’ curriculum, and not simply as an international e-learning process” (Juan Fuente, A.; Hodas, T.; Menéndez Ferreira. R., 2013). UbiCamp technological model could easily integrate new partners into the project. The project produced also a number of OERs (Open Educational Resources) concerning sociocultural learning materials, training material, etc., to be accessed by the participants.

Each partner delivered their course(s) through their own platforms: they not only provided the subject contents but also allowed teachers and students to interact. In this sense, we can say that the courses in the UbiCamp project were already miniature MOOC’s. The students were all regularly enrolled at one of the universities which took part in the project, and worked on assigned tasks in a virtual environment.

The project started on the basis of a direct acquaintance among some of the partner universities, who chose to cooperate by using information and communication technologies. To reach these objectives, the availability of Distance Learning technologies was a key factor, as was an open policy towards Open Education Resources. The components which were considered fundamental for a fruitful implementation of the UbiCamp project were:

- Information: to give students all necessary information in order to take one semester “abroad”, they were given clear and detailed info of their virtual semester in a partner institution, both on administrative steps and the social issues involved to be documented.
- On line courses: the central part of the project was based on the idea to deliver the courses online, which could be attended from any possible place they wished.
- Interactivity: students had the chance of truly interacting with peer students and tutors abroad. Technology played a crucial role in all this, as it created an interactive workspace for all participants.
- Didactical: partners shared study curriculum and assessment methodologies;
- Sociocultural elements: learning resources created to enhance intercultural exchanges.
- Open educational resources: contents were based on the subjects and standards identified by partners. The Learning Objects were designed in order to achieve maximum usability at European level.

3.1 The partners

UbiCamp program was developed by seven European universities, each of them providing courses to be recognised in the partners’ curriculums. The seven universities offered the online courses on their own websites and the students were all students regularly enrolled at the partner institutions, one of which, the Italian Pegaso, is an Online University.

The idea to make up a consortium was put forward by the Spanish university of Oviedo in 2009. The other partners were: University of Southampton (UK), Vytautas Magnus University (Lithuania), Universidad Autonoma de Madrid (Spain), Yasar Universitesi (Turkey) and Kaunas University of technology (Lithuania). Pegaso Online University (Italy) joined the consortium in the phase of piloting of the online courses.

4. The MOOC revolution

The acronym MOOC stands for Massive Open Online Course. A MOOC is course delivered online, integrating different features: unrestricted and free accessibility to higher education, the expertise of a teacher academically accredited in a field of study, a repository of resources available online. A MOOC requires the active commitment of students who establish autonomously their learning goals and interests.

Hundreds of thousands of people around the world are using opportunities to take courses online as MOOCs are becoming mostly popular. Online courses are offered by more and more colleges and universities worldwide. Online portals such as Coursera and Udacity work with several universities and make selected courses available on the Net. Less famous universities are including virtual education options offered from more prominent institutions, and this makes them more attractive, while at the same time they can make their best courses accessible to an international audience.

A MOOC generally has no fees, nor does it require formal accreditation, the only requisites being motivation and Internet access. Universities developing them are persuaded that MOOCs can involve thousands of new students all over the world. Until a few years ago, it was mostly top tier universities that offered MOOCs (Tschofen & Mackness, 2012). In recent years, though, this situation has evolved as other institutions of higher education are offering MOOCs.

The reasons of the favourable opinion enjoyed by MOOCs are their usability and the growth potential. Universities are interested in MOOCs in the view of extending their “brand”, attracting new students, experimenting innovation in their didactic offer and, of course, reducing costs.

MOOCs learners’ main motivation is, in an early stage, satisfaction from studying high level contents and curiosity about the experience, but now more and more learners are also looking for some form of certification or award.

It is easy to predict that the influence of MOOCs on higher education will be deep and long-lasting. Nonetheless, it is controversial whether MOOCs will bring more advantages or disadvantages to HEI’s. Many universities are positively changing their approach, following the debate which is taking place in the press as well as in the academy, concerning the massive growth of this phenomenon.

4.1 A short history of MOOCs

The acronym MOOC was first used in 2008 by Dave Cormier of the Prince Edward Island University, to describe an open course created by Siemens and Downes and offered to a group of students at the Manitoba University, and they also allowed students from other universities to enroll. (Downes, 2012).

MOOCs were conceived as “an environment for enacting connectivist pedagogy, an approach to teaching focused on building networks between participants, based on, but moving rapidly beyond, a foundation of shared content” (Mahraj, 2012), and using social networking to foster interaction and collaboration among students.

Since then, MOOCs have been proposed by more and more universities, and became highly popular in 2011, when “two courses taught by Stanford professors Sebastian Thrun and Peter Norvig, the founders of Udacity, enrolled 90,000 and 160,000 students, respectively”².

Many other preeminent professors have been creating MOOC courses, or, like Daphne Koller and Andrew Ng, have set up their own MOOC providers, such as edX, Coursera, MITx and Udacity (Mahraj, K., 2012).

MOOC providers like Udacity, Coursera, and edX are meant to “democratize education”, with massive enrolment in their free courses. Daphne Koller in a TED talk claimed that Coursera’s goal “is to take the best courses from the best instructors at the best universities and provide it to everyone around the world for free”³. One necessary corollary is that courses be available for free to anyone with an Internet connection, thus contrasting the high costs of post-secondary education and at the same time meeting the increasing demand for higher education.

4.2 Main MOOC features

As said before, MOOCs offer learners the opportunity to attend courses delivered by renowned experts without any prerequisites. Videotaped lectures based on a set syllabus are presented over a fixed period, with assignments to students, online resources, midterm and final tests. There are no expectations and students are free to complete “as much of the course as they wish and at their own pace” (Martin, 2012).

The courses’ structure varies depending on the university. In some cases, lecturers offer virtual tutorial hours for student guidance with ‘live’ discussion, in others they only ensure discussion in forums, without any direct contact.

In Kop, Fournier, and Hill (2011), activities in MOOCs are divided in four categories: (1) aggregation, where “access is provided to a wide variety of reading, video and web resources in the course”; (2) remixing, where “after using resources in the course, that content is then reused in another format, in a blog, or in discussion board postings elsewhere”; (3) repurposing, where “participants were encouraged to create something of their own”; and (4) feeding forward, where “participants are encouraged to share their work with other people in the course and with the world at large”⁴.

As in MOOCs “knowledge is distributed across a network of connections”, learning consists of the learners “ability to construct and traverse those networks”⁵. Another feature is that MOOC students are very diverse as age, gender and world distribution are concerned. However, even if not all are native English speakers, they use this language to study and communicate, and also share common interests.

Learners in this worldwide connectivity “interact with one another” and share “ideas, hunches, queries...in the hope that these interactions will trigger other insights”. (...) knowledge is social in nature and constructed through a process of collaboration, interaction and communication among learners in social settings” (DeWaard et al., 2011). Moreover, even in presence of a coordinator, in the end, when participants suggest discussion topics these are taken up by others showing that that participants can easily manage their learning pace.

² (Mehaffy, G.L., 2012).

³ Retrieved at: https://www.ted.com/talks/daphne_koller_what_we_re_learning_from_online_education/transcript

⁴ Kop, R., Fournier, H., & Mak, J. (2011). See also Creed-Dikeogu, G., & Clark, C. (2013).

⁵ Mahraj, K. (2012).

4.3 Some problems with MOOCs

MOOCs are facing some hindrances in achieving full effectiveness, which are caused by problems still to be solved. One major question is whether MOOCs will just transfer ordinary courses online, or will force the academy to develop new didactic schemes. For example, one major issue is that professors grade papers of their MOOC students by means of digital self-graders, so that inevitably all assignments are made of multiple choice questions. Many courses are graded on a pass/fail system, but in this context, what does a 'pass' mean? Students should have more opportunities to write papers extensively on issues taught in their MOOC course, and to build a fruitful relationship with the lecturers or get systematic response on how their learning progress is going on.

More complicatedly, many MOOCs lack effective instructional strategy, as they do not include the student-teacher interaction that should be needed for most lectures; they appear insufficient as regards enabling dialogue and collaboration between participants and lecturers.

Moreover, students not taking part in forums or chatrooms miss the opportunity to exchange ideas and opinions with other students about the course(s) they are attending, and this represents a problem as interaction among students in a learning environment is extremely important. Also, a positive attitude of students and staff towards online learning teaching is necessary, as well as effective tutoring and assistance should be ensured to help students to actively participate in online courses.

Nevertheless, the number of MOOCs offered is continually growing, and universities are going to get more and more involved, and must be prepared to support the MOOCs development as well as their implementation. Their strength (being open to students of all backgrounds without prerequisites) becomes a weakness when it comes to more high-level classes, as it is more difficult to teach advanced topics to a wide range of students with dissimilar backgrounds.

Even if they are a new way of accessing learning, MOOCs maintain many features of traditional education. As in ordinary courses, students have the right to access reliable content and to be instructed on how to find, assess, and use information. Professors will be required to make sure this information is complete and handy, and to support their institution and students participating in MOOCs.

Though universities are not homogenous organisations, the prevalent opinion is that, whatever their pros and whatever their cons, MOOCs diffusion is unstoppable, and will transform the traditional system of Higher Education.

5. Turning Virtual Mobility into MOOCs

The UbiCamp courses not only delivered the subject information but also allowed students and teachers to interact. However, sharing online courses in the UbiCamp project was thought as a one-off activity which has not been included as a stable form of cooperation among partner universities. One reason is probably that online and traditional courses in many cases are not fully compatible, and cannot be easily harmonised.

In my opinion the UbiCamp courses do include the potential to become a MOOC network, as partners can count on a two years' experience with sharing distance learning. As a matter of fact, UbiCamp was in the first place "a virtual community of teachers and students", and it should not be a big step to turn into a MOOC system. Offering the students a number of MOOCs stemming from the UbiCamp courses would represent an advantage in that UbiCamp also integrated the sociocultural aspects, while MOOCs normally have a stronger focus on learning with peer students. Students are more motivated if they can make their learning a social process. A student can start a learning interaction with a fellow student in a larger group of students, whereas in the UbiCamp courses we had only some tens of students. In this sense, a MOOC platform would have much more impact than the UbiCamp courses had, while the latter represents an example of how sociocultural aspects are important in the learning process.

A MOOC network will also potentially give much more added value to the UbiCamp partners, making their programmes attractive to students from all over the world. With the aid of a MOOC platform, the partners could also enhance their 'internationalization drive': the foreign student exchanges will be necessarily more numerous than in bilateral collaboration between universities. Moreover, if the experience with the MOOCs will prove successful, this will make students consider with increased interest physical mobility to a partner's campus.

In order to implement a network, the information among both MOOCs and Virtual Mobility experts from the different partner HEIs must be made easier, and existing examples and good practices of MOOCs and Virtual Mobility must be integrated in coherent collaboration agreement.

6. The platform choice

In the case UbiCamp partners decide to implement a MOOC network, a crucial question is which platform to choose. All partners have already some experiences in using platforms that are unrestrictedly available to teachers who want to deliver online courses, and Pegaso more than others, as all its courses are online.

Naturally, the platform to be chosen must fulfill the needs required in online education delivery, *i.e.* it must be intuitive, have a well-kept and easy design as a learner doesn't have to need to be particularly expert as far as computer skills are concerned. The interoperability of learning tools should be essential, in order to easily access social media and repositories.

One real possibility could be the *Pegasonline* e-learning platform that allows the management of on-line courses based on the Learning Management System (LMS). It can integrate higher technological, interactive, educational tools, such as TV Learning, Radio Learning, Social Learning and even Games Learning, which can involve learners in a wide spectrum learning experience.

The platform is an operative space which is always available, easily accessible, where everyone can find contents, tools, technical supports and also a wide library. Any resource on the platform is linked to any other, and can be reached also through tablets and smartphone. Its use is tracked for both teachers and students in order to have reports, such as a dynamic profile of learning improvements and a list of critical elements.

Thus, teachers of any institution in the MOOC network can create assignments where learners can make questions and comments, and have a dialogue with students from different backgrounds. One issue to be agreed upon is whether students who are registered in one of the networked universities can interact with the unregistered MOOC subscribers and receive the same assignments, or it would be advisable to create different feedback and grading areas, and also the possibility of devising a credit (sub)-subsystem for MOOC subscribers.

7. Conclusions

The framework and the standards defined within the UbiCamp project, along with the digital tools and materials produced, can support the HEIs authorities and the evaluation institutions to recognize the Virtual Mobility as an innovative global e-learning model. Combining online courses with face to face courses offered the UbiCamp students an international network and an overall viewpoint on study opportunities.

More interestingly, the Virtual Mobility experience showed that a decentralized, widespread MOOC network is possible, in which participating institutions merely have to meet the quality requirements, while the technology integration can be a simple process.

New technologies, along with different pedagogical approaches offer both students and lecturers a more challenging experience. In this way our work with UbiCamp was part of a wider on-going process to continually increase the quality of the study programs provided by Universities.

However, issues such the technological infrastructure, the accreditation of MOOCs, a good and agreed assessment system still need to be addressed. It is crucial that universities in their policies support integration of MOOCs, as long as they are want to assimilate new learning technologies and pedagogies in the traditional systems. The MOOC revolution raises new questions and universities are requested to respond to these, and to implement their capacity to innovate, in order to survive and grow, and (last but not least) also to compete with the massive investments that non-educational providers are making in this field.

Finally, the universities can use MOOCs to attract international students to their study programmes, and improve access to life-long learning in Europe and worldwide.

REFERENCES

- Bozkurt, A., Akgun-Ozbek, E., Onrat-Yilmazer, S., Erdogdu, E., Ucar, H., Guler, E., Sezgin, S., Karadeniz, A., Sen, N., Goksel-Canbek, N., Dincer, G. D., Ari, S., & Aydin, C. H. (2015). Trends in Distance Education Research: A Content Analysis of Journals 2009-2013. *International Review of Research in Open and Distributed Learning*, 16(1), 330-363. https://www.academia.edu/11056576/Trends_in_Distance_Education_Research_A_Content_Analysis_of_Journals_2009-2013
- Butler, B. (2012, October 22). Massive open online courses: Legal and policy issues for research libraries (Issue Brief). Association of Research Libraries. Retrieved from <http://www.arl.org/bm~doc/issuebrief-mooc-22oct12.pdf>
- Creed-Dikeogu, G., & Clark, C. (2013). Are you MOOC-ing yet? A review for academic libraries. *Kansas Library Association College and University Libraries Section Proceedings*. 3
- Dawson, C. (November 1, 2012). Canvas network: Infrastructure takes on Coursera, et al with a unique approach to MOOCs. *ZDNet Education*. Retrieved from <http://www.zdnet.com/canvas-network-structure-takes-on-coursera-et-al-with-a-unique-approach-to-moocs-7000006733/>
- De Waard, I; Abaljian, S; Gallagher, M.S.; Hogue, R; Keskin, N; Apostolos, K.& Rodriquez, O.C. (2011, November). Using mLearnng and MOOCs to understand chaos, emergence and complexity in education. *The International Review of Research in Open and Distance Learning*, 12(7), 95-112. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1046/2043>
- De Waard, I. (2016). *Self-directed learning of adult experienced online learners enrolled in FutureLearn MOOCs*. Milton Keynes: Open University. Retrieved April 21, 2016 from https://www.academia.edu/28760942/Self-Directed_Learning_of_Experienced_Adult_Online_Learners_Enrolled_in_FutureLearn_M
- Downes, S. (2012). Connectivism and Connective Knowledge: essays on meaning and learning networks. *Stephen Downes Web*.
- Holmes, L. "*An Early Report Card on Massive Open Online Courses*". *The Wall Street Journal*. Retrieved 1 March 2016.
- Juan Fuente, A.; Hodas, T.; Menéndez Ferreira. R. "UBICamp: an experience for solving barriers in virtual mobility, Academia, 2013.
- Kop, R., & Hill, A. (2008). Connectivism: Learning theory of the future or vestige of the past? *The International Review of Research in Open and Distance Learning*, 9(3). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/523/1137>
- Kop, R., Fournier, H., & Mak, J. (2011). A pedagogy of abundance or a pedagogy to support human beings? Participant support on massive open online courses. *The International Review of Research in Open & Distance Learning*, 12(7), 4-93. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1041/2025>
- Mahraj, K. (2012). Using information expertise to enhance massive open online courses. *Public Services Quarterly*, 8, 360-368.
- Martin, F. G. (2012). Education: will massive open online courses change how we teach? Retrieved from <http://cacm.acm.org/magazines/2012/8/153817-will-massive-open-online-courses-change-how-we-teach>
- McAuley, A., Stewart, B., Siemens, G., & Cormier, D. (2010). The MOOC model for digital practice. *SSHRC Knowledge Synthesis Grant on the Digital Economy*. Retrieved from http://www.edukwest.com/wp-content/uploads/2011/07/MOOC_Final.pdf
- Mehaffy, G.L. (2012, September/October). Challenge and Change. *Educuse Review*, 47(5). Retrieved from http://online.tarleton.edu/fdi/Documents/EDUCAUSE_Mehaffy.pdf
- Truyen, F., Kuppens, A., van Dorp, C., Janssen, B., Rivera, J., Griset, R. (2010). MultiCampus Open Educational Resources: the case of OER-HE. Barcelona Open Ed 2010. Conference proceedings book. Opened.Barcelona, 1-4 september 2010 (retrieved from <http://hdl.handle.net/10609/4955>).
- Tschofen, C. & Mackness, J. (2012). Connectivism and dimensions of individual experience. *The International Review of Research in Open and Distance Learning*, 13(1), 124-143. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1143/2086>
- Tschofen, C.; Mackness J. (2012). Connectivism and dimensions of individual experience. *The International Review of Research in Open and Distributed Learning*. 13(1), 124-143. Retrieved from
- Verbeken, S., Truyen, F., & Baetens, J. (2014). LACE: using a MOOC for regular networked curricula. Proceedings of OpenCourseWare Consortium Global. Retrieved at http://conference.oeconsortium.org/2014/wp-content/uploads/2014/02/Paper_25-LACE.pdf (14/05/2015).
- Vriens, M.; Achten, M.; Op de Beeck, I.; Van Petegem, W. (2010). Virtual mobility as an alternative or complement to physical mobility. EDULEARN 2010. 5 & 6 July 2010.
- Wong, Michael (28 March 2013). "*Online Peer Assessment in MOOCs: Students Learning from Students*". Centre for Teaching, Learning and Technology Newsletter. University of British Columbia. Retrieved 3 February 2016.

Governmental Organization's Goals of Distance Education for in-Service Training

Kamu Kurumlarının Hizmet İçi Eğitimde Uzaktan Eğitim Hedefleri

Ismail OZLER, Turkey, ismozler@gmail.com
Hasan CAKIR, Gazi University, Turkey, hasanc@gazi.edu.tr

Abstract: The purpose of this study is to determine the targets of distance education applications for in-service training in governmental organizations. Due to large number of staff and cost spent all over the country, it is estimated that ministry level governmental organizations should gain benefit from distance education for in-service professional training. In the scope of the study, it is explained the topic's importance by giving information about the distance education and in-service training. This study, which is conducted as a document analysis of the strategic plans of government organizations downloaded from their web sites in December 2014, aims to examine goals of distance education for professional development training. Findings of the research indicate that more than half of the governmental organizations do not have any relevant goal, some of them have limited goals and only six organizations have goals about distance education for professional development training.

Keywords: Distance Education, E-Learning, In-Service Training, Professional Development

Öz: Bu çalışmanın amacı kamu kurumlarının hizmet içi eğitim uygulamalarında uzaktan eğitim ortamları ile ilgili hedeflerini tespit etmektir. Personel çokluğu ve geniş coğrafyada teşkilatlanması nedeniyle kamu kurumlarının hizmet içi eğitim uygulamalarında uzaktan eğitim ortamlarından faydalanmaları beklenmektedir. Çalışma kapsamında hizmet içi eğitim ve uzaktan eğitim ile ilgili literatüre dayalı bilgiler verilerek konunun önemi ortaya konulmuştur. Çalışmanın amacı kurumların hizmet içi eğitimde uzaktan eğitim hedeflerini ortaya koymaktır ve çalışmada 2014 yılı Aralık ayında bakanlıkların web sayfalarında bulunan stratejik planları doküman analiz yöntemi ile incelenmiştir. Araştırma bulguları, kurumların (bakanlıklar) yarısının hizmet içi eğitimde uzaktan eğitim ile ilgili herhangi bir hedef belirlemediğini, bir kısmının sınırlı hedefler ortaya koyduğunu, 6 bakanlığın uzaktan eğitim ile ilgili çeşitli hedefler belirlediğini ortaya koymuştur.

Anahtar Kelimeler: Uzaktan Eğitim, E-Öğrenme, Hizmet İçi Eğitim, Mesleki Gelişim

1. Introduction

Government organizations need to train their employees in order to correct the faults in the existing practices, improve satisfaction of citizens and increase quality of services provided, minimize the problems being experienced. The main-services provided by state in Turkey are performed by the ministries as the executive authorities. Similar to many organizations, the ministries also allocate significant amounts of resources for training of their staff. In spite of the sources allocated by many organizations, it is stated that in-service trainings provided to employees are still not in desired level due to many problems and difficulties such as geographical disorganization and large number of staff. Distance education environments which provide significant convenience for training large groups in wide geographies may contribute into solution of this problem with. This study examines the distance education targets in in-service training according to strategic plans of the ministries.

2. In-Service Training

In-service training may be defined as the process of gaining individuals the abilities they would need throughout their working life (Orhan and Akkoyunlu, 1999). Can et al. (Can, Akgün, and Kavuncubaşı, 1998) specified the in-service training as the process of teaching employees systematically necessary knowledge, skills and behaviors to ensure them display the expected performance during the period beginning from their starting date until leaving their job. The aim benefits and difficulties of the in-service training are described in this chapter in order to better understand the subject.

According to Yılmaz and Düğenci (2010), in-service training has economic, social and individual aims. These aims include in general,

- Improve productivity, increase product/service quality,
- Prepare the necessary human resource to be needed by an organization in direction of its strategic objectives,
- Increase motivation of employees by contributing in their progress,
- Improve loyalty of staff to the organization,
- Comply with developing and changing legal legislation, procedure and implementations (Peker, 2010; Yılmaz and Düğenci, 2010)

In conjunction with these aims, in-service trainings are provided for reasons such as promotion, change of position, change of duty or making the staff ready for duties to be undertaken in the future.

To list the main benefits of in-service training, it brings necessary knowledge, skills and experience in individuals they would need to display desired performance in order to fulfill duties of the organization and consequently productivity of staff increases and the possibility of making mistakes decreases. Organizations have to resolve

performance problems of their employees in accordance with their mission, vision and strategic plans (Çakır, 2013). If the performance problems are related to lack of skills and knowledge; they can be resolved by means of training programs to be organized education needs and training design principles which are propounded as a result of right analyses. Organizations decrease failure rates resulting from lack of knowledge and skills in staff and rapidly adapt to the changes in existing practices by means of in-service trainings. They have also make human resource educated which will realize and support their visions and missions in addition to correcting the existing practices (Çakır, 2013).

Changes in citizens and the private sector profile and relations with other countries and organizations are forcing organizations to change. Organizations have to propound their targets for in-service training in their strategic plan for improving knowledge and experience of organization staff in order to turn this change into an advantage. It is known that a number of problems are encountered in in-service training practices even though its importance has been noticed by governmental organizations in our country. It is stated in the Prime Ministry strategic plan ("T.C. Başbakanlık (2011-2015) Stratejik Planı," 2010) that "Failure in exposing public staff to sufficient extent of in-service training prevent them from having knowledge and skills to carry out their works in an effective and productive way".

The difficulties experienced in implementation of in-service training prevent the benefits expected from education from reaching up to desired level. In addition to education provided on-the-job, in-service training is in general implemented in a way bringing staff together in a center and providing the education in class-hall atmosphere. However, it is not possible to educate large groups in this way. The Ministry of Education (2009) states in its strategic plan that all employees cannot sufficiently benefit from in-service training by reason of large number of staff members. By reason that the ministries provide services in a wide geography throughout the country; access of staff members to the place of education from the place where they work is another difficulty. Some difficulties are experienced in educating large groups in a wide geography by reason of both education cost and the fact that staff members would become distanced from their office.

According to a study held by Ministry of Education (MEB), daily direct in-service training cost of a public staff member is 385 TRY in average. According to the Education Activities report of the Ministry of Internal Affairs, Department of Education, 3445 staff members received in-service training throughout a year. The figure comprises of over 1649 executive directors status and 1794 other status staff members according to the report. For a staff member working in executive director status, not only the education cost but also the indirect cost arising from becoming distanced from his/her office reaches to a significant dimension for the ministries which have a great number of staff members throughout the country such as the Ministry of Education, Ministry of Health and Ministry of Internal Affairs.

3. In-Service Training and Education Technology

One of the indicators of quality is the use of technology. The most important benefit provided by technology for human beings is to generate solutions which would minimize the defective aspects of the existing practices. In conjunction with this, solutions are being provided for a number of education related problems by means of technology. According to Alkan (1996), all possibilities of the education technology should be exploited in order to provide high quality education for wide masses.

Improvement of learning quality and increase in the number of learners, controlling or declining the teaching costs create a pressure on organizations and the organizations must rapidly complete the integration that aims effective use of technology in education in order to get rid of this pressure (Garrison and Kanuka, 2004). However, the process of integration is progressing so slowly and the organizations cannot yet use technology effectively (Hammond, 2014; Öncü, 2013). Today technology is still perceived as the use of *office applications such as word processor (MS Word), presentation tool (MS Powerpoint), electronic mail service (e-mail)*. The Ministry of Internal Affairs has determined the level of computer usage ability according to criteria of "word, excel, powerpoint, internet usage, e-mail usage" (İçişleri Bakanlığı, 2009). However, information and communication technologies provide much more convenience for daily life and working life compare to the office applications.

Technology would provide a great extent of contributions into education when it is used correctly in terms of pedagogy as content based in compliance with education needs (Hammond, 2014). In this scope, today effective use of technology became a necessity for overwhelming the difficulties experienced in education. As a result of this necessity, organizations should benefit from distance education environments as an effective method in educating large groups.

4. Distance Education

Distance education environments are considered a low cost, high quality and effective solution which could meet education requirements of working people without becoming distant from their workplace (Alkan, 1996). The USA Army aims to achieve some saving up to 805 million US dollars until 2015 with the Distance Education Program (Winkler, Leonard, and Shanley, 2001). Interest of governmental organizations in distance education has not yet reached to the desired level in our country in spite of developments occurred throughout the world. In-service training practices do not include any information about distance education environments in strategic plans of several ministries.

Then, why is distance education such much important? It would be useful to provide information about distance education in short to better understand the subject.

Distance education environments which in general express presence of instructor and learner in different physical environments have rises in the form of publishing teaching material (newspaper, journal, books etc.) and making them available to learners by mail (Gunawardena and McIsaac, 1996; Karataş, Karataş, and Kaya, 2012). Educational television programs and then computer aided education applications made distance education more interesting after wide groups are educated through the radio technology.

Today, technology is used for education purpose in different forms. Integration of technology that started by use of computers at class is still ongoing in different fields such as internet technology, online education practices, use of presentation and application tools (interactive whiteboards, projectors etc.) (Ertmer et al., 2012).

Once computer technology and internet infrastructure became widespread, that has been a turning point in education and distance education has gained a different dimension (Saba, 2005). Being criticized based on limitation of learner-instructor interaction, distance education has eliminated this restriction by means of possibilities and facilities brought by the internet technology. Students may now direct their questions to instructors in parallel with developments in information technologies, and practices with a wide participation can be performed within communication and interaction with other individuals who receive education (Holmberg, 2005; Morrison, Ross, and Kemp, 2007). However, distance education has some rules and practices which include much more than recording a course in video media and broadcasting this.

Distance education must pass through an effective design process and be planned in detail in order to achieve expected objectives (Gunawardena and McIsaac, 1996). This is because incorrect planning and implementation of distance education would lead to withdrawal or failure in education. In addition to transmission of a course in a class atmosphere to people in distance the subjects such as preparation of education materials, course content and evaluation methods, interaction, course period and timing, feedback should be planned, designed and implemented in detail (Reiser, 2001). Teaching materials and medias should be prepared in a way that arouses the feeling of being face-to-face with teacher in a guiding structure that makes learning easier (Holmberg, 2003; Holmberg, 2005).

Convenience of distance education sometimes outweighs in-class (face-to-face) training (Simonson et al., 2009). A number of institutions and organizations regardless of being small-large size prefer distance education instead of training practices provided in class atmosphere with a high cost (Morrison, Ross, and Kemp, 2007). This is because today's organizations have to continuously adapt their employees to legal and work conditions rapidly in parallel with changing technological developments and innovate themselves in such a competitive environment. This necessity has oriented organizations to shift towards distance education due to the difficulties in the existing education practices.

As the most widespread implementation of distance education, e-learning environments have reached a market size equal to 35 billion dollars in 2011 throughout the world. It is suggested that this figure would exceed 50 billion dollars in 2016 (Docebo, 2014). The figures as well as high amount of money spent for distance education are also the indicators of increasing interest all over the world. According to the Department of Education's Integrated Postsecondary Education Data System (IPEDS), 1.898.980 college students, 5.444.701 undergraduate and graduate students enrolled in at least one distance education course during 2012 fall semester in the USA (Lokken, Womer, and Mullins, 2014).

In today's world where the knowledge is undergoing a highly rapid change, governmental organizations should benefit from distance education programs in order to ensure public staff to rapidly accommodate themselves to changing and developing circumstances. A number of previous studies revealed substantially various benefits of the distance education but the following benefits come to the forefront when the subject is evaluated in terms of in-service education;

- Training of considerably large groups with low costs,
- Avoidance of the fact that employed staff would become distanced from his/her office,
- Ability of updating education content rapidly according to changing and developing new circumstances,
- Ability of reusing prepared materials (education modules) for different trainings (Yılmaz and Düğenci, 2010),
- The fact that participants of a training can access to training materials in anywhere and anytime they desire,
- Ability of providing education for a number of participants in different spaces highly distant from each other

(Morrison, Ross, and Kemp, 2007).

5. Method

This study was held with the method of document analysis. Document study implies review and analysis of literature sources related with the research subject oriented for a certain purpose (Karadağ, 2014; Karasar, 2012) The study aims to reveal targets of the ministries related with utilization of distance education method in in-service training.

In this study, targets of the ministries towards distance education practices in in-service training are examined in direction of the Republic of Turkey Prime Ministry (2011-2015) Strategic Plan and Strategic Plans of the ministries which constitute the government as of December of 2014. Internet (public network) WEB sites (web pages) of the prime ministry and relevant ministries were examined and their strategic plans were accessed, then data has been acquired from these plans in the form of document review. Since the Ministry of Foreign Affairs and National Defense Ministry's Strategic Plans could not be accessed they and the Vice Prime Ministers were excluded from the study by

reason of organization structure of the ministers. For that reason, strategic plans of 19 out of 21 ministries and that of the Prime Ministry constitute the scope of the study.

The words "distance education", "online education", "e-education" and "in-service training" have been searched in the strategic plans and viewpoints of organizations about distance education environments in the context of in-service training have been analyzed in scope of the research. By considering the possibility of misspelling, the statements of "in-service training" and "in service training" have been separately searched in text but they have been evaluated together. Any information has not been found about online education and e-education in the strategic plans other than the Ministry of Education and Ministry of Environment and Urban Planning.

6. Findings and Interpretation

It was determined that some ministries utilize distance education practices even though their strategic plans do not include these practices. However, most of these practices are those oriented towards external stakeholders associated with field of duty of the ministries instead of in-service training. For example, the Ministry of Education has prepared and still utilizes a number of distance education environments oriented towards primary and secondary school students. However, data related with status of distance education has been gathered in scope of in-service training in accordance with the objective of this study. For this reason, distance education practices which do not include in-service training have been excluded from the study.

Any objectives or targets related with "Distance Education" have not been found in the strategic plans of the Prime Ministry and 10 ministries. Some information related with various objectives and aims are included in the strategic plans of 9 ministries with respect to establishment and utilization of distance education environments.

The Ministry of Transportation, Maritime Affairs and Communications aims to establish "Distance In-Service Education Centers". The Ministry of Justice aims to develop and utilize distance education software modules in the in-service trainings on the subjects of cyber crimes and UYAP (National Judiciary Informatics System). The Ministry of Science, Industry and Technology has specified the objective of "putting web based distance education portal into practice and providing trainings" in its strategic plan. The Ministry of Economy stated its objectives related with "Establishment of Online Education Portal" and the Ministry of Development specified the target of "preparation of distance education programs" in their strategic plans.

Three other ministries specified narrower-scoped distance education objectives. The Ministry of Environment and Urban Planning aimed to prepare online education platform in activities related with Geographical Information Systems, while the Ministry of Health targeted to utilize the practices of "Education with Video Conference System" in Organization Based Projects, and the Ministry of Forestry and Water Affairs is still utilizing the Informatics Training Portal.

The Ministry of Education aims to increase the number of staff members who attend/are certificated in foreign language teaching in international standards, vocational education and distance in-service education activities in international standards by means of distance education. The Ministry is planning to ensure that "each teacher attend at least one in-service training every five years", "teachers are encouraged to attend conferences, conventions and symposiums organized related with their fields" and "the number of staff members who attend in-service training activities performed is increased 2% every year".

In-service training program for 2014 of the Ministry of Education was analyzed by reason of its field of duty and staff status. This is because the Ministry of Education should effectively utilize modern and technological innovations related with education and serve as a model for other organizations.

The Ministry has planned that 82 different in-service trainings and seminars should be provided in 181 periods for 23842 individuals according to its 2014 In-Service Education plan. The shortest of these trainings takes one (1) day, and the longest one takes 118 days. When the number of attendees is analyzed, 114 trainings in total have been determined which target more than 100 staff members. Among them, participation of 444 individuals in total is targeted in one period for Motor Vehicles Driving Courses Applied Seminars. Motor Vehicles Driving Courses Applied Seminars target 4229 people in 14 separate periods, Training Management seminar targets 2348 people in total for 20 separate periods, while Vocational Open Education High School Practices Seminar targets 1800 people in 12 separate periods. However, any training has not been designed as distance education and all these trainings have been planned in a way to be provided face-to-face even though they are included in their strategic plan.

Table 1. MEB In-Service Training in Numbers

<i>In-Service Training cost per person</i>	385 Turkish Liras (145 €) per day
<i>Staff trained</i>	23842 people in a year
<i>More than 100 attendees</i>	114 different trainings
<i>Largest group</i>	444 people
<i>Largest and most repeated</i>	20 times for 2348 people
<i>Longest period</i>	118 days

Undoubtedly, face-to-face in-service training has some superior benefits such as rewarding and socialization of staff. For this reason, organizations take into account such benefits while planning in-service trainings. Moreover, expected efficiency may not be obtained from distance education for learners lack of motivation. However, the limitations of distance education may be minimized with some measures such as establishment of appropriate evaluation and rewarding system, granting valid certificates at the end of distance education, and ensuring that trainees who have completed one stage of distance education with excellence should receive more advanced trainings in the form of face-to-face education.

7. Conclusion and Recommendations

Expected benefits are not able to be obtained from in-service trainings in governmental organizations for some reasons such as geographical restrictions and large number of staff members. Possibilities provided by the education technology should be utilized to resolve this problem. Once information and communication infrastructure became widespread; that has ensured experience of a turning point in online distance education. While a rapid transformation is being experienced on the subject of distance education throughout the world, particularly governmental organizations are not sufficiently interested in this issue in our country. According to Alkan (1996), scientific approach, coordination, policies follow-up in practice are the reasons which restrict development in distance education and such reasons are still prevailing today.

In spite of many benefits of distance education, it is understood that the targets of utilizing this in in-service education practices of governmental organizations are not sufficient. In-service training practices of organizations will gain a different dimension by means of true policies to be followed-up, proper coordination of distance education processes, introduction of best practices by adapting them to organization staff. Governmental organizations may train large groups with low costs by utilizing distance education environments in in-service training processes correctly. In addition to this, they can reuse prepared materials in separate educations provided for different groups in different times. It is impossible to think that distance education practices would totally substitute face-to-face education one day. However, distance education should be taken into consideration as an alternative that is qualified, cost effective, has the ability of responding to education needs, is appropriate with target groups, and improves performance and productivity in circumstances when provision of face-to-face education is difficult (Alkan, 1996; Morrison, Ross, and Kemp, 2007; Simonson et al., 2009).

REFERENCES

- Alkan, Cevat. "Uzaktan Eğitimin Tarihsel Gelişimi." Türkiye 1. Uluslararası Uzaktan Eğitim Sempozyumu. Ankara, 2009.
- Can, Halil, Akgün, Ahmet, and Kavuncubaşı, Şahin. *Kamu ve Özel Kesimde Personel Yönetimi*. Ankara: Siyasal Kitapevi, 1998.
- Çakır, Hasan. "İnsan Performans Teknolojilerinin Temelleri." In *Öğretim Teknolojilerinin Temelleri: Teoriler, Araştırmalar, Eğilimler*, Edited by Çağiltay and Göktaş. Ankara: Pegem Akademi, 2013.
- Docebo. "Elearning-Market-Trends-and-Forecast-2014-2016." 2014.
- Ertmer, Peggy A., Anne T. Ottenbreit-Leftwich, Olgun Sadik, Emine Sendurur, and Polat Sendurur. "Teacher Beliefs and Technology Integration Practices: A Critical Relationship." *Computers & Education* 59 (2) (2012): 423–35. doi:10.1016/j.compedu.2012.02.001.
- Garrison, D.Randy, and Heather Kanuka. "Blended Learning: Uncovering Its Transformative Potential in Higher Education." *The Internet and Higher Education* 7 (2) (2004.): 95–105. doi:10.1016/j.iheduc.2004.02.001.
- Gunawardena, C.N., and M.S. McIsaac. "Distance Education". In *Handbook of research for educational communications and technology*, 2:403–37. 1996.
- Hammond, Michael. "Introducing ICT in Schools in England: Rationale and Consequences: Introducing ICT into Schools in England." *British Journal of Educational Technology* 45 (2) (2014.): 191–201. doi:10.1111/bjet.12033.
- Holmberg, Börje. *Distance Education in Essence: An Overview of Theory and Practice in the Early Twenty-First Century*. Oldenburg: Bis. 2003.
- Holmberg, Börje. *The Evolution, Principles and Practices of Distance Education*. Oldenburg: Bis, Bibliotheks- und Informationssystem der Universität Oldenburg, 2005.
- İçişleri Bakanlığı. İçişleri Bakanlığı 2010_2014 Stratejik Planı. Ankara, 2009.
- Karadağ, Ruhan. "Okuma İlgisi, Tutumları ve Alışkanlığı Konusunda Yapılmış Çalışmaların Lisansüstü Tezlere Dayalı Analizi: YÖK ve ProQuest Veri Tabanları Örnekleme". *Pamukkale University Journal of Education* Ocak (35) (2014): 1–1. doi:10.9779/PUJE619.
- Karasar, Niyazi. *Bilimsel Araştırma Yöntemi: Kavramlar, İlkeler, Teknikler*. Nobel Yayın Dağıtım. Ankara, 2012.
- Karataş, Erinc, Serçin Karataş, and Zeki Kaya. "Uzaktan Eğitim". In *Öğrenme ve Öğretme Kuramlar-Yaklaşımlar-Modeller* Edited by Kaya, Z.. Ankara: Nobel Yayın Dağıtım. 2012.
- Lokken, Fred, L. Womer, and C. Mullins. "Distance Education Survey Results". Trends in eLearning: Tracking the impact of eLearning at community colleges (10th Anniversary Edition). Retrieved from Instructional Technology Council website: <http://www.itcnetwork.org/attachments/article/66/AnnualSurvey2013PublishedApril2014.pdf>. 2014.
- Morrison, G., R., S. Ross M., and J. Kemp E. *Introduction to the Instructional Design Process. Designing Effective Instruction*. 5. edition. NJ: John Wiley & Sons. 2007.
- Orhan, Feza, and Akkoyunlu, Buket. "Uzaktan Eğitim Yaklaşımında Temel Eğitim 1. Kademe Öğretmenleri'nin Video Destekli Hizmetiçi Eğitimi." *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi* 17. (17) (1999). <http://dergipark.ulakbim.gov.tr/hunefd/article/download/5000049030/5000046350>.
- Öncü, Semiral. "Eğitimde Sistemik Değişim." In *Öğretim teknolojilerinin temelleri: Teoriler, araştırmalar, eğilimler*, Edited by Çağiltay, Göktaş. Ankara: Pegem Akademi, 2013.
- Peker, Kadir. "Kamu Kurum ve Kuruluşlarında Hizmet İçi Eğitim ve Yöntemleri." *Mevzuat Dergisi*, sayı 156. (2010).
- Reiser, Robert A. "A History of Instructional Design and Technology: Part II: A History of Instructional design." *Educational Technology Research and Development* 49 (2) (2001.): 57–67.
- Saba, Farhad. "Critical Issues in Distance Education: A report from the United States." *Distance Education* 26 (2) (2005): 255–72. doi:10.1080/01587910500168892.
- Simonson, Michael R., Sharon Smaldino, Michael Albright, and Susan Zvacek. *Teaching and Learning at a Distance: Foundations of Distance Education*. 4th ed. Boston: Allyn & Bacon, 2009..
- T.C. Başbakanlık. (2011-2015) Stratejik Planı, T.C. Başbakanlık. Ankara, 2010.
- Winkler, John D., Henry A. Leonard, and Michael G. Shanley. *Army Distance Learning and Personnel Readiness*. Santa Monica, CA: Rand.2001.
- Yılmaz, Hakan, and Muharrem Düğenci. "Hizmet içi eğitime farklı bir yaklaşım: e-hizmet içi eğitim." XII. Akademik Bilişim Konferansı Bildirileri (2010): 67-74.

UbiCamp: Results of A Pilot Interchange of Virtual Mobility

Raquel Menéndez FERREIRA, University of Oviedo, Spain, raquelfm@innova.uniovi.es

Aquilino A. Juan FUENTE, University of Oviedo, Spain, aajuan@uniovi.es

Ramón Pérez PÉREZ, University of Oviedo, Spain, jrpp@uniovi.es

Abstract: Aware of the potential of the Virtual Mobility (VM) in the European Higher Education and after the study and previous participation in several European VM projects, the authors have analysed which have been the strengths and weaknesses of this kind of experiences, and, its impact in our university education systems. Thus, UbiCamp project arises to try to solve the main obstacles or difficulties encountered in this type of experience. During the UbiCamp project, the partners have designed a framework in which to establish the basic criteria, necessary to define and carry out a pilot of Virtual Mobility. These basic criteria are composed of the main elements of virtual mobility, which have been divided into five dimensions: Academic, training, administrative, technological and sociocultural. In order to assess the viability of each dimension of the framework, an online questionnaire have been designed for the main stakeholders; teachers and students. The main goal of this article is to show the solutions to the main barriers identified in the previous projects and that they have been put in practice in the UbiCamp framework. Then, to analyse the most important data from the questionnaires for each dimension of the framework that have been implemented in the pilot. From this study, a view of the expectations and motivations of students and teachers can be obtained, before and after the VM, and also an assessment of the organization, methodologies and technological tools used to test if they are appropriate for the development of the Virtual Mobility. Finally, a reflection about the encountered difficulties and a list of the main challenges to be solved in the future of the VM are stated.

Keywords: Virtual Mobility, Erasmus, TICs, E-learning, Strengths, Weaknesses, Challenges, VM Barriers

1. Introduction

In 2010, the European Commission launched the Europe 2020 strategy, which stress the need for learning mobility at all levels of training. The goals of this strategy are: to acquire new intercultural competencies and to promote social cohesion between de European countries. (European Comission, 2010).

In 2009, it is adopted the Leuven Communique between the institutions in the Bologna Process. This communique specifies that “in 2020 at least 20% of those graduating in the European higher education area should have had a study or training period abroad” (Ministerio, E. d., 2009).

It does not mind if it is achieved or not, this goal is insufficient compared with the great number of students that will not be able to participate (80%), own to different reasons.

In this context, Virtual Mobility appears as support activities that facilitate international collaboration experiences between different European universities without traveling; only by using the ICTs. It is a viable and profitable alternative to physical mobility.

Aware of the potential of the Virtual Mobility (VM) in the European Higher Education and after the study and previous participation in several European VM projects, UbiCamp project arises as a pilot experience to try to solve the barriers and problems founded in previous projects.

2. Virtual Mobility concept

The most common definition of VM was provided by “E-learningeuropa.info” (nowadays called “Open Education Europa”). They defined it as “the use of the ITCs to obtain the same benefit than a student with physical mobility and without travelling” (Open Education Europa, 2013).

EADTU project and E-move project defines Virtual Mobility “as an activity based on a co-operation of at least two Higher Education institutions: two or more institutions agree to offer their students the opportunity to acquire a number of ECTS-points at one of the foreign partner universities or through a joint activity of the partners. The ECTS-points of this international experience will then be counted to the student's degree at his/her home university” (EADTU, 2007)

TeaCamp project points out that: “VM offers the possibility to students taking a course in another country through the use of ICTs, in which, in addition to obtain the credits granted by the host universities and acquire specific skills of the subject selected, the students obtain academically important skills like: knowledge of other cultures, language, different education systems, acquisition of technological skills, etc. without traveling to the host University”.

Bearing in mind the TeaCamp definition, it is essential to provide the participants with the tools that should allow them to acquire academic knowledge related to the student's training area and enable them to develop an experience exchange to promote the knowledge of the university organizing the mobility, that is, its social and cultural context. If the final aim of the VM is to give the students an experience similar to the physical one, that is, to use the TICs to study

a course without travelling, it is also necessary to promote the sociocultural interchange because, in a physical Erasmus, students always acquire this kind of knowledge.

2.1. Characteristics of Virtual Mobility

According to Movinter (Movinter, 2010) VM have some distinctive elements which distinguish it from other kinds of online learning. In first place, it is necessary a constant *interactivity and communication* among students belonging to different countries. The second instance deals with the creation of *international teaching groups*, it is necessary that lecturers and tutors belong to different institutions of the European countries in order to guarantee that the different perspectives: national and cultural are available to students. Furthermore, it is necessary a *joint curricula design* to coordinate the academic offer between the participating universities.

Multicultural exchange is one of the most relevant issues of VM and makes it different from a traditional e-learning process. To provide students with information or activities related to the political, cultural and other aspects of the behaviour of a society are essential elements in a VM. These issues will contribute to improve learning on intercultural information.

Other distinctive characteristic of VM is the use of *appropriate technological solutions*; it is important to provide students with the Information and Communications Technologies (ICT) tools needed to attend the online learning. It means, providing a learning management platform (LMS) to develop the courses, a videoconference system for online classes, forums, wikis, etc. and also, other web 2.0 tools to promote social interaction, such as social networking, bookmarking etc.

Finally, it is essential to ensure the students' *recognition of credits*. It is necessary create an agreement between the universities to guarantee the credits recognition at the end of the study program. This is a powerful factor of motivation, which allows participants to demonstrate their expertise in Virtual Mobility experiences and academic achievements.

3. Barriers and obstacles to VM

Our team have participated in several European VM projects. This experience joint to the literature review of other previous experiences, have showed us several types of barriers, already mentioned by Schreurs (Schreurs, et al., 2006) and classified them in three main categories: pedagogical, technological and organizational issues.

3.1. Pedagogical dimension

There exist some troubles and barriers related to teachers' activity. For example, insufficient technological experience to deal with the necessary ICT tools, the command of the official language in the VM experience and the methodology to teach in a VM environment.

Even though most teachers think to be experts in e-learning tools, the possibilities of the ICTs and the specificity of some tools makes it difficult, for a wide range of teachers, to be comfortable in the VM environments.

Having a minimum level of command of the official language is necessary, because, in most cases, the language is not the native language of the teacher.

On the other hand, near all the teachers know methodologies to teach in a face to face environments, even most of them know how to teach using e-learning processes, but not all the teachers know the specificity of the VM methodologies; for example, how to teach sociocultural items at the same time as teaching academic ones.

Finally, we have identified other problems as, for example, insufficient information on curricula and students' unrealistic expectations.

Because of these questions, teacher's team must adopt the adequate pedagogical training, having technological knowledge and mastering languages which perform the three key factors for taking part in a VM experience, as identified in (Bijnens, et al., 2007).

3.2. Technological dimension

On the same way as teachers can have problems with the technological aspects of the VM tools, students can also be neophyte using this kind of means to learn. So, at the beginning of the experience it is necessary for students to explore and know which tools are most commonly used in each institution, to adapt themselves to them and to train themselves to use them.

On the other hand, the teaching staff needs technological training related to the main tools used in the distance learning; some lectures haven't got enough knowledge about how to use tools like the LMS, email, videoconferences, virtual reality tools, social networks, virtual tours, etc.

3.3. Organisational dimension

Among other aspects, we can highlight the academic recognition, the mobility assessment, the legal framework, the coordination, the quality, the aspects related to cultural identity and others such as the length of the VM projects.

Based on these elements and barriers of the VM mentioned above and having participated previously in several projects of Virtual Mobility, the team developed the UbiCamp project to design a VM experience that considers all the related problems and tries to solve them.

4. Goal and research questions: UbiCamp Project Description

As mentioned before, the main goals to be solved are the barriers and problems identified in our previous projects. According to these premises, the team starts the UbiCamp Project as a project that attempts to overcome the usual barriers for virtual mobility (VM) within HEIs in the EU.

This project was a partnership of seven universities belonging to the European Community collaborating through face to face and virtual meetings and coordinated by the Oviedo University.

The participating institutions were; Vytauto Didžiojo University (Lithuania), Yaşar University, Autonomous University of Madrid, Kaunas University of Technology, University Telematica Pegaso (Italy), University of Southampton and University of Oviedo.

UbiCamp is the acronym of “Ubiquitous Campus”, which is a model of Virtual Mobility that allows the integration of new institutions through a decentralised model. Each institution would only have to respect the established minimum quality requirements and standards, to achieve an easy technological integration.

The main aims of the project were:

- Developing a “Virtual Mobility Practical Framework”
- Creation of open educational resources.
- Integration of the cultural element into the virtual learning processes.
- Creation of virtual environments for sharing experiences.
- Developing training materials and implementing training sessions in at least 35 Universities in Europe, involving students, teachers, Erasmus officers and administrators.
- Raising awareness of virtual mobility among HEIs.
- Testing the “virtual mobility practical framework” through the implementation of Virtual Erasmus Exchanges among those Universities that have been trained and wish to participate.
- Dissemination of project results widely at national and European level and anticipating exploitation activities for multiplying project impact.

This article refers mainly to the design and implementation of a theoretical and practical framework for the implementation of a project of Virtual Mobility in the first semester of academic year 2014-15, in which students from every partner institutions of the project, participated. Moreover, it has been possible to validate the methodology used, in such a way that the framework was justified as a solution for some barriers as in the Table 1.

Table 1. List of barriers classified by pedagogical, technological and organizational dimension.

Dimension	Barrier
Pedagogical dimension	Insufficient technological experience to deal with the necessary ICT tools Command of the official language in the VM experience Methodology to teach in a VM environment To teach sociocultural items To teach academic items Insufficient information on curricula, Students’ unrealistic expectations Problems with credit recognition
Technological dimension	Problems to use technological tools (like the LMS, email, videoconferences, virtual reality tools, social networks, virtual tours, etc.)
Organisational dimension	Academic recognition Mobility assessment Legal framework Coordination Quality Aspects related to cultural identity Length of the VM projects

5. Methodology: Implementation of the project

In this section, we will develop all the steps that has been considered to design a VM programme. We had followed the NetActive (NetActive, 2009) guidelines:

5.1. Designing the VM framework

The UbiCamp VM framework was designed considering the elements and barriers mentioned above and it is divided in five categories:

- **Academic dimension** defines all the aspects related to the minimum requirements and quality standards that must comply the learning courses (pedagogical methodologies), but more important yet, with the evaluation of the contents designed for the VM course and the tools and the means selected to support it, as well. Curriculum must be harmonized with peer-university curriculum in terms of study outcomes and assignments
- **Cultural dimension** defines learning resources to promote cultural exchange among participants during the VM. As in physical mobility, virtual mobility should also provide cultural and linguistic learning. The acquisition of this knowledge needs also to be assessed in order to validate the whole virtual mobility experience.
- **Technological dimension** defines all aspects related to the technologies used in the project, specifies the minimum ICT tools that every institution must provide to participate in the VM.
- **Training dimension** defines the available resources to train in VM issues to all those involved in the experience (professors, students, administration staff, etc). VM procedures, requirements, use of technologies, etc. Moreover, it is necessary for them to raise awareness of the benefits and the objectives of the virtual mobility.
- **Management dimension** defines the different administrative processes necessary to carry out a VM experience like institutional arrangements for teachers and students, the credit recognition and define the roles of each involved institution.

This legal framework contains the minimum requirements that institutions should accomplish to participate in the project.

This way, a solution to all the previously related barriers can be designed as showed in Table 2.

Table 2. Framework dimensions as solutions for VM barriers

Barrier	Framework dimension
Insufficient technological experience to dial with the necessary ICT tools	Training
Command of the official language in the VM experience	Training
Methodology to teach in a VM environment	Academic Technological
To teach sociocultural items	Cultural Technological
To teach academic items	Academic
Insufficient information on curricula	Academic Management
Students' unrealistic expectations	Complete framework
Problems with credit recognition	Management
Problems to use technological tools	Training Technological
Academic recognition	Management
Mobility assessment	Complete framework
Legal framework	Management
Coordination	Management
Quality	Complete framework
Aspects related to cultural identity	Cultural
Length of the VM projects	Management

5.2. Pilot planning

At this stage, the team began to prepare the entire process of VM. The main decisions were: to decide the number of students that can participate, the final list of modules, to prepare a call with the requirements and the procedures to apply the VM, training teachers and students on VM procedures, etc.

In this phase, we also established the minimum requirements about sociocultural contents which the partners should accomplish with.

Every institution involved in the project must develop contents with information on history, gastronomy, important places in their countries, etc., as well as implement some evaluation to assess whether the students have acquired a minimum knowledge about the culture of the host institution.

This way, as shown in Table 3, the barriers can be solved or eased by mean of some solutions implemented in the UBICamp project.

Table 3. Barriers and solutions from UBICamp

Barrier	Solutions
Insufficient technological experience to deal with the necessary ICT tools	Technological teachers' training
Command of the official language in the VM experience	English teachers' training
Methodology to teach in a VM environment	Distance learning solutions (LMS, Videoconference, etc.)
To teach sociocultural items	Designing of a platform to show sociocultural contents
To teach academic items	Standard curricula definition
Insufficient information on curricula	Standard curricula definition
Students' unrealistic expectations	The UBICamp framework performs the complete VM environment for students and teachers. All the possible services by the experience are integrated into the framework.
Problems with credit recognition	Definition of a procedure for ECTS recognition like the Erasmus Physical Mobility one
Problems to use technological tools	Technological teachers' training
Academic recognition	Definition of a procedure for ECTS recognition like the Erasmus Physical Mobility one
Mobility assessment	Definition of quality requirements, assessment procedures and process to VM recognition
Legal framework	Definition of a procedure for ECTS recognition like the Erasmus Physical Mobility one. On the other hand, a VM recognition, shared by all the partners, is also necessary.
Coordination	Definition of procedures and protocols to coordinate the VM experience
Quality	Definition of VM quality
Aspects related to cultural identity	Identification of the cultural items to be modelled as contents
Length of the VM projects	Validation of the VM procedures

Finally, partners selected 18 modules to participate in the VM project. These modules belong to different academic areas of study as computer engineering, education and information technologies, commerce & marketing, tourism, public administration and management, etc.

Table 4. Final list of the modules offered in UbiCamp project for the academic year 2014-2015

Title of the course	Learning Area	Institution
Web Science: How the web is changing the world	Inter-disciplinary	University of Southampton (EN)
Learning in Connected World	Elect. & Com. Sc. Education	University of Southampton (EN)
Project Management	Economics	Kaunas university of technology (LT)
Management	Economics	Kaunas university of technology (LT)
Introduction to Programming in C and Linux Operating System	Computer Science	Universidad Autonoma de Madrid (ES)
Introduction to Videogames programming	Computer Science	Universidad Autonoma de Madrid (ES)
Multimedia Educational Resources	Computer Science	Universidad Autonoma de Madrid (ES)
Corporate Social Responsibility	Economics	University of Oviedo (ES)
Introduction to Economics	Economics	University of Oviedo (ES)
Software Architecture	Computer Science	University of Oviedo (ES)
Innovation and Project in Primary Education	Education	University of Oviedo (ES)
Digital graphics programming	Computer Science	Vytautas Magnus University (LT)
Information Technologies in Education	Education	Vytautas Magnus University (LT)
Collaborative learning	Education	Vytautas Magnus University (LT)
Open Educational Resources	Education	Vytautas Magnus University (LT)
EU Education Programmes and Project Management	Education	Yasar University (TK)
Aesthetics Culture	Education	Yasar University (TK)
International Business Communication	Economics	Università Telematica Pegaso (IT)

5.3. Pilot implementation

The pilot was implemented in the first semester of the academic year 2014-2015 and there was a total of 28 teachers involved belonging to different European institutions.

The initial list of students accepted to participate was 72, and some of them were enrolled in several modules simultaneously.

During the pilot, the teachers evaluated the academic modules offered. At the same time, tutors were responsible for assessing the cultural knowledge acquired by the students using the sociocultural contents offered by the partners.

With respect to the “To teach sociocultural items” and “Aspects related to cultural identity” barriers, the University of Oviedo designed a parallel course offered at the same time than the official modules. This course was called “UbiCamp: Sociocultural contents” and all incoming students have been enrolled in it. This course is performed by several contents about the most important aspects of the Asturian culture. It was created using multimedia means and in an interactive way to make it more pleasant to the student visit. These contents are also posted on the official website of UbiCamp for anyone who is interested in visit them¹. In the paper “*Diseño de una biblioteca digital de contenidos culturales para soporte a experiencias de Movilidad Virtual*” (Juan Fuente, et al., 2012), authors explain the methodology used to design and create sociocultural contents.

Despite the efforts from all the partners, it was impossible to agree in a standard of quality for sociocultural contents and assessment. Every partner design their own model and the way to assess it. For example, Universidad Autonoma de Madrid created Virtual Worlds (Berns, et al., 2011) to promote the virtual interaction between students because, in these environments is possible to interact with other students through their avatars (Bello-Organ, et al., 2012) and see, hear and touch virtual objects (Gonzalez-Pardo, et al., 2010)

In the rest of this article, the references to sociocultural aspects are from the point of view of the University of Oviedo, and not from the complete project.

Because of this, it was impossible to solve the barriers “Mobility assessment” and “Quality³” satisfactorily, more research should be done in that field. Even though this kind of recognition have no academic effect, this could be in the future the main difference between VM and a distance learning processes.

With respect to the academic barriers, all of them was satisfactorily solved and all the students get the credits recognition in their curricula. This was possible by means of a specific Erasmus agreement which solves all the legal problems (Legal framework barrier), and the problems related to “Academic recognition”, “Problems with credit recognition”, “Coordination”,

In this sense, once the academic evaluations were made, as well as in traditional Erasmus process, these evaluations were sent to the origin institutions (by means of the corresponding transcripts) for the academic recognition of studies. Students who could demonstrate an extensive knowledge about the culture of the host country obtained a certificate of VM signed by the corresponding tutor.

With respect to the barriers “Methodology to teach in a VM environment”, “To teach academic items” and “Insufficient information on curricula”, was solved by agreeing in a model of course curricula, with all the valuable information in a standard form.

Because of all the previous comments, students have some more realistic expectations on the experience, solving the “Students’ unrealistic expectations” barrier: students know at first the way they have to attend the courses and the way they can get the recognition of their efforts.

During the UbiCamp project, a list of courses was designed and taught covering the main problematic aspects: technology and language—teaching in English. These courses were a solution to the barriers “Insufficient technological experience to dial with the necessary ICT tools”, “Command of the official language in the VM experience” and “Problems to use technological tools”.

All these previous means give the project the necessary quality, solving the “Quality” barriers from all the aspects but the sociocultural recognition.

Finally, it is usual that most of the VM experiences do not continue after the end of the project, despite the exploitation plans. But UbiCamp project gives procedures to solve the more problematic legal aspects of the virtual mobility experiences, so it was used in later projects, like in the OUV⁴ project, solving the “Length of the VM projects” barrier.

¹ <http://www.ubicamp.eu/campuses/uniovi/sociocultural/presentation>

² Design of a digital library of cultural contents to Support VM experiences

³ From the point of view of the sociocultural aspects

⁴ <http://openstudies.eu/>

5.4. Pilot assessment

With the aim of assessing the interchange pilot and the proposed solutions to the identified barriers, three surveys have been designed; the one for teachers and the other two for students; one to be filled in before and other to be filled in after the interchange.

The first student's survey was designed to obtain information about students' expectations on VM. In this survey, students were asked about the expected benefits of VM, their personal motivation to select this type of learning, and their opinion about the creation of a sociocultural module, etc.

The second survey, was divided in 5 sections, one for each of the five dimensions of the framework. In this survey, it has been evaluated questions related to the organizing of the VM, structure of the modules, the used ICT tools, the sociocultural competences development, learning methods, etc.

Finally, in the teacher's survey, teachers were asked for several questions related to the course design, the use of the ICT tools for the e-learning—LMS, Videoconferences system, forums, etc., and to comment the difficulties encountered during the period of lecture.

The objective of all these surveys was to validate the framework as a valid way to solve all the barriers in a VM process.

6. Findings and Discussions

6.1. Preliminary results from the surveys

6.1.1. Students' point of view

This section shows the main data from the students' surveys. A total of 60 students filled in the survey and through a virtual mobility course, they expected to improve their language skills, get knowledge about the modules studied and interact with people from different countries. As foreseen difficulties, they mentioned problems related to the management of time, with the language to follow the lessons and connection problems.

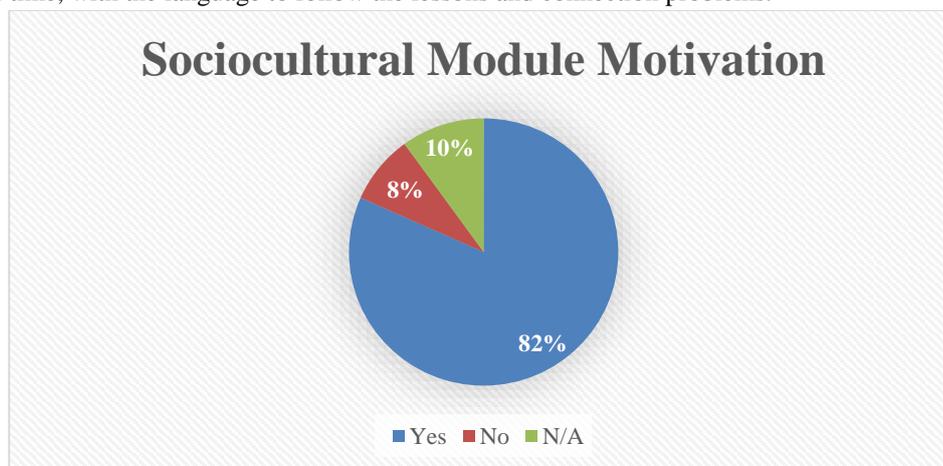


Figure 1: Motivation to follow a Sociocultural Module

Related to the sociocultural contents, the 82% of students surveyed were motivated to attend the sociocultural module in order to acquire sociocultural skills. These results can be seen in the Figure1. This result justifies the need of designing specific sociocultural contents, with quality and able to be assessed, and it also justifies that students consider different to learn by means of distance learning and to do it by means of VM.

The second survey was filled in by 35 students at the end of the pilot interchange. It will show the main results related to the items mentioned above and the organization of the virtual mobility as well as the elements designed in the framework.

The learning organization of the VM was designed by means of tasks and activities to work cooperatively, and in this survey, it was analysed if really teachers proposed collaborative task and created international groups of work. In this sense, 77% of the students have stated that they work in an international group. Figure 2 shows these data.

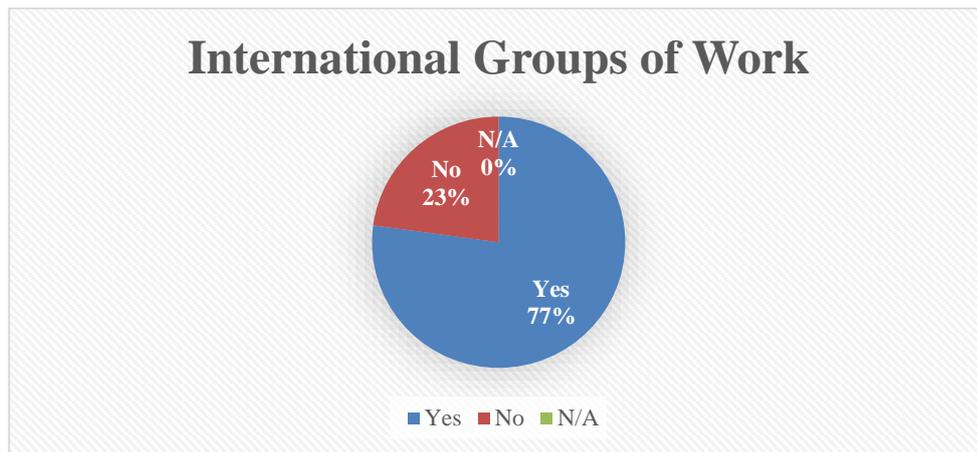


Figure 2. International Groups of Work

In his survey, also it was analysed how good was this cooperation, in the opinion of the students, 52% of them have affirmed that the cooperation was “good” and “very good”. This information shows the importance of the team works to the success of any Virtual Mobility experience.

It also shows that our care about designing solutions to improve courses has positive effects for some barriers:

- Methodology to teach in a VM environment
- To teach academic items
- Insufficient information on curricula
- Students’ unrealistic expectations

At the same time, students were asked for the difficulties in the cooperation due to insufficient level of English and the most of students answered that there no were difficulties in relation to insufficient English language skills of the schoolmates. These results show that our effort to design solutions related to language command on teachers and students, has had positive effects on the project. The following barriers has been eased:

- Command of the official language in the VM experience

Regarding the importance of the methods of learning, and the collaboration and communication tools; the tools most highly valued as a “very important” were the following; videoconferencing, real time tools like chat or Skype and the review the lecture records, in the Figure 3, it can be seen how students have appreciated these issues.

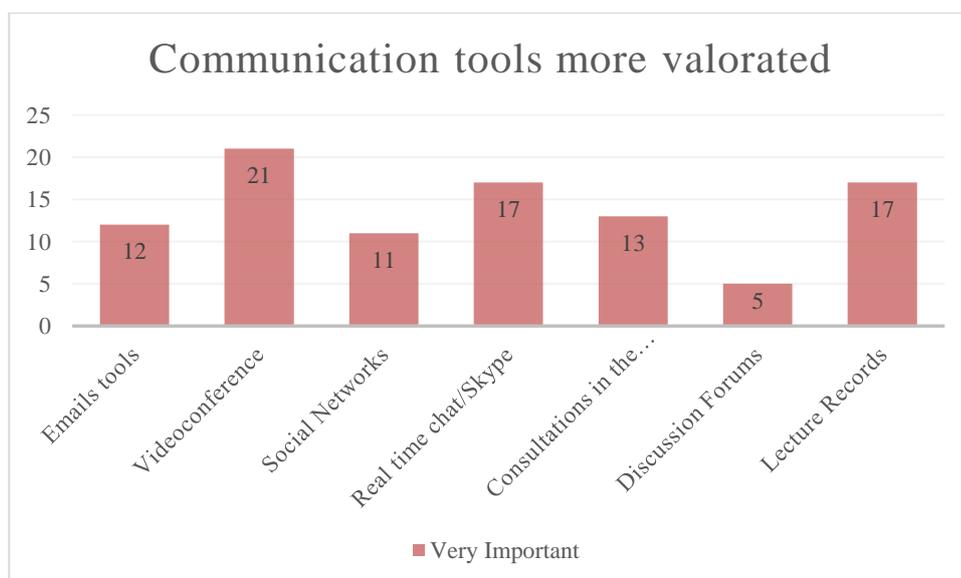


Figure 3. Communication tools most valorated

Furthermore, 91% of the students have manifested that the communication and collaboration tools provided were enough for developed the assignments, Figure 4 shows these results.

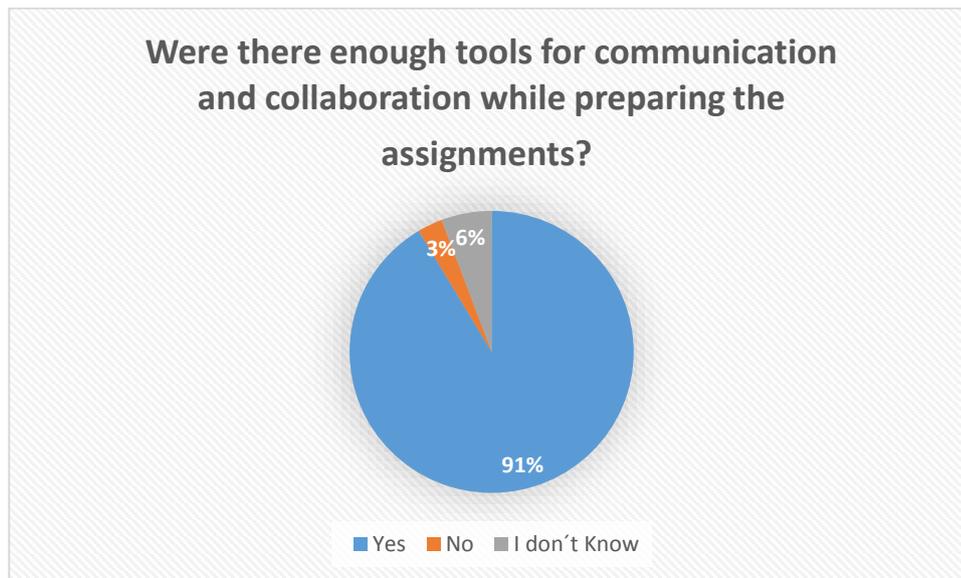


Figure 4. Communication and collaborative tools used.

All the previous results that the solutions selected for some barriers has been positive effects on the project. These barriers are:

- Insufficient technological experience to dial with the necessary ICT tools
- Methodology to teach in a VM environment
- To teach academic items
- Students' unrealistic expectations
- Problems to use technological tools
- Quality

The most used methods to organize the learning, according to the students, have been the following; information presentation, individual work and guidance, and the less used have been modelling or imitation and experimentation, Figure 5 shows these results.

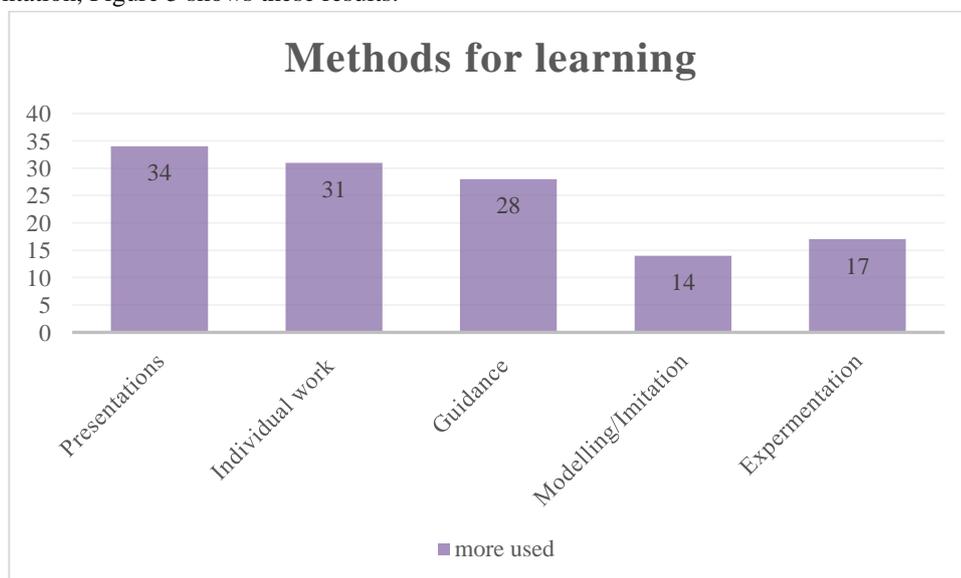


Figure 5. Methods most and less used for learning.

These results are clearly related to the learning processes; they show perception of the students about the methods mostly used by teachers to teach in an VM environment. Because of they all are stated in the standard curricula definition of the course, it is an element that eased the following barriers:

- Methodology to teach in a VM environment
- To teach academic items
- Insufficient information on curricula

In the Figure 6, the main virtual mobility competences acquired by the students, are shown. This figure shows the VM competences that student selected as “Strongly/Well developed”. According to these results, intercultural competence was one of the less developed by the students, while the knowledge related to the studied subject was the most acquired.

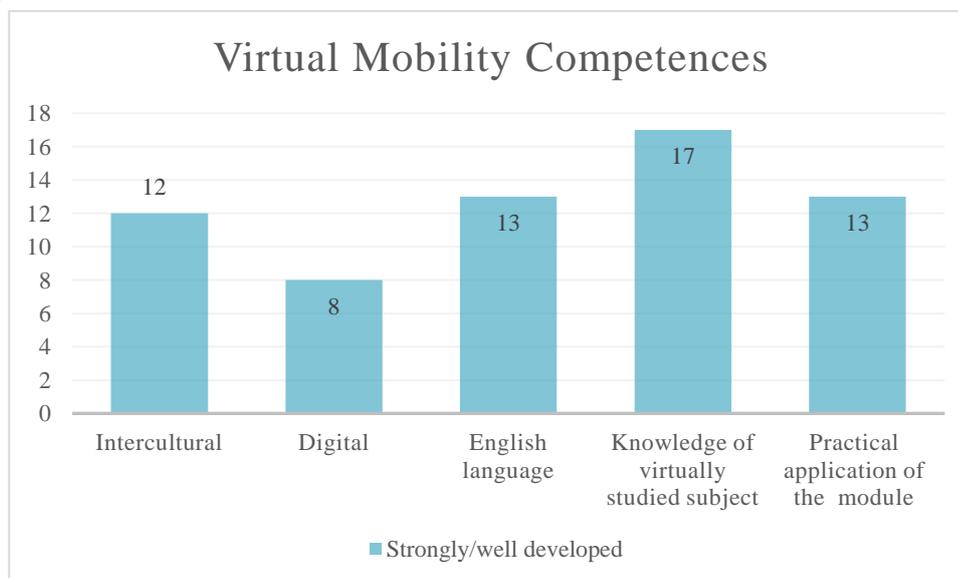


Figure 6. Virtual Mobility Competences more acquired by students.

The previous figure shows the main aspects of the VM experience. It shows that most of the objectives are well achieved, but others—like the intercultural competencies, need to be improved. In any case, this figure demonstrate that many barriers are well solved or eased, for example:

- Insufficient technological experience to dial with the necessary ICT tools
- Command of the official language in the VM experience
- Methodology to teach in a VM environment
- To teach academic items
- Students’ unrealistic expectations
- Problems to use technological tools
- Quality

While others need better solutions, for example:

- Aspects related to cultural identity
- To teach sociocultural items

At this case, the main problem no solved were:

- Disagreement between partners in the way of designing sociocultural contents. Any partners do not consider important this aspect of the project and they do not agree in the quality and scope of the sociocultural contents.
- Disagreement of some partners in how to assess this cultural knowledge.
- Disagreement in considering the sociocultural aspects as the difference between VM and an experience of distance learning.

The previous results are a mixture of all the students’ opinion in the different HEIs, so it is impossible to determine which partners have made a better work.

For some partners, one prominent issue to be considered during this project was the students’ participation in socio-cultural contents. Related to this issue, this survey shows that 60 % of the students have attended regularly following the socio-cultural activities developed whereas 26% of participants have not followed them and a 14% answered “I don’t Know”.

Previous results show how important was the sociocultural contents from the point of view of the UbiCamp project. Even though there were no satisfactory agreement on the way to build this part of the project, the common sense and the obligation of building a sociocultural campus, shows satisfactory results that eased the following barriers:

- To teach sociocultural items
- Mobility assessment
- Quality

- Aspects related to cultural identity

The “Mobility assessment” barrier is the worst one solved by the UbiCamp project. Perhaps other project in the future can dial with this aspect of VM and the get better solutions and results.

6.1.2. Teachers’ Point of View

With respect to the results of the surveys to the teachers, the total number of responses has been 11, and only 6 of them had already taught a course with a distance learning methodology.

For designing and preparing the modules, and to adapt them to a virtual methodology, teachers have stressed that it is necessary to have didactical and technological support as well as using multimedia applications, training support and tutoring support.

The main difficulties encountered in the design of the modules according to the teachers were two:

1. To include socio-cultural activities into the course learning outcomes
2. To adapt the course structure to the VM requirements by UbiCamp

In the Figure , methods of learning organization most commonly used by the teachers in the design of the modules are showed, this figure can be compared with the students’ (Figure 5), both have pointed that the most used methods were information presentation, individual work and guidance; teachers also have added the group work.

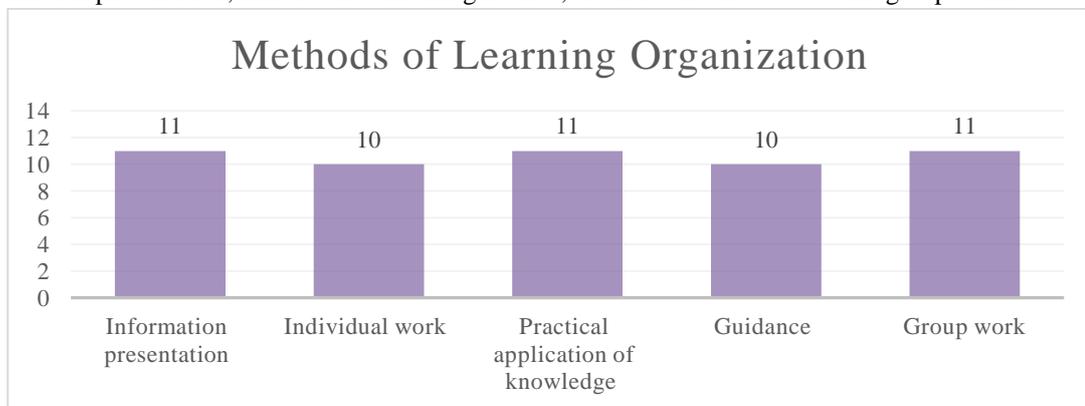


Figure 7. Methods of Learning Organization.

This result shows the perception between teacher and students about learning methods differs slightly. This lack of perception has to be improved by improving the “Standard curricula definition” and perhaps the “Technological teachers' training” solutions. In any case this result justifies or eases the following barriers:

- Methodology to teach in a VM environment
- To teach academic items
- Insufficient information on curricula

Most important communication methods valued by teachers were email, videoconferencing, real time tools like chat or Skype, UbiCamp Web portal and consultations in the LMS, in the Figure , can be seen how teachers have valued these issues.

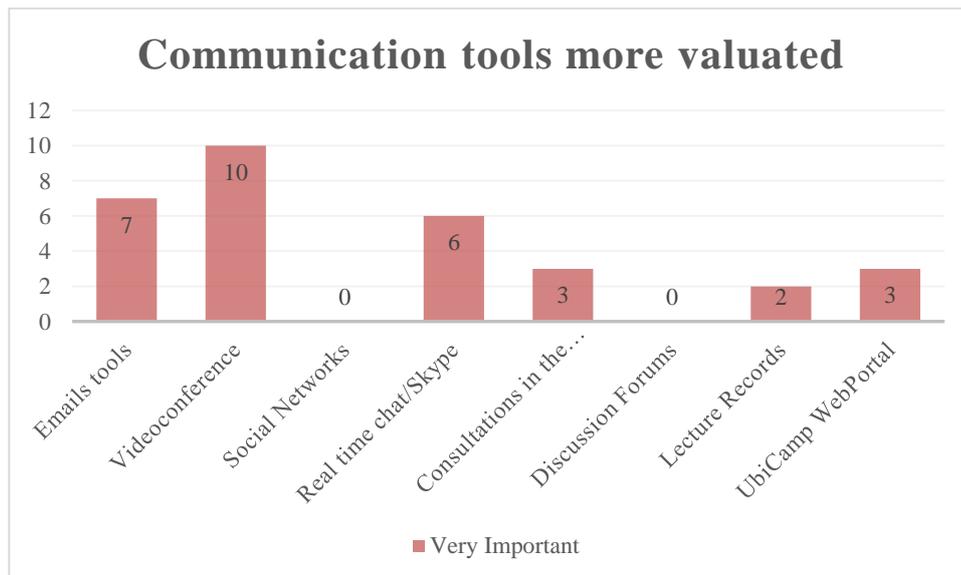


Figure 8. Importance of the Communication Tools by Teachers

Regarding the cooperation and collaborative work, teachers have confirmed that they have organized cooperation assignments and students work cooperatively without problems.

These results ease the following barriers:

- Insufficient technological experience to deal with the necessary ICT tools
- Methodology to teach in a VM environment

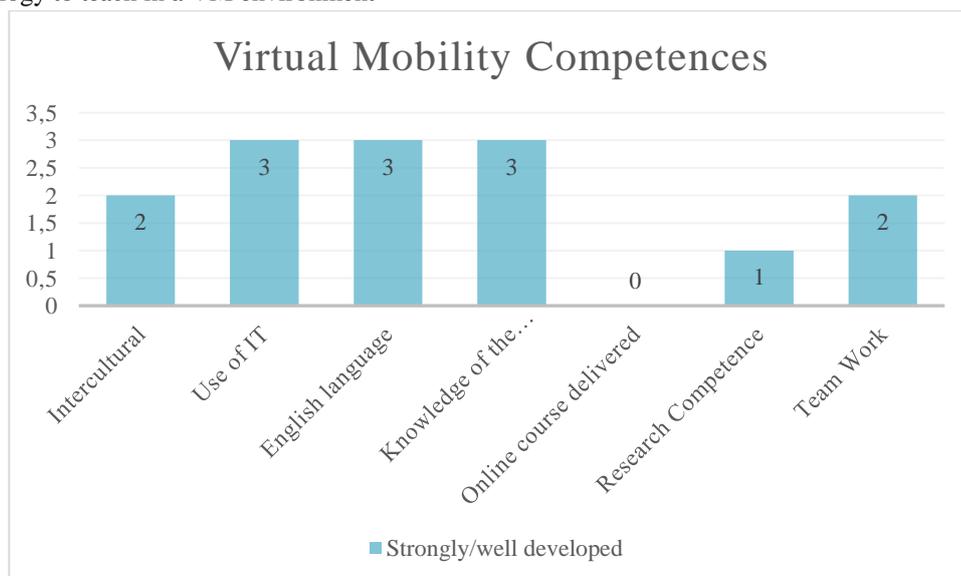


Figure 9. Virtual Mobility Competences more acquired by teachers.

Teachers were also surveyed about the virtual mobility competences acquired by them. In Figure 9, the virtual mobility competences are shown. The English language, the use of the ITCs and the intercultural knowledge were the more developed competences in teachers' opinion.

This result clearly solves or eases problems related to the following barriers:

- Insufficient technological experience to deal with the necessary ICT tools
- Command of the official language in the VM experience
- Methodology to teach in a VM environment
- To teach academic items

On the other hand, teachers have specified that they also have acquired administrative competences about Erasmus interchanges.

6.2. Results of the Pilot project

The list of students accepted in Pilot were 72, however, not of all them started the interchange and some of them took more than one module simultaneously.

From the sociocultural perspective, attending at the students hosted in the University of Oviedo, only 3 of the 25 students received have undertaken activities of monitoring and evaluation with success. The rest of participating institutions, the results have been similar; all teachers involved have manifested the disinterest of the students to visit the sociocultural content of each of the countries. This disinterest has a simple explanation: students are not interested in expending much time in acquiring knowledge not compulsory to obtain the VM recognition, so, this is an aspect to improve in future experiences to differentiate VM and distance learning.

From the administrative point of view, the main problems manifested by all participating institutions have been: (1) especially delays at the time of signing the learning agreements, (2) the starting of the pilot and, in any cases, (3) the operations during the time of enrolling the students in the corresponding courses. A possible solution in future VM experiences, is to treat VM students with priority, because they have no other contact with the host institution than the electronic one, so, while they are not enrolled and with full access to the resources of the host institution they do not feel as participating in a mobility process.

Finally, even though there is no survey about the academic recognition, a positive aspect was got, most of the participants have passed the modules, all of them have validated their credits which have been properly integrated in their academic records. The solution—procedures—proposed for UBICamp, was used in subsequent projects. This way, the following barriers was solved or eased by UBICamp:

- Problems with credit recognition
- Academic recognition
- Coordination
- Length of the VM projects

7. Conclusions and Implications

UbiCamp was designed to solve the main barriers identified in previous projects. These barriers were identified by team of the University of Oviedo and the project was proposed bearing them in mind.

To solve these barriers, a framework was designed which divided the problems in different dimensions. For each of these dimension, a set of solutions was designed.

After the experience, several data were captured to assess the adequacy of the proposed solutions. After the assessment, interesting results were met for future experiences, some positive and some negative.

The barriers “Insufficient technological experience to dial with the necessary ICT tools”, “Command of the official language in the VM experience” and “Problems to use technological tools”, were solved by mean of training courses for students and teachers and they have been positively assessed for both.

The barriers “Methodology to teach in a VM environment” and “To teach academic items” have been solved by means of training on distance learning solutions (LMS, Videoconference, etc.) and by means of the definition of a standard of course curricula. This way, teachers were more comfortable adapting their courses to the VM environment and students were more confident in the academic objectives, easing the problems related to the “Students’ unrealistic expectations” and “Insufficient information on curricula” barrier.

With respect to the legal and coordination aspects, like credits recognition, institution coordination, etc. the framework has been designed to solve all these aspects simulating a physical Erasmus mobility, but adapting the institutional and learning agreements to the VM model. Thanks to this solution, ECTS could be recognized and students were sure of the recognition during all the process. These solved a set of barriers related to legal and academic aspects, like “Legal framework”, “Academic recognition”, Problems with credit recognition”, “Students’ unrealistic expectations”, “Coordination” and “Quality”—of legal aspects. This is, at end, the best result of all the UbiCamp project.

Finally, with respect to the sociocultural interchange, even though this was the most prominent aspect of the UbiCamp, the disagreement between partners in obtain a unified model made impossible to get a standard for assessment, so UbiCamp gets only partial success in this question. Barriers as “To teach sociocultural items” and “Aspects related to cultural identity” have been solved in a separate way for the different partners, all of them acceptable. But it was impossible to solve the “Mobility assessment” barrier in a unified manner to get the recognition of the different institutions and to put this information in the students’ curricula.

In any case, partner's efforts result in a lot of positive procedures and solutions that can be used as good practices in future projects of VM.

Acknowledgements

This work has been supported by UbiCamp project (526843-LLP-1-2012-1-ES-ERASMUS-ESMO), EphemeCH (TIN2014-56494-C4-4-P) project under Spanish Ministry of Economy and Competitiveness, supported by the European Regional Development Fund FEDER.

REFERENCES

- Bello-Orgaz G. [et al.] Clustering avatars behaviours from virtual worlds interactions [Conference] // Proceedings of the 4th International Workshop on Web Intelligence & Communities - WI&C '12. - Lyon, France. : ACM press, 2012. - Vol. 4. - pp. 1-7.
- Berns Anke, Gonzalez-Pardo Antonio and Camacho David Implementing the use of Virtual Worlds in the teaching of foreign languages (level A1) [Conference] // In International Conference on Learning a Language in Virtual Worlds. A review of Innovation and ICT in Language Teaching Methodology. - Warsaw, Poland : [s.n.], 2011. - pp. 33-40.
- Bijnens K. [et al.] Virtual Mobility: an Innovative Alternative for Physical Mobility? [Book Section] // Libro de Buenas Prácticas de e-learning / book auth. Landeta-Etxeberría Ana. - Madrid : UDIMA Universidad a Distancia de Madrid - educ@ned, 2007.
- EADTU Guide to Virtual Mobility [Conference] // EADTU Annual Conference / ed. Universities European Association of Distance Teaching. - Lisbon : [s.n.], 2007.
- European Commission Europa 2020 [Online] // Una estrategia para un crecimiento inteligente, sostenible e integrador.. - 2010. - 7 12 2013. - http://ec.europa.eu/commission_2010-2014/president/news/documents/pdf/20100303_1_es.pdf.
- Gonzalez-Pardo Antonio [et al.] Using virtual worlds for behaviour clustering-based analysis [Conference] // Proceedings of ACM Workshop on Surreal Media and Virtual Cloning / ed. Multimedia ACM. - Florence : [s.n.], 2010. - pp. 9-14. - Florence, Italy, 25-29 October 2010. . - ISBN: 978-1-4503-0175-6.
- Juan Fuente Aquilino A., Menéndez Ferreira Raquel and Camacho Fernández David Diseño de una biblioteca digital de contenidos culturales para soporte a experiencias de Movilidad Virtual [Journal] // RIAICES / ed. Oviedo University of. - 2012. - 1 : Vol. 0. - pp. 115-145.
- Ministerio, E. d. El Proceso de Bolonia 2020 [Online] // Comunicado de la Conferencia de Ministros Europeos responsables de la educación superior. - 2009. - 2013. - http://www.crue.org/export/sites/Crue/procbolonia/documentos/antecedentes/Comunicado_Lovaina_Ministerio_es.pdf.
- Movinter Movinter [Online] // White paper in praise of virtual mobility: how ICT can support institutional cooperation and internationalization of curricula in higher education. - 2010. - 2013. - http://www.cebem.org/cmsfiles/publicaciones/movinter_white_paper.pdf.
- NetActive NetActive [Online] // Bases y propuestas para las buenas practicas en la Movilidad Virtual. - 2009. - 2013. - <http://avicenna.uned.es/net-active/cd/NetActive.htm>.
- Open Education Europa Open Education Europa [Online] / ed. Europa Open Education. - 2013. - <http://openeducationeuropa.eu>.
- Schreurs B. [et al.] Towards sustainable virtual mobility in higher education institutions [Conference] // EADTU Annual Conference 2006: Widening Participation and Opportunities by e-Learning in Higher Education. - Tallinn, Estonia : [s.n.], 2006.