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FACULTY OF BUSINESS ECONOMICS
Master of Management: Management Information Systems

Masterproef

Use of MOOCs in a university is an opportunity for international study.

Case: virtual exchange and international students in UHasselt and PSUT.

Promotor :

Ms. SOPHIE SCHROEVEN

Amani Al-Jaafreh

*Master Thesis nominated to obtain the degree of Master of Management , specialization
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UNIVERSITEIT HASSELT

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February,2014

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Amani AL-Jaafreh

February,2014

Executive Summary

The research study aims at examining whether students are ready to take MOOC courses and whether a university can accept MOOC courses in their curriculum in the universities UHasselt and PSUT. The face of higher education is changing rapidly. One of the major developments in higher education is online learning. Online learning is becoming more popular and this sector is growing rapidly. Recently, there is a new phenomenon in online learning called MOOC (massive open online courses). MOOCs are online courses that are free-of-charge and open to anyone anywhere. But if a learner wants a certificate or wants to receive an academic credit, it is required to pay a tuition fee.

MOOC courses being of high academic quality content, are typically provided by the best universities in the world such as Stanford, MIT, California and many other universities, often in partnership with companies such as Coursera, Edx, Udacity, and other learning services platforms. An MOOC course consists of more and different learning activities including some virtual class activities, such as video lectures, reading materials, discussion forums and also assignments and quizzes. Learning these courses is on self-paced base.

MOOCs provide a new format of learning and allow universities to reach a bigger and even more global group of students than traditional learning. The solution is crossing geographic boundaries and time zones. Many thousands of learners are registered for MOOC courses. Students can earn an academic credit or even an academic degree when passing the exams.

Many universities all over the world are evolving to technology enhanced learning (TEL) solutions. Some of them are accepting MOOC courses as equivalent to their own college courses. Some universities accept MOOC courses as part of their curriculum and allow students to earn an academic credit partly based on MOOCs credits.

UHasselt and PSUT have already experience with the organization of student exchange programs. UHasselt is organizing an international master of management degree program. Yearly a group of PSUT students is participating in it.

Some students may not participate in such an exchange program or international master's degree program because they can't stay abroad for a year or a semester. In order to help these students we propose a solution of a virtual course or a virtual study program. Online courses are considered to be an essential aspect of it and can be applied practically where students can take courses involved in their curriculum online. These online courses could be either from students' own university or MOOCs courses.

This thesis introduced two types of virtual study program: virtual exchange students and virtual international students that can enable distance learning by international students. In order to accomplish the main objectives of this thesis we needed to explore and clarify various concepts. Research was done about the feasibility and acceptance of them by faculty/ university management, professors and students of both institutions. Are these models attractive from the point of view of the faculty management, professors, and students? That was the main question to be answered.

In the organized survey a questionnaire was sent to faculty/ university management, to professors and to students of both universities. The data, collected from this internet based research were then analyzed . As a main result we found that the two types of proposed virtual study programs can be accepted by faculty management, academic staff and students of both universities, UHasselt and PSUT. Professors had some reserve with regards to accepting the equivalence of the MOOC courses to their own courses and preferred the selection of courses to be framed in a bilateral agreement.

TABELS OF CONTENTS:

Acknowledgement	i
Executive Summary	ii
Table of contents	iv
List of figures	x
List of tables	xi
Chapter 1: Introduction	
1.1 University study in evolution	1
1.2 Research Questions	2
1.3 Methodology	4
1.4 Thesis Outline	4
Chapter 2 : Massive Open Online Course (MOOC)	
2.1 Introduction	6
2.2 History	6
2.3 What are MOOCs?	7
2.4 Components of an MOOC	8
2.5 Types of MOOCs	9
2.5.1 cMOOC	9
2.5.2 xMOOC	10
2.6 Difference between cMOOC and xMOOC	11
2.7 MOOCs providers	12
2.7.1 Coursers	13
2.7.2 Udacity	13
2.7.3 Edx	14
2.7.4 Khan Academy	15
2.7.5 Iversity	15
2.8 Reasons why MOOCs will change the world	15

Chapter 3 : Virtual Learning in universities

3.1 Introduction	18
3.2 E-learning	19
3.2.1 Definition of e-learning	19
3.2.2 Advantages of e-learning	19
3.2.3 Disadvantages of e-learning	20
3.3 Virtual classroom	21
3.3.1 Virtual classroom definition	21
3.3.2 The importance of virtual classroom	21
3.3.3 Types of virtual classroom	22
3.4 Online tutoring	23
3.4.1 E-tutor definition	23
3.4.2 The role of the online tutor	23
3.4.3 Synchronous and asynchronous online tutoring	24

Chapter 4: MOOCs universities

4.1 Introduction	25
4.2 MOOC participants	25
4.3 Completion rates	26
4.4 San Jose State University and Udacity partnership	27
4.5 University of central Lancashire	28
4.6 American Council on education	29
4.7 Georgia Techs Massive Open masters degree in Computer Science	30

Chapter 5: Case: Modeling a Virtual exchange student and a Virtual international student program

5.1 International experience of students at UHasselt and PSUT	31
5.1.1 Exchange students	31
5.1.2 International students	32

5.1.3 How we can get more students to enjoy an international experience	32
5.2 Virtual study program	32
5.2.1 Virtual exchange students programs at UHasselt and at PSUT	33
5.2.2 Virtual international students programs in UHasselt	33
5.3 Study on the feasibility and the likelihood of acceptance in the university of the proposed virtual study program	34
5.3.1 Indicators used for self assessment by students	34
5.3.2 Indicators used for self assessment by professors	34
5.3.3 Indicators used for self assessment by faculty management	35
5.4 Set up of the research and set up of the survey	35
5.5 Overview of the organized survey	36
5.6 Resulting answers	37
Chapter 6: Analysis of survey data about feasibility and acceptance of the virtual study programs In the universities UHasselt and PSUT	
6.1 Virtual exchange students: survey for faculty management of both universities	39
6.1.1 Can MOOC courses be included as part of the curriculum of a study program from a legal point of view?	39
6.1.2 Will the inclusion of MOOCs as part of the curriculum improve the international image of the faculty?	40
6.1.3 Will the implementation of MOOCs, included in the curriculum have an impact on the international cooperation of the faculty?	40
6.1.4 Can the selection be organized starting from a global list of MOOCs?	41
6.1.5 Must the selection be organized on partnership base? Do you see the virtual student exchange be framed in a bilateral agreement between the universities?	41
6.1.6 What are the conditions to accept a proposed virtual exchange course as a candidate virtual exchange course?	42
6.1.7 Are the characteristics of the online learning process part of or are they having an impact on the decision to accept the course as candidate exchange course?	43
6.1.8 Conclusion	43
6.2 Virtual exchange students: survey for professors of both universities	44

6.2.1 Can the selection be organized starting from a global list of MOOCs?	44
6.2.2 Must the selection be organized on partnership base? Do you see the virtual student exchange be framed in a bilateral agreement between the universities?	44
6.2.3 What are the conditions to accept a proposed virtual exchange course as a candidate virtual exchange course?	45
6.2.4 Are the characteristics of the online learning process part of or are they having an impact on the decision to accept the course as candidate exchange course?	46
6.2.5 Conclusion	46
6.3 Virtual exchange students: survey for students for PSUT.	47
6.3.1 Learning	47
6.3.2 Ready for e-learning	48
6.3.3 Evaluation	49
6.3.4 Living and Cost	50
6.3.5 Do you like to become a virtual exchange student?	51
6.3.6 Conclusion	51
6.4 Virtual exchange students: survey for students for UHasselt	51
6.4.1 Learning	52
6.4.2 Ready for e-learning	53
6.4.3 Evaluation	54
6.4.4 Living and Cost	55
6.4.5 Do you like to become a virtual exchange student?	55
6.4.6 Conclusion	56
6.5 Virtual international students: survey for faculty management of UHasselt University	56
6.5.1 Can virtual international students be accepted in the International Master of management program from legal point of view?	56
6.5.2 What is the most important benefit resulting from the inclusion of virtual international students in the master of management program?	57
6.5.3 What is the most important risk resulting from the inclusion of virtual international students in the master of management program?	57
6.5.4 Can the UHasselt courses become organized online?	57

6.5.5 Can the UHasselt courses be replaced by MOOCs?	57
6.5.6 Can the student select himself the MOOCs courses?	58
6.5.7 Can the online curriculum be built yearly by a curriculum commission, deciding on the list of acceptable online and MOOCs courses?	58
6.5.8 Conclusion	59
6.6 Virtual international students: survey for professors of UHasselt University	59
6.6.1 Can the UHasselt courses become organized online?	59
6.6.2 Can the UHasselt courses be replaced by MOOCs?	60
6.6.3 Can the student select himself the MOOCs courses?	60
6.6.4 Can the online curriculum be built yearly by a curriculum commission, deciding on the list of acceptable online and MOOCs courses?	60
6.6.5 Conclusion	61
6.7 Virtual international students: survey for students for PSUT	61
6.7.1 Learning	61
6.7.2 Ready for e-learning	63
6.7.3 Evaluation	64
6.7.4 Being a distance student, costs	65
6.7.5 Do you like to become a virtual international student?	66
6.7.6 conclusion	66
6.8 Virtual exchange students: survey for students for UHasselt	67
6.8.1 Learning	67
6.8.2 Ready for e-learning	68
6.8.3 Evaluation	69
6.8.4 Being a distance student, costs	70
6.8.5 Do you like to become a virtual international student?	71
6.8.6 conclusion	72
Chapter7 : Conclusion	73

References	75
Appendices	
Appendix 1: Questionnaire Virtual exchange students for faculty management	78
Appendix 2: Questionnaire Virtual exchange students for professors	81
Appendix 3: Questionnaire Virtual exchange students for students	82
Appendix 4: Questionnaire Virtual international students for faculty management	85
Appendix 5: Questionnaire Virtual international students for professors	87
Appendix 6: Questionnaire Virtual international students for students	88

List of figures:

Figure 2.1: MOOCs and Open Education Timeline	7
Figure 2.2: exploring the meaning of the words Massive Open Online Courses	8
Figure 4.1 the compilation rates	27
Figure 6.1: Inclusion of MOOC courses in the curriculum	39
Figure 6.2: Improvement of international image by including MOOC	40
Figure 6.3: Impact of the inclusion of MOOC on the international cooperation	41
Figure 6.4: Organization of the selection from a list of MOOC	41
Figure 6.5: Selection of MOOC on a partnership base	42
Figure 6.6: Contents of the virtual MOOC course	42
Figure 6.7: Impact of the online learning process on the selection of MOOC virtual courses	43
Figure 6.8: Organization of the selection from a list of MOOC	44
Figure 6.9: Selection of MOOC on a partnership base	45
Figure 6.10: contents of the virtual MOOC course	45
Figure 6.11: Impact of the online learning process on the selection of MOOC virtual courses	46
Figure 6.12 become a virtual exchange student	51
Figure 6.13 become a virtual exchange student	56
Figure 6.14: inclusion virtual international students in the International Master of management program	57
Figure 6.15: UHasselt courses online	58
Figure 6.16: MOOCs courses	58
Figure 6.17: answers for the online curriculum be built yearly by a curriculum commission	59
Figure 6.18: UHasselt courses online	60
Figure 6.19: MOOCs courses	60
Figure 6.20: answers for the online curriculum be built yearly by a curriculum commission	61
Figure 6.21: become a virtual international student	66
Figure 6.22: become a virtual international student	72

List of Tables:

Table 2.1 cMOOC Courses	10
Table 2.2 xMOOC Courses	11
Table 2.3 difference between cMOOC and xMOOC	12
Table5.1: the organization of the surveys and the target groups	35
Table5.2: results for virtual student exchange program	38
Table5.3: results for virtual international student program	38
Table 6.1: findings of learning for students PSUT	47
Table 6.2: finding of ready for e-learning for students PSUT	48
Table 6.3: findings of evaluation for students PSUT	49
Table 6.4: findings of living and costs for students PSUT	50
Table 6.5: findings of learning for students UHasselt	52
Table 6.6: finding of ready for e-learning for students UHasselt	53
Table6.7: findings of evaluation for students UHasselt	54
Table 6.8: findings of living and costs for students UHasselt	55
Table 6.9: findings of learning for students PSUT	62
Table 9.10: finding of ready for e-learning for students PSUT	63
Table 6.11: findings of evaluation for students PSUT	64
Table 6.12 findings of being a distance student for students PSUT	65
Table 6.13: findings of learning for students UHasselt	68
Table 6.14: finding of ready for e-learning for students UHasselt	69
Table 6.15: findings of evaluation for students UHasselt	70
Table 6.16 findings of being a distance student for students UHasselt	71

Chapter 1

Introduction

In this introductory chapter we will briefly outline the background of this study, its methodology and its structure. We will clearly indicate the logic of our research and the contents of each of the different chapters.

1.1 University study in evolution:

For several decades now, the educational system provided via internet is being improved year after year and has been enhancing along with the development and advancement of the information and communication technology. Studying at universities and after the university has received special significance in our present because of its significant impact on the future of the individual in preparing him or her in a scientific way to their profession and in helping them to achieve their ambitions and objectives that will give them a convenient occupation in the community. It was common in the past that if you wanted to take a college degree, you had to stay in a house near to the university. Nowadays because of the existence of the internet, on distance learning is made easier because you can find many online universities and courses.

There is a recent phenomenon in higher education, called MOOCs (Massive Open Online Courses). This term is a combination of “distance learning” and the use of the social media [1]. This online learning tool provides access to university courses for a large number of people who might otherwise be excluded for reasons ranging from time to geographic location and to financial hardship [1]. This has encouraged elite universities to put their courses online by setting up open learning platforms such as edX, Coursera and Udacity together with private partners. So, learning via the Internet should become a haven for those who have not absorbed it by using the traditional classroom or who do not have time to go to university and study within the specific timetable offered. This ongoing revolution of MOOCs can present a significant change in the nature of higher education in the coming years. In this thesis we will perform research about the opportunity these MOOCs present for enabling on distance learning for international students.

1.2 Research Questions:

The main goal of this thesis is to investigate whether students are ready to take MOOC Courses and whether a university can accept MOOC courses in their curriculum.

Are the students, the university professors, and university management /administrative staff ready for using and accepting MOOCs as part of their curriculum?

Can a curriculum be composed of, or can it include MOOC courses, and create the opportunity of obtaining a university degree for international students?

From the general question, the following sub-questions were formulated.

Sub-question 1. MOOCs are a recent phenomenon in e-learning. Many definitions and information can be found in literature. Therefore, the first sub-question attempts to explain the meaning of MOOCs.

The first sub-question is:

What are MOOCs?

Sub-question 2. MOOC courses are e-learning courses that have several advantages and disadvantages compared to traditional face-to-face organized classroom courses, especially for on distance (international) students. Their readiness to follow MOOC courses must be analyzed . The requirement of tutoring the students in a virtual classroom must be described and clarified as well.

The second sub-question is:

What are the advantages and disadvantages of learning MOOC courses for international students? How can they be made attractive for (international) students?

Sub-question 3. Thousands of individual learners are registered for MOOC courses. Completion rates, being the number of participants finishing with a credit, can be about 40%, although most MOOCs have completion rates of less than 13%. The third sub-question is:

Are MOOC Courses already known or even popular with the students? Do universities accept their MOOCs credits?

Sub-question 4. It is important to analyze the best practices of universities that are accepting MOOCs as part of their curriculum and that are already accepting the MOOC credits that students earn from other universities from all over the world. The fourth sub-question is:

Do universities accept MOOC credits as part of their study program curriculum? Can the university certificates of students be based on MOOC credits from other universities?

The fifth sub-question is:

UHasselt and PSUT organize a student's exchange program.

Are they ready to extended it to a virtual exchange students program and is it an opportunity for them?

The sixth sub-question is:

Are international students candidates for becoming virtual international students?

Are the faculty management and professors of UHasselt prepared to organize a virtual international study program for international “on distance” students?

1.3 Methodology

To meet the thesis objectives and to fulfill them, our methodology builds on two approaches: a literature review and a practical case study.

In the literature review articles were found in different sources, scientific databases and in Google Scholar. Hasselt University and Princess Sumaya University Unlimited have large scale access to scientific databases .In this study three scientific databases were used: Emerald Insight, ProQuest, and eBray which were used to search for articles, etc. Many articles referred to in this study were found using 'Google Scholar' which offered a simple and easy access to current research. Others was resulting from searching recent researches reports and conference proceeding in the e-learning domain.

In the case study part we collected information considering the international activities of the universities and among PSUT and Hasselt University , both universities having a long standing and developing relationship.

The proposed virtual study program models are built based on literature research. For measuring the feasibility and the acceptance rate of their solutions, a set of indicators was developed. Surveys were organized using a questionnaire, of which the questions are related to the indicators.

1.4 Thesis outline

This thesis is organized as follows:

The second chapter (chapter two) in this study will include a literature review on MOOCs, what are MOOCs, components of a MOOC, what are the types of MOOCs, difference between two types of MOOCs, what are the MOOCs providers, and the reasons about why MOOCs will change the world.

Chapter three will include literature review on e-learning, what is online learning, what are the advantage and disadvantage of online learning, and also we mention virtual classroom, It will also include literature review about online tutoring and e-tutor.

Chapter Four will include literature review to know who the participants are that enroll in massive open online courses, also mention the rate of learners who earned a certificate of completion the course, It will also include literature review about some universities give credit or degree for MOOC courses.

Chapter five These explains the virtual exchange students and the virtual international students , illustrate the success indicators that we used in the questionnaire and also illustrate the set-up of the survey.

Chapter six explains data analysis and results. And also explains the opinion of the faculty managements, professors, and students on two types of virtual study programs: virtual exchange and virtual international students.

Chapter seven is the final chapter of the study and contains the conclusions and suggestions for future study and research.

Chapter 2

Massive Open Online Courses (MOOCs)

2.1 Introduction

This chapter aims at introducing the meaning of Massive Open Online Course (MOOCs). After describing the history of MOOCs, we define what they are and explain the meaning of two main classes of MOOCs: cMOOC and xMOOC. This chapter also demonstrates the components of an MOOC and talks about MOOCs providers. Moreover, it includes reasons why MOOCs will change the learning world.

2.2 History

Since 2000 the concept of openness in education has developed quickly, although it has its origins in the early 20th century [1]. In 2002, the Massachusetts Institute of Technology (MIT) established OpenCourseWare and the Open University set up OpenLearn in 2006 [2].

In 2008, the term MOOC was first launched in Canada by George Siemens and Steven Downes in response to a course called connectivism and connective knowledge (CCK08). Around 2,200 people signed up for this course. In 2012, another MOOC experiment caught the attention of academics. Two Professors at Stanford, Sebastian Thrun and Peter Norvig, decided to offer the course “Introduction to Artificial Intelligence” open on the internet. More than 160,000 students in 190 countries signed up, of whom 23,000 completed the course [1]. This fact led Thrun and Norvig to build a new business model for the delivery of online knowledge. It meant the start-up of the company Udacity. After that, two more American start-ups for MOOCs appeared: Coursera and EdX. In the late 2012, a new platform, Futurelearn founded by the Open University [3] was founded. We can see in figure 2.1 a timeline of the emergence of OER and MOOCs.

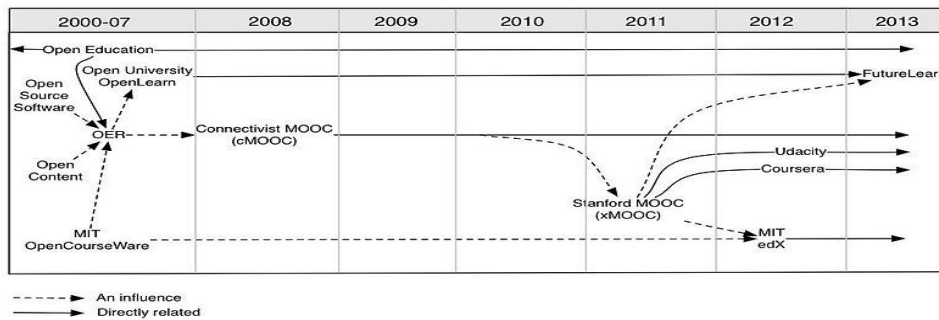


Figure 2.1: MOOCs and Open Education Timeline [3].

2.3 What are MOOCs?

The proliferation of information and communications technologies in recent years has changed the landscape of higher education. A new recent phenomenon exists in the open educational resources (OER) called MOOCs. The first MOOC started as mentioned, in 2008 by George Siemens and Steven Downes in response to a course called "connectivism and connective knowledge" (CCK08) [1, 2]. The term MOOC is being applied to a wide range of online courses. MOOCs are online courses that are free-of-charge and open to anyone anywhere, for all people eager to learn and interested in studying online. Essentially an unlimited number of people can take part in some MOOCs courses [1]. MOOCs represent a combination of "distance learning" and "social media expertise" in the digital world.

MOOCs based on the description by McAuley, Stewart, Siemens, and Cormier [1]: "A MOOC is an online course with the option of free and open registration, a publicly shared curriculum, and open-ended outcomes. MOOCs are integrating social networking, accessible online resources, and are facilitated by leading practitioners in the field of study. Most significantly, MOOCs build on the engagement of learners who self-organize their participation according to their learning goals, prior knowledge and skills, and common interests." [1]

MOOCs build, as stated, on the active engagement of several hundred to several thousand learners who self-organize their participation according to prior knowledge and skills, learning goals, and common interests. Although MOOCs share in some of the conventions of an ordinary course, such as a predefined timeline and weekly topics for consideration, they generally carry no fees, state no prerequisites other than internet access and interest, have no predefined expectations for participation and no formal accreditation [4].

In figure 2.2 we can see the explanation the name OF MOOC. The abbreviation clearly conveys its definition. The first word in MOOCs is "Massive" because It's designed to enroll thousands of students. They are "Open" because, in theory, anyone with an internet connection can enroll and should not possess any prerequisites such as a qualification or a level of performance in earlier studies. On the other hand, the access to the educational resources of MOOC should in principle be free, but if anyone's wants a certificate or wants to receive an academic credit, they should be required to pay a small fee. MOOCs are further "Online" because much of the interaction takes place online in threaded web discussion groups with cohorts of learners, or on wikis or via video tutorials by professors. Finally, MOOCs are "Courses" because they have concrete start and end dates. They should have tests and quizzes and protected exams to assess the knowledge acquired by students. Upon completion, some may offer a "Verified Certificate" of completion or college credit. These courses are self-paced, which means that you follow the course materials, complete the readings and assessments and get help from a large community of learners through discussions forums [5, 6].

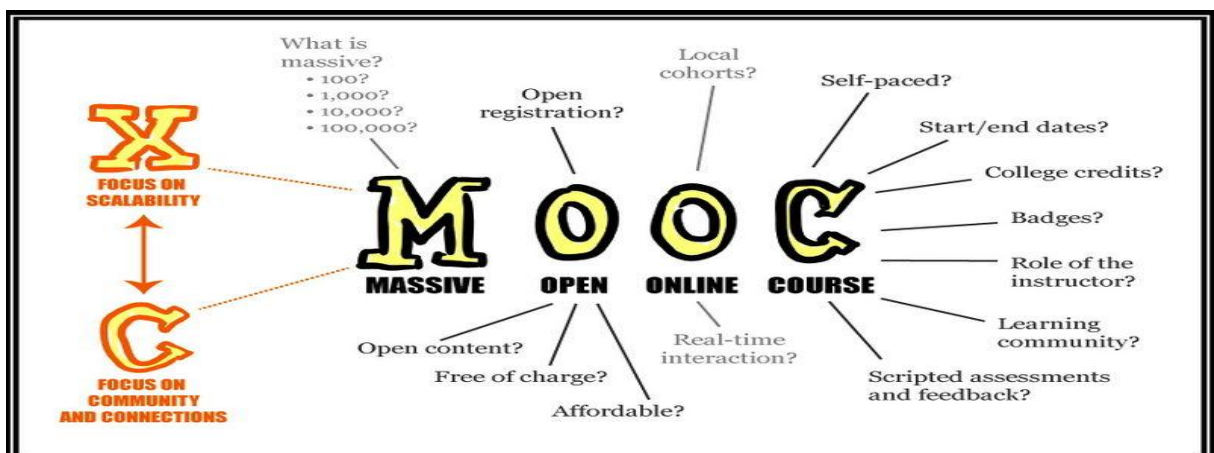


Figure 2.2: exploring the meaning of the words Massive Open Online Courses [4].

2.4 Components of an MOOC:

MOOCs are the very definition of dynamic social learning. They offer participants the opportunity to interact, connect and engage with others all over the world. MOOCs are interactive and use quizzes, assignments and tests, as well as, videos blogs, wikis, facebook pages, twitter and participant forums to engage with students. Each MOOC course has a **syllabus** that lists the learning objectives and defines the scope of the topics and accompanying readings, discussions, assignments, and quizzes or tests. The syllabus also includes a weekly schedule especially for discussions and assignment

submissions. The contents of an MOOC course typically consists of video lectures, suggested reading materials, discussion forums and also assignments and quizzes [4, 7].

The **video lecture** is the most unique and valuable component of any an online course in that it provides an expert (the instructor) the means to deliver his or her expertise (built up over years of teaching and researching a subject) in an extraordinarily efficient fashion. Students usually don't need to buy books for these courses, because all reading material is either be provided within the MOOC content or is linked to open access texts [8, 9].

MOOCs provide interactive user forums that help build a community for the students and the professors. **Discussion forums** in MOOCs aim at establishing the interaction between course participants. Learners can share and discuss information and opinions with others from all over the world [10].

In a typical MOOC, students watch video lectures online and interact with one another in discussion forums. Some MOOC courses require students to take an online quiz or test with multiple choice answers that can be graded automatically. The assignments are an important component of MOOCs. Some MOOC courses require students to complete assignments and upload the solutions into the MOOC platform. These assignments can be evaluated and graded automatically or by other students [7, 8].

2.5 Type of MOOCs:

Two distinct classes of MOOC exist side by side for the time being, based on a different pedagogical emphasis and a different organizational model. The two types are: the cMOOC and the xMOOC.

2.5.1 cMOOC

The connectivist MOOC(c MOOC) was the first MOOCs. The first course following this concept was based around theories of connectivism developed by Canadian educationalists and MOOC pioneers George Siemens (of Athabasca University), Stephen Downes (of the National Research Council, Canada), and Dave Cormier (of the University of Prince Edward Island) and others [1, 6]

Courses are typically developed and led by academics through an open source web platform. cMOOCs emphasize social networked learning and count on building and fostering a community. They are characterized by an almost chaotic structure. Knowledge is open and is generated as participant's progress through the course [10]. Learners contribute to the generation of this knowledge via blogs, articles, images, videos, and social media [2]. In table2.1, is a list of name courses of type cMOOC.

Date	Title	Course Content
2008	CCK08	Connectivism and Connective Knowledge
2010	PLENK2010	Personal Learning Environment and Network and Knowledge
2011	EduMOOC	Online Learning for Today and Tomorrow
2011	MobiMOOC	Mobile Learning
2011	Change11	Education, Learning, and Technology
2011	DS106	Digital Storytelling
2012	LAK12	Learning Analytics

Table 2.1 cMOOC Courses, [2]

2.5.2 xMOOC

The most popular MOOCs, now called xMOOCs, are online versions of traditional learning formats (video lectures followed by short quizzes and tests, instruction, discussion etc.). xMOOC typically describes courses offered by companies like edX, Udacity and Coursera and others. XMOOCs are the new and well-publicized type that moves a traditional university learning paradigm into the online learning space [2, 19]. They are characterized by a straightforward structure. Students in xMOOCs are watching video lectures for each unit and then attempt to solve tests and/or assignments [4]. Nevertheless, knowledge generation happens in the discussion forums and via peer feedback [7]. In table2.2, is a list of name courses of type xMOOCs.

Date	Title	Course Content
2011	CS221	Introduction to Artificial Intelligence
2011	6.002x	Online Circuit and Analysis
2012	N/A	Functional Programming Principles in Scala
2012	N/A	Software Engineering for SaaS
2012	N/A	Introduction to Genetics and Evolution
2013	N/A	Introduction to Databases
2013	3.091x	Introduction to Solid State Chemistry

Table 2.2 xMOOC Courses, [2].

2.6 Difference between cMOOC and xMOOC:

According to Siemens (2010), "Connectivism is the thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks" [1].

Both types of MOOCs share some similar elements: they are available to hundreds or thousands of learners and have an open source structure with free-of-charge participation. But there are also significant differences between these types of MOOCs. They are situated in the perspective they have on knowledge and learning. The xMOOCs adopt a traditional instructivist lecture and knowledge dissemination delivery process, which provides a scalable digital version of traditional learning, whereas the cMOOCs provide personalized experiences and encourage divergent and creative thinking [3,11]. cMOOCs are thus not like a traditional online courses whereas xMOOCs resemble them more.

In a cMOOCs the learners learn through participating in the various discourses, engaging in the learning activities, interacting and connecting with other students through digital platforms such as blogs, wikis, and social media platforms to create and construct knowledge. xMOOCs are more like a

traditional online course where the teacher teaches and the students learn and consume the knowledge from the course through reading a book or watching a video lecture. xMOOCs are linear because learners follow a particular defined trajectory and based on a behavioral/cognitivist learning theory. This signifies that students master the contents through the transfer of knowledge or information from one person or a number of persons to the learner. Siemens (2010) defines the difference between two types as follows: “cMOOCs focus on knowledge creation and generation whereas xMOOCs focus on knowledge duplication.” [1]. In table2.3, we can see the difference between cMOOCs and xMOOCs.

cMOOC	xMOOC
Social networked learning	Traditional approach
Non-linear , chaotic	Linear , straightforward
Individualized learning	Mastery of concepts
Distributed knowledge	Centralized repository
Comparatively more learner action	Comparatively less learner action

Table 2.3: difference between cMOOC and xMOOC, [2].

2.7 MOOCs Providers:

MOOCs are typically provided by higher education institutions, often in partnership with “organizers (companies)” such as Coursera, edX, and Udacity. Each of these providers has their own online learning platform and delivers free courses from some of the world's elite universities. The main difference between them is the courses they have to offer and the structure and styles of delivery of these courses but nearly all of them provide a digital classroom platform that is structured with lecture videos, tests, quizzes and massive communities of fellow learners from all over the world for discussion and collaboration [2, 4]. The following is a list of some of the companies that are active:

2.7.1 Coursera:

Coursera is an education company offering MOOCs founded by computer science professors Andrew Ng and Daphne Koller from Stanford University. It started in April 2010. Coursera is a for-profit online initiative. The platform has partnerships with the top universities and organizations all over the world to offer courses online in different languages and for anyone to take. These courses offer a wide range of topics, spanning the humanities, medicine, biology, social sciences, mathematics, business, computer science and many other topics. Whether you're looking to improve your position, advance your career, or just learn more and expand your knowledge, it contains multiple courses that you may find to be interesting. Coursera has raised \$ 22 million in venture capital in its first year of operations [4, 12].

According to the website, Coursera currently have over 4 million students and 542 courses from 97 partner institutions. Partners include the University of California, University of British Columbia, Oxford University, Princeton, and many others [12]. There is a certification of completion from Coursera and protected examinations provided in partnership with Pearson VUE Education. The following is a list of some courses offered by Coursera:

1. Social and Economic Networks: Models and Analysis (Stanford University).
2. Machine Learning (Stanford University).
3. An Introduction to Operations Management (University of Pennsylvania).
4. Bioelectricity: A Quantitative Approach (Duke University).
5. Computer Architecture (Princeton University).
6. Nanotechnology: The Basics (Rice University).

2.7.2 Udacity:

Udacity is a for-profit MOOC founded by Sebastian Thrun, professor of computer science at Stanford and David Stavens in June 2011. Udacity has raised more than \$ 21 million in venture capital. Udacity offers a smaller number of courses and focuses on courses for building and applying your knowledge in STEM (Science, Technology, Engineering, and Mathematics) disciplines. These courses are categorized into beginner level, intermediate level and advanced level [3, 13]. There is a certification

upon completion by some of the participating universities and protected examinations, provided in partnership with Pearson VUE Education. The following is a list of some courses offered by Udacity:

1. Introduction to Computer Science.
2. Introduction to Physics.
3. Statistics.
4. Introduction to Artificial Intelligence.
5. Programming Languages.

2.7.3 Edx:

EdX, on the other hand, is a nonprofit MOOC platform founded by the Massachusetts Institute of Technology (MIT) and Harvard University in May 2012. The two institutions have contributed \$60 million of resources to this project, each of them funding the venture with \$30 million. EdX is new, but expanding quite quickly [15].

Edx offers a large number of courses from various universities in the world. Students can take great online courses from the world's best universities and the best professors. These courses are from Harvard, MIT, Berkeley (University of California), UT (the University of Texas System) and many other universities. Topics include biology, business, chemistry, computer science, economics, finance, electronics, engineering, food and nutrition, history, humanities, law, literature, math, medicine, music, philosophy, physics, science, statistics and many more [14]. At the moment there is a new collaboration between Edx and Google. Edx and Google will jointly develop MOOC.org. MOOC.org is an EdX department. It will allow educational institutions, businesses and teachers to easily build and host courses for the world to take. MOOC.org will be launched in early 2014. There is a certification of completion from the 'X University' with protected examinations provided in partnership with Pearson VUE assessments center. The following is a list of some courses offered by Edx. :

1. Elements of structures (MIT)
2. Introduction to computer science (MIT)
3. Introduction to public speaking (Matt McGarrity, UWashingtonx)

4. Health and society (Harvard)

5. Introduction to the music business (Berkeley)

2.7.4 Khan Academy:

Khan Academy is a non-profit educational website created by educator Salman Khan in 2006. The goal of this organization is to change education for the better by providing a free world-class education for anyone anywhere [7].

The website features lectures via video tutorials stored on YouTube and encompasses topics like mathematics, history, healthcare, medicine, finance, physics, chemistry, biology, astronomy, economics, cosmology, organic chemistry, American civics, art history, macroeconomics, microeconomics, and computer science [16].

2.7.5 Iversity:

Iversity is a nonprofit MOOC platform based in Berlin founded by Jonas Liepmann and Hannes Klopper in October 2013. The courses are available in English and German language. The following is a list of some courses offered by Iversity [7, 17].

1. Design 101 (or Design Basics).
2. The Future of Storytelling.
3. The Fascination of Crystals and Symmetry.
4. The European Union in Global Governance.
5. Contemporary Architecture.
6. Political Philosophy: An Introduction.

2.8 Reasons why MOOCs Will Change the World:

Massive Open Online Courses offer a new business model of low-cost, high quality education that has the potential of transforming both higher education and corporate learning by making lifelong learning a tangible reality. The model offers a number of large advantages over previous online learning models. These are related to the adjectives the word courses precede in the word MOOC. We treat them in the correct order.

1. MOOC is Massive

The MOOC model offers training on a massive scale to selected target audiences. It does so by focusing on communities and connections. In principle everybody connected to the system and its providers (suppliers) and belonging to the target group can participate at courses whenever they want. There is consequently no limit to who can follow a course within the target group. Moreover people can follow these courses at their own pace [18].

Consequently, given the framework of the target group you are targeting, the MOOC model offers a number of advantages that cannot be denied. Firstly, since no specific network connectivity is required, access is very easy indeed. One hopes that this will attract more learners than ever before. Secondly, there is only a very limited language barrier to be overcome. Taking into account for instance that English is the second language of over two and a half billion people in the world; the reach is very large indeed. For specific languages (take for instance Chinese and Arabic) one single translation limits the cost of languages and lowers this barrier as well. Thirdly, there will be no time zone limitations either as the access will be available whenever needed. Finally, the 24 on 24 hour, 7 days on 7 approach makes the courses easy to organize in a short time span [18].

2. MOOC is Open

The MOOC model is also open. This signifies it is available without much preconditions attached to it in terms of tools one can and must use, diplomas one possesses and so on. Certainly if the contents are also open and only limited charges are asked, the affordability brings the world of subjects closer to the person who wants to learn.

This also offers a set of large advantages over other models. This is linked to the fact that open applies to the tools used, the contents offered and the diplomas not required to enroll. Firstly, since no tools are required, any tool can be used, making the learning experience available to whatever system the person who wants to learn uses. No limitation to the contents has a second advantage, namely that sharing is easy. Imagine you can share information and contents with not only friends, but specialists outside as well as within your environment. Thirdly, since no enrollment prerequisites would be asked, anyone from economist to psychologist could be following courses in mathematics and chemistry or vice versa if the interest and necessity is there [16,17].

The most important advantage of this open system lies however in the inverse movement: since there is no limitation to connections between students, there would also be no limitation to connections between professors. Learning across boundaries thus would become more easily and across disciplines, corporate and institutional walls.

3. MOOC is Online

The online access characteristic is already linked to a number of the previously indicated advantages, such as easy access on a 24/7 basis without time zone limitation for everybody.

4. MOOC is courses.

The MOOC model offers individuals nearly unlimited access to courses they are interested in. Thus learning is actually done in an informal and cozy setting of choice by the person who wants to have access to it. This will certainly improve the results as for the first time people will not be forced to learn in a setting which they do not choose themselves. It is self-paced and thus certainly more motivating. A second big advantage is that at the same time your skills are used at your pace as well: slow learners are not forced to follow the velocity of the more rapid ones and rapid ones are not demotivated by the time needed by others. In other words, anyone participating will learn as he or she prefers [19, 16].

Chapter 3

Virtual learning in Universities

3.1 Introduction:

Traditional or face-to-face learning is still popular as a teaching method, because most people grew up in a traditional learning environment. Traditional learning has some advantages such as learning in a social interaction environment and creating opportunities to ask questions and participate in live discussions, which facilitate an exchange of ideas. This lowers the possibility of misunderstanding and offers greater personal contact with other students. But it is slow, costly and by no means the interaction is guaranteed. Moreover people do not have much power to intervene in their own study process [20].

The face of higher education however is changing rapidly. One of the major developments in higher education is online education. Online education is becoming more popular and this sector is growing rapidly. This development focuses on the use of electronic media and information and communication technologies (ICT) in teaching and the transformation of traditional classrooms to virtual classrooms through the use of networks and information technology [20].

E-learning is a new trend, it's not about only using computers and networks in education. It is a whole new system to capture, transfer, and distribute the knowledge and skill in a way that is almost free from time and space boundaries. E-learning terms have spread rapidly and are numerous. We talk about Web-based learning, computer-based learning, Digital learning, virtual classroom and learning through video conferencing, and even about an electronic teacher [21].

Various factors have played an important role in the implementation and application of e-learning. One of the most important factors is the decreasing of the costs of learning process. The growth of e-learning is moreover directly related to the increasing access to information and communications technology. Teachers are increasingly using information and communications technology to support their teaching methods in order to achieve better results.

3.2 e-learning:

Many definitions and information can be found in literature about e-learning.

3.2.1 Definition of e-learning

E-learning indicates using the Internet applications and information communication technologies to deliver learning materials to students. E-learning includes numerous types of media capable of delivering this instructional content or learning experience. It includes technology applications and processes such as audio or video tape, internet, extranet, satellite TV, and CD-ROM [21].

E-Learning courses offer students a flexible alternative to campus courses, Students can register in the course according to their own schedule and at the most convenient location to them. E-learning suits best for busy people who want to increase their knowledge, education level and skills without giving up their jobs or leaving home [20,21].

There are many advantages to online learning compared to traditional face-to-face courses and lectures. There are a few disadvantages as well.

3.2.2 Advantages of e-learning

The main reason for students to turn to online classes is because of the convenience they offer. You can learn at any time and from anywhere. You learn at your own pace. Moreover, the student can take quizzes and tests included in the course when he or she wants and thus know exactly where he or she stands at any precise moment [22].

A second reason is that e-learning reduces the cost of learning substantially. Servicing an unlimited number of students is possible, which reduces the cost per student. The students do not have to travel and spend a lot on it and can select the learning materials that meet their level of knowledge and interest, which brings them in a situation of studying at a more adapted time schedule and thus with greater chance of success and due to the limited travel time in a shorter period as well [23].

Thirdly, e-courses are interactive which aids learning retention. Fourthly, e-Learning courses can be easily updated when necessary and thus have a shorter development cycle.

E-learning is a type of “on distance” education, in which learning is independent of time and of location, and where the communication between the student and the instructor is organized on distance. In case of e-learning, communication is going online or electronically.

E-learning can give students an opportunity to gain knowledge and skills in a flexible way. Scalable, efficient and fast e-learning moreover gives students the ability to quickly create and communicate new ideas among one another. E-learning has the potential to enhance any lifelong learning process [20].

3.2.3 Disadvantages of e-learning

The learners may first of all feel isolated from the teachers and other students in e-learning as there is no personal contact when instructors and other learners aren't meeting face-to-face. It is thus possible to misunderstand what was meant.

Secondly, the students need to have access to a computer as well as to the internet. They also need to have computer skills with managing computer files and online learning software. Without these skills it is not possible for them to succeed in e-learning. E-learners need to be very comfortable using a computer. There is also a socio-economic factor linked to this: in some parts of the world, the costs might still be too high and thus e-learning may not offer equal opportunity to study to all potential students [23].

A third factor is that some practical inconveniences may hamper the effectiveness of e-learning. Slow Internet connections or older computers may make the access to courses and materials frustrating and slows down the on-line interaction process. Practically, the used materials have to be very appealing as well to encourage continuation of the efforts [22].

This is related to a fourth element. Students have to be psychologically ready to share questions, thoughts and responses via the internet. If this is not the case, the process is less fruitful. Moreover, the chat-possibilities may also lead to real chat sessions about other things than the course material. Discipline is thus one of the major characteristics the e-students need to possess. This is all the more necessary as the normal classroom routines fail and stimulation and motivation has to be drawn from the interest in the course itself, not from the social contact [21].

Also the characteristics of the teachers have to be adapted to this new learning method. They cannot rely on older notes and handouts anymore and have to be very good at computer skills as well. They have to be willing to share much information with students and answer swiftly to questions that might be very probing indeed. All this is very innovative for teachers and not all of them might be ready for it and sometimes will need extra training as well.

3.3 Virtual Classroom:

Many information can be found In literature about virtual classroom.

3.3.1 Virtual classroom definition

A virtual classroom is a simulated classroom delivered by the Internet, which provides a convenient communication environment for on distance learners just like a traditional face-to-face classroom does. A virtual classroom allows learners to attend a class from anywhere in the world and aims at providing a learning experience that is very similar to a real classroom [24].

3.3.2 The importance of virtual classroom:

A virtual classroom makes it possible to bring learners from around the world together online in highly interactive virtual classes while at the same time greatly reducing the travel, the time spent, and the expenses for the teaching programs [25].

In a traditional classroom, professor and students are present. The same sets of participants are similarly present in a virtual classroom. The teacher provides course contents through a variety of methods such as multimedia resources and video conferencing. Professor and students can communicate with each other just as in the traditional classroom via chat rooms and these technologies. Similar to traditional classroom courses, the professor will use whiteboard, give notes/resources, and give presentations in a virtual classroom. Thus, virtual classroom can be visualized as a classroom where a lecture or session is conducted using Internet [28,24].

The virtual classroom model is based on the concept of the meeting of students and teachers through the internet to attend sessions from anywhere and anytime in the world. The most important feature in this type of education that it is very useful for students and people from different geographical regions who cannot meet face to face because of lack of time [29].

A virtual classroom has a facility to record and store each class on a server. This also provides learners with the opportunity to watch any class that they may have missed. This can also be extremely useful for students to review classes, materials and concepts for an upcoming exam. But if students miss a traditional classroom session, they have very little opportunity to engage in the learning experience that took place [26].

The virtual classroom also provides the chance for most of the learners to obtain information and training from a capable tutor in an interactive environment. Most of the learners have direct contact with the instructor during which they can gain comments and opinions that can be helpful to them. The virtual classroom also provides a prepared and scheduled program of classes, which can be supportive for students who may find the freedom of asynchronous learning to be overwhelming. In addition, the virtual classroom provides a social learning environment that replicates the traditional classroom [26].

The virtual classroom will modify and change the way and the procedure of learning. It will increase and improve the learning experience for a lot of people. Knowledge and skills will be developed through the use of computer and telecommunication technology [23].

3.3.3 Types of virtual classrooms

There exist two types of virtual classrooms, synchronous and asynchronous ones. **Synchronous learning** requires all participants and instructors to be online at the same time. Lectures, discussions, and presentations occur at a specific hour. This type of e-learning involves the exchange of information with one or more participants during the same period of time. Students can communicate through a microphone, chat rights, or by writing on the board [29]. The tools used in the virtual synchronous classroom include: whiteboards, videoconferencing, and chat rooms. On the other hand, In **asynchronous learning**, sometimes called “self-paced” learning, instructors provide materials, lectures, tests, and assignments that can be accessed at any time. Students are expected to complete lessons and assignments independently, but each student is learning at his own pace. This type of e-learning involves the exchange of information with each other without the dependency of other participants’ involvement at the same time. The tools used in the virtual asynchronous classroom include: e-mail, Social networking, and forums [29, 24].

3.4 Online tutoring:

3.4.1 E-tutor definition:

A tutor is a person qualified to teach students from around the world in one or more subjects. Online tutors work for companies that offer tutoring, in a variety of subject matters, to students of all ages - including elementary, high school, and college students. In Addition to that, online tutors usually offer flexible hours, typically evenings and weekends to teach students outside of school hours [30].

“E-tutoring” is thus a process of teaching, support, management and assessment of a student via the online environment [31]. Students benefit from the courses provided by the online tutors without the trouble of scheduling appointments and meeting in certain places. They can access the material it at any time and from anywhere, so that it best fits their schedule. While many online tutoring jobs require a college degree, classroom experience and knowledge of the subject matter they will be tutoring [30].

E-tutor.com and etutoring.org are examples of the online tutoring platforms that provide tutoring programs for online schooling, homeschooling, and even summer school. They provide a curriculum for elementary school, middle, high school, and college students. And also these platforms allow tutors to work with students synchronously or asynchronously. The major reason for the growing popularity of online tutors is the various benefits they offer over the traditional method of going to tutoring classes or the tutor coming to your home. Online tutoring is very convenient, flexible, and also available 24 hours a day [32, 33].

The main advantage of online tutoring is the flexibility it gives to both the tutor and the student. It also makes it easier to access resources anywhere in the world and it facilitates interaction among students and with the tutor. The key feature of e-tutoring is to facilitate collaborative learning and group working [30, 31].

3.4.2 The role of the online tutor:

The job of online tutor is similar to that of a teacher, except that all the work is done through the Internet. Online tutors use e-mail, virtual classrooms, live messaging systems and audio/video

conferencing to interact with students. As a consequence, they can work from anywhere provided they have a computer, and a reliable internet connection. Skype is a widely used tool to conduct lessons [28].

Expert tutors are available 24 hours a day, 7 days a week. To help students around the world overcome challenges in any subject. It will also help students to improve core skills, such as research, reading comprehension, and writing. The role of an online tutor can go from helping out students with homework or focusing on examination preparation to teaching full online courses. Tutoring can be provided on a one-to-one basis or to a group of students [28].

3.4.3 Synchronous and Asynchronous online tutoring:

Both synchronous and asynchronous e-tutoring exist. The difference is very similar to the difference between synchronous and asynchronous virtual classrooms. Synchronous tutoring takes place when both the learner or group of learners and the tutor are simultaneously engaged in an online, real-time chat. Asynchronous tutoring on the other hand does not require that the learner and the tutor are online at the same time. For example the learner can send a completed assignment by email and the tutor will respond with corrections at a later time or the learner submits a paper using online technology and the tutor reviews the paper at a later time [30, 28].

Chapter 4

MOOCs Universities

4.1 Introduction:

MOOCs, massive open online courses, provide a new form of online teaching and allow universities to reach a very large number of people without regard for geographic boundaries and time zones. These universities have partnered with the providers of MOOCs such as Coursera, Udacity, and edX.

Students can now get a taste of education at some of the world's top universities without spending a penny, leaving their own home or even going through an application procedure – by taking free online courses offered by an ever-growing selection of institutions. Those who wish to receive academic credit are required to pay a small fee.

Universities all over the world try to develop teaching techniques, such as includes MOOC courses into college courses. Students can access high quality educational resources which are available online through MOOCs.

Universities can benefit from MOOC courses in many ways. First, MOOCs are online courses and students can study at their own pace. The students can take quizzes and tests included in the course and know where they stand at any moment. Secondly, MOOC courses are interactive which aids learning retention. Thirdly, MOOC courses can be easily updated when necessary and thus have a shorter development cycle. Thus a MOOC courses takes less time than a classroom course and is less costly [34].

In this chapter I will try to cover the different types of MOOC participants and completion rates, and then I will talk about some universities that allow learners to get credits when they take MOOC courses.

4.2 MOOC participants:

It is important to know who the participants are that enroll in these massive open online courses. Literature has thus far classified MOOC participants into the following categories: lurkers, drop-ins, passive participants, active participants [4,5].

- **Lurkers** – This is the majority of students within MOOC participants. These people enroll but just observe or sample a few items at the most. Many of these students do not even get beyond registering for the MOOC or maybe watching part of a video.

- **Drop-Ins** – These are the students who become partially or fully active participants for a selected topic within the course, but do not attempt to complete the entire course. Some of these students are focused participants who use MOOCs informally to find content that helps them meet course goals elsewhere.

- **Passive Participants** – These are the students who view a course as some content to consume and expect to be taught. These students typically watch videos, perhaps take quizzes, but do not tend to participate in activities or class discussions.

- **Active Participants** – These are the students who fully intend to participate in the MOOC, including consuming contents, taking quizzes and exams, taking part in activities such as writing assignments and peer grading, and actively participate in discussions via discussion forums, blogs, twitter, or other forms of social media.

4.3 Completion rates:

The completion rate of a course is typically defined as the number of learners who earned a certificate of completion or 'passed' the course.

We describe the data captured by Katy Jordan on MOOC completion rates. Note that these data compare the ratio of students completing a course to the total number of students registered. According to Jordan, a completion rate should be measured for active participants only, thus for those students, who planned to complete the course, participated in all or most of the activities, and took tests and quizzes. "Completion rates can approach 40%, although most MOOCs have completion rates of less than 13%" (Jordan, 2013). In general, the rate of completion in MOOC courses is low. A typical example is the course "Bioelectricity: A Quantitative Approach" from Duke

University and ran at the Coursera platform in 2012 for 8 weeks. Only 313 students (2.6%) completed the course and earned a certificate out of a total of 12000 students enrolled on the course [35].

In the figure 4.1 we can see the completion rate for some courses such as "Think Again: How to Reason and Argue" from Duke University and ran at Coursera platform in 2012-11. 5322(2.3%) completed the course out of a total of 226652 students enrolled on this course as an illustration.

Course	Platform	Start date	End date	Number enrolled	Number completed	% completed	Assessment type	Data source
Think Again: How to Reason and Argue	Coursera	2012-11		226652	5322	2.3	Auto grading only	http://cit.duke.edu/blog/2013/06/preliminary-results-on-dukes-third-coursera-effort-think-again/
Sports and Society	Coursera	2013-04-30		19281	1626	8.4	Auto grading only	http://cit.duke.edu/blog/2013/07/duke-sports-and-society-mooc-wraps-up/
Medical Neuroscience	Coursera	2013-04-08		44980	756	1.7	Auto and peer grading	http://cit.duke.edu/blog/2013/07/coursera-medical-neuroscience-week-3/
Introduction to Genetics and Evolution	Coursera	2012-10		33000	1705	5.2	Auto grading only	http://today.duke.edu/node/93914
Introduction to Astronomy	Coursera	2012-11		60000	2141	3.6	Auto grading only	http://hdl.handle.net/10161/6679
Image and video processing - From Mars to Hollywood with a stop at the hospital	Coursera	2013-01-14		40000	4069	10.2	Auto grading only	http://cit.duke.edu/blog/2013/06/looking-back-on-image-and-video-processing/

Figure 4.1 the compilation rates [32].

There are some elite universities that allow students to earn credits or degrees for MOOC courses such as SJSU, Uclan, ACE, and Georgia Tec. Some of them are mentioned in the next paragraphs.

4.4 San Jose State University and Udacity Partnership:

As online education became one of the most important aspects worldwide, San Jose State University decided to initiate a program called San Jose State Plus. This program will be offered with the cooperation of Udacity and *is considered to be one of the leading ventures that aim at efficient, developed and practical educational systems [36].*

This outstanding program includes both SJSU students and non SJSU students. Both groups will be able to have access to three main courses which SJSU expert faculty members thought they are the most important. These courses include two math subjects and one statistical subject [36].

Courses are not only being limited to theoretical uninteresting material, but they are completed with some exciting videos and communicating interactive elements that motivate the student and make him/her more engaged. SJSU faculty members are responsible for the course curriculum and in the aim to provide an adequate environmental education some of Udacity members support SJSU faculty by monitoring and tracking the student's activities and level throughout the course. In addition to that the program takes into consideration the situations where students might need immediate help. Therefore well-designed chat rooms and guidelines are provided [36].

This program takes into consideration that there might be two main groups of students: those who want to enroll as credited students and those who want to be non-credited students. Both groups have access to the courses but the main difference is that group one, the credited students, are capable to interact with professors and receive additional support services while the second group does not get such facilities. Moreover, credited students have to pay certain amount of money whereas, not credited students will have the free access for the material. The last difference between these two groups is that credited students have the ability to take a formal exam provided by SJSU and that the access for this type of exam needs a certain type of authentication and compliance the program will only provide to credited students [36].

The program is limited to only 100 students who aim to be credited students. Priority is given to "waitlisted students at California Community Colleges who would otherwise face out-of-state or private options and members of the armed forces and veterans"[36].

Finally this program aims at making the life of a student much easier and convenient by allowing him/her to enroll and access the courses at any suitable time that fits his/her schedule.

4.5 University of Central Lancashire

University of Central Lancashire is considered to be one of the most popular universities in the United Kingdom that initiated an open online academic program. It offers an academic credit for online courses that students complete and in this case students have to pay small fee to get the credit [37].

Coursera, Udacity and EdX are all considered to be the MOOCs provider through their online platforms that empower students and enable them to study in a more flexible way in the aim of achieving their academic and professional ambitions.

To ensure that these MOOCs are working on the right track, Uclan (University of Central Lancashire) decided that a continuous follow up should be preceded, to make sure that students got the idea the material wanted to convey provided in the online courses [37].

This follow up will be applied through “relevant assignment” for the enrolled students and such assignments will be prepared by the academic staff of the university. In that way, this follow up will ensure that University of Central Lancashire is providing the best service with adequate quality for its students.

4.6 American Council on Education:

The American Council on Education is a vast council through which 1800 member colleges are subordinated for supervision. ACE recommended five MOOCs for credit on the online educational system.

These courses are "Introduction to Genetics and Evolution" and "Bioelectricity: A Quantitative Approach," from Duke University. Two others, "Pre-Calculus" and "Algebra," come from the University of California. The last, "Calculus: Single-Variable," comes from the University of Pennsylvania. All five courses are offered through the Coursera platform [38].

Since ACE is mainly supported financially by the Gates foundation, which are also the sponsors for Coursera it is truly believed that ACE is trying its best to make the online education process easier in order for this process to happen at a scale.

According to the council's president Molly Corbett Broad and in order to make sure that these MOOCs will have a beneficial long term impact on the educational system , ACE have to guarantee a "degree completion, increasing learning productivity, and deepening college curricula,"[38].

4.7 Georgia Tech's Massive Online Master's Degree in Computer Science:

A first professional online Master of Science degree in computer science (OMS CS) has been offered by The Georgia Institute of Technology and can be earned completely by the “massive online” delivery format and for a small fee of the cost of traditional, on-campus programs. The Master degree will be provided in cooperation with online education leader Udacity Inc. and AT&T [39,40].

Georgia Tech has been involved in online education for more than 30 years. Offering a master's degree in this format is the next step in growing Georgia Tech's online offerings.

“We are thrilled to be able to join with Udacity and AT&T in taking this bold next step,” said Rafael L. Bras, provost and executive vice president for academic affairs at Georgia Tech [39].

Udacity founder Sebastian Thrun said. “Udacity has been at the forefront of innovation in online pedagogy. We hope our work with Georgia Tech and AT&T will induce transformational change in higher education.”[39].

The courses related to the OMS CS are online and free through the Udacity site. They are made up of video lectures, computer-graded homework assignments and additional reading materials. Students who don't want to get a degree will take these courses for free, but students who want to get a degree program or credit have to apply for admission to the university and pay tuition fees. They have to take protected exams and have access to tutoring online office hours and other support services [39].

Chapter Five

Case: Modeling a Virtual exchange student and a Virtual international student program

5.1 International experience of students at UHasselt and PSUT

UHasselt and PSUT have already experience with the organization of student exchange program. UHasselt is organizing an international Master of Management degree program. Yearly a group of PSUT students is participating in it.

5.1.1 Exchange students.

In a student exchange program students study abroad at a partner institute of their university. An exchange student stays in the host country for a semester or for an academic year. The most famous exchange program in EU is the Erasmus program. Participation in an exchange program is characterized as follows:

1. Students stay at a host university for a certain period. This period could be a year or one semester.
2. Students take the courses which are accepted and approved by their home university.
3. Credits were transferred to the home university.
4. Students get a certificate / diploma from the home university.

ERASMUS is the most successful student exchange program globally. Each year, more than 230, 000 students study abroad thanks to the Erasmus program. The period that the students spend abroad not only enriches students' lives academically, but it also offers the opportunity for students to improve their language, intercultural skills, self-reliance and self-awareness.

UHasselt has also bilateral exchange agreements with some universities outside of Europe. One of the examples of bilateral exchange agreement is the UHasselt- PSUT agreement.

5.1.2 International students.

Students can apply in a university abroad. When they get the acceptance, they are obligated to follow the administrative rules and lectures. A diploma / certificate will be given according to their exam results.

As part of international networking, UHasselt initiated various bilateral cooperation agreements with other universities. The agreement of UHasselt-PSUT is an example. It involves flexible cooperation procedures. Jordanian students who want to pursue their master's degree in management as a major can enroll two main programs which could be either Management Information System (MIS) or International Marketing Strategy (IMS). Students enroll in the program and spend a certain period which mainly could be one whole semester at their home university (PSUT). In this semester students take some courses. These courses are part of the curriculum of the masters of management program. After spending one semester in Jordan, students travel to Belgium to the host university (UHasselt) in order to complete the rest of the courses. After passing these courses students will be certified by the host university (UHasselt).

The Flanders Institute VLIR-IOUS offers the possibility of an international scholarship for less fortunate students in developing countries such as Africa, Asia and Latin-America . Such a scholarship offers these students either training or an enrollment for a masters or PHD program in Flemish universities.

5.1.3 How we can get more students to enjoy an international experience.

Some students cannot participate in an exchange program or international master's degree program because they can't stay abroad for a year or a semester. In order to help these students we propose a solution that might aid them in their academic life. Online courses are considered to be essential aspect that can be applied practically where students can take courses involved in their curriculum online. These online courses could be either from students' own university or MOOCs courses.

5.2 Virtual study programs:

To create the possibility for students to study international courses we proposed a virtual exchange student program. To create the opportunity for international students to obtain a university degree we proposed a virtual international program.

5.2.1 Virtual exchange students program at UHasselt and PSUT.

Many students work in order to support themselves or their families financially others, might suffer from a disease. All these reasons might be an obstacle that stops the students from travelling abroad. Therefore, taking courses online without stay traveling abroad will help such students dramatically. The virtual exchange study program is characterized as follows:

1. Students stay at their home university.
2. Students take online courses from one or more international university. Such course should be approved and accepted by students' home university.
3. The home university transfer credits which students earned from the international university.
4. Students get certificate / diploma from their home university.

Jordanian students stay in Jordan at their home university (PSUT). They take online courses from one or more international universities. The online courses that students enroll should be both accepted and approved by their university (PSUT). This process will allow the student to stay at home, without travelling abroad. Consequently, the home university transfer these earned credits and give the students certificate/diploma for it.

ERASMUS is the most successful student exchange program globally. In ERASMUS exchange program at UHasselt. UHasselt has concluded exchange agreements with European partner institutions and UHasselt has also bilateral exchange agreement with various outside of EU (European Union)

5.2.2 Virtual international students program in UHasselt.

Travelling abroad to study is not an easy process. Some students prefer to stay home because travelling abroad might be expensive. Also, some students might have difficulties to cope with different social lives. Moreover, professional activities might stop the student from travelling abroad. These previous cases might be one of the reasons that motivate the student to become a virtual international student in UHasselt. In case of becoming a virtual student, student needs to follow online courses given by UHasselt University and/or selected course from MOOCs delivered by other international universities. The study program will include online courses that are accepted by UHasselt University. Grading will be based on the earned credits from the international universities.

5.3 study on the feasibility and the likelihood of acceptance in the University of the Proposed Virtual Study Program:

Any successful organizational change needs the acceptance of all stakeholders in advance. This proposed change of educational model, has to be accepted by management, academic staff and students. To measure the feasibility of, the acceptance of and the readiness of the proposed solution, success indicators have been identified and a questionnaire was developed for self-assessment by management, professors and students.

5.3.1 Indicators used for self assessment by students

Do students see the virtual programs as an attractive solution? Are they ready to participate in it?

The following indicators are used:

1. Learning process: Study via e-learning model, Collaboration with peers and Tutoring.
2. Learning environment: Access to internet and Learning system.
3. Evaluation: Online intermediate self-testing, Assignments spread over process, Remedial comments by professors and Online final exams.
4. Living and study related costs: Study from home and Additional tuition fees.

Other indicators, especially for virtual international students who pursue masters in management at UHasselt:

5. Participation in the introduction week at UHasselt.
6. Thesis should be under the supervision of UHasselt professor and students need to travel two times a year to UHasselt.

5.3.2 Indicators used for self- assessment by professors.

Is it possible for a professor to accept MOOC courses as being equivalent to his/her course, as a valuable alternative in the curriculum, if yes when this could be possible?

The following indicators are used:

1. Selection of course: Free from global list or on partnership base

2. Equivalence of course.

3. Characteristics of online learning process.

5.3.3 Indicators used for self- assessment by faculty management.

1. Is the development of a virtual study program possible, and is it an opportunity for the faculty / university?

2. What are the requirements and conditions to take into account to start-up such a project?

3. Is a bilateral agreement needed to guarantee a smooth and successful organization?

4. What are the aspects that have to be agreed on in advance?

5.4 Set up of the research and set up of the survey:

We organized two types of questionnaire, one for the virtual exchange study program and one for the virtual international study program. We created another version for the survey of the students, of the management and of the professors. Table 5.1 shows the target groups of the surveys.

		Faculty /university management	professor	student
Virtual student exchange program	UHasselt	Dean BEW Head MIS Vice Rector education	Professors Erasmus program courses	Students 2 nd year BEW
	PSUT	Dean and Head department MIS	Professors MIS	Students 2 nd year MIS
Virtual international student program	UHasselt	Dean BEW Head MIS Vice Rector education	Professors Master of Management courses	(International) Master of Management students
	PSUT			Students 3 rd year MIS

Table5.1: the organization of the surveys and the target groups.

In the process of collecting data an internet-based questionnaire will be used as an instrument. Using the questionnaire as a survey methodology is the best tool in obtaining the information and data needed due to its very structured manner. Using such a method has its both advantages and disadvantages. Looking from the bright side perspective such a method can collect a large amount of data from a large sample in a relatively very short time, without any costs. Moreover, the data obtained can be quickly and easily interpreted and analyzed. On the other hand, a questionnaire may bring also some negative aspects: the respondents may not be truthful; some respondents may understand differently the meaning of the question which will lead to a high level of subjectivity. The questionnaire used in this research paper is designed to be aligned with the main research question and contains close-ended questions that can be answered with a single answer. All the questions are measured on a 5 point Likert scale and also contain open questions.

The questionnaires are designed in **Qualtrics** Survey Software and can be found in the appendix.

It is essential to note that in order to collect enough data that enabled the researcher to analyze and give good conclusions about the main research question; the survey was sent twice for both universities due to the insufficient number of response that took place in the first time.

5.5.Overview of the organized surveys: 8 questionnaires for the two models were organized.

Survey 1. Virtual exchange students: survey for faculty management of both universities:

to examine the strengths and the weakness of a virtual exchange students program as seen by faculty management of the exchange courses about accepting MOOC courses in their curriculum. (Appendix 1).

Survey 2. Virtual exchange students: survey for professors of both universities:

to examine the strengths and the weakness of a virtual exchange students program as seen by professors of the exchange courses about accepting MOOC courses in their curriculum. (Appendix 2).

Survey 3. Virtual exchange students: survey for students for PSUT(Appendix 3):

to examine the strengths and the weakness of a virtual exchange students program as seen by students of PSUT about if they ready to participate in a virtual exchange program.

Survey 4. Virtual exchange students: survey for students for UHasselt(Appendix 3):

to examine the strengths and the weakness of a virtual exchange students program as seen by students of UHasselt about if they ready to participate in a virtual exchange program.

Survey 5. Virtual international students: survey for faculty management of UHasselt(Appendix 4):

to examine the strengths and the weakness of a virtual international students program as seen by faculty management of UHasselt about the possibility of accepting virtual international students as part of the international master of management program and about accepting MOOC courses in their curriculum.

Survey 6. Virtual international students: survey for professors of UHasselt(Appendix 5):

to examine the strengths and the weakness of a virtual exchange international program as seen by professors masters of management at UHasselt about the possibility of accepting virtual international students as part of the international master of management program and about accepting MOOC courses in their curriculum.

Survey 7. Virtual international students: survey for students for PSUT(Appendix 6):

to examine the strengths and the weakness of a virtual international students program as seen by students of PSUT about if they ready to participate in a virtual international program.

Survey 8. Virtual exchange students: survey for students for UHasselt: (Appendix 6)

to examine the strengths and the weakness of a virtual international students program as seen by students of UHasselt about if they ready to participate in a virtual international program.

5.6.Resulting answers:

The numbers of answers for virtual exchange students program			
	Faculty management	professors	students
UHasselt	3	10	36
PSUT	2	9	47

Table5.2: results for virtual student exchange program

The numbers of answers for virtual international students program			
	Faculty management	professors	students
UHasselt	3	5	31
PSUT			30

Table5.3: results for virtual international student program

Chapter 6

Analysis of survey data about feasibility and acceptance of the virtual study programs

In the universities UHasselt and PSUT

6.1 Virtual exchange students: survey for faculty management of both universities.

The survey was sent to 5 members for faculty managements of UHasselt and PSUT. The total numbers of responses from UHasselt are 3 and from PSUT are 2.

Following are the results of the analysis for each question of the survey data.

6.1.1 Can MOOC courses be included as part of the curriculum of a study program from a legal point of view? (Permitted by the government)

All the responses from PSUT for this question are yes but without given any explain. 2 /3 of the responses for the UHasselt management answer yes but and mentioned that the inclusion of these courses in the curriculum should be recognized by the legal instances. Also, the examination board of the program has to recognize the quality and the equivalence with a local course, in addition to keeping the responsibility of the institute which offers the degree and is also responsible for the quality of the course, including all the feedback, interaction with students and grade procedures (see Figure 6.1).

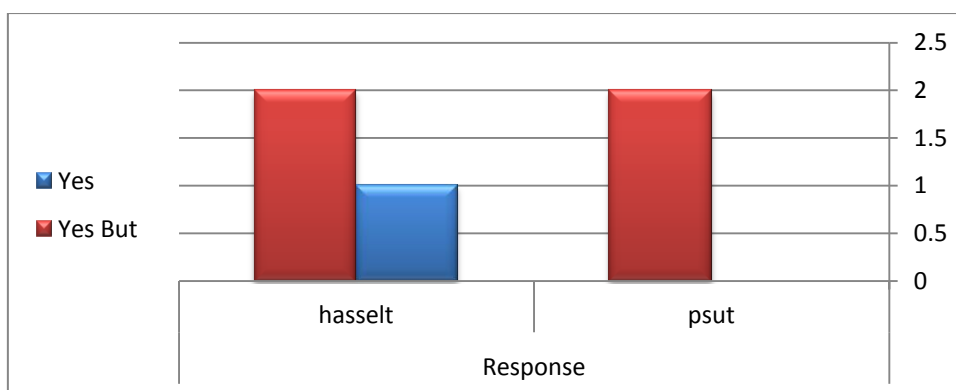


Figure 6.1: Inclusion of MOOC courses in the curriculum

6.1.2 Will the inclusion of MOOCs as part of the curriculum improve the international image of the faculty?

All the responses were positive regarding this question, but 2 of the total number of respondents (5 in total) added that there could be an option for the non-core courses of the program to benefit more benefit from MOOC courses (see Figure 6.2).

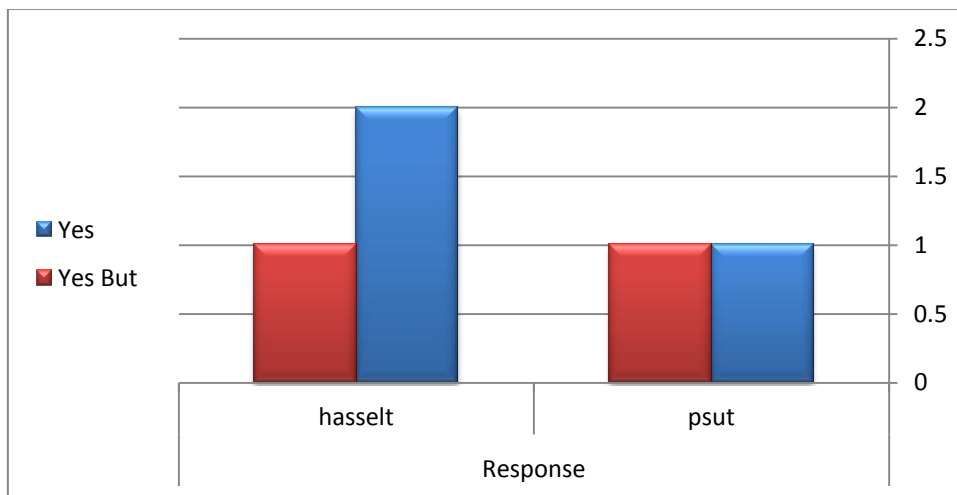


Figure 6.2: Improvement of international image by including MOOC

6.1.3 Will the implementation of MOOCs, included in the curriculum have an impact on the international cooperation of the faculty?

All answers to this question were positive. However 4 of the respondents added that the impact depends on who implements the MOOCs: the international cooperation will increase mostly for the universities that provide those courses, not for the ones who only "use" it. We can see this in the yes but part of Figure 6.3.

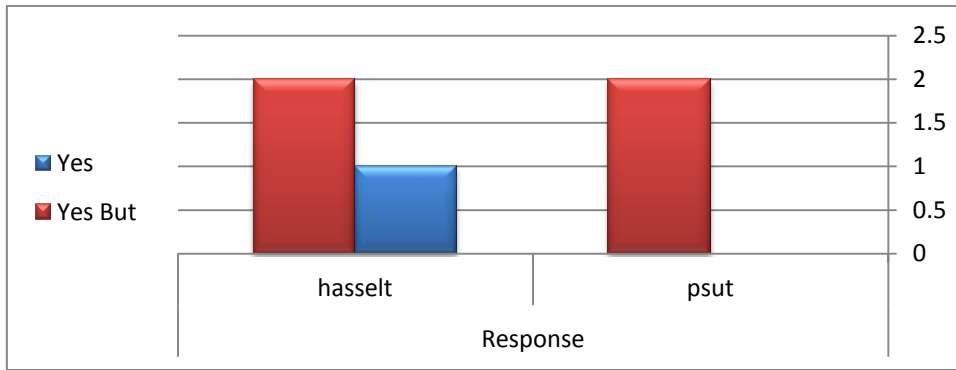


Figure 6.3: Impact of the inclusion of MOOC on the international cooperation

6.1.4 Can the selection be organized starting from a global list of MOOCs?

In the first question of the “Selection of (partner) universities in the virtual exchange program” part, the responses of PSUT respondents answered that the selection could indeed be organized starting from the global list of MOOCs. Regarding UHasselt, 2/3 of the responses were yes, but with some reserve while the other 1/3 replied that this way it is not applicable (Figure 6.4).

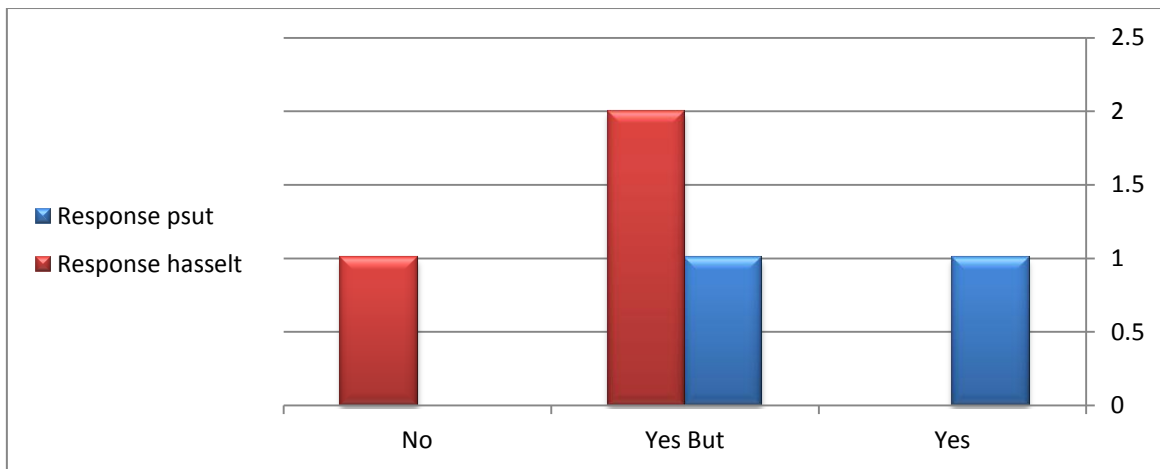


Figure 6.4: Organization of the selection from a list of MOOC

6.1.5 Must the selection be organized on partnership base? Do you see the virtual student exchange be framed in a bilateral agreement between the universities?

PSUT responses were roughly all No. On the other hand Hasselt management responses varied between yes and no. This can be seen in Figure 6.5.

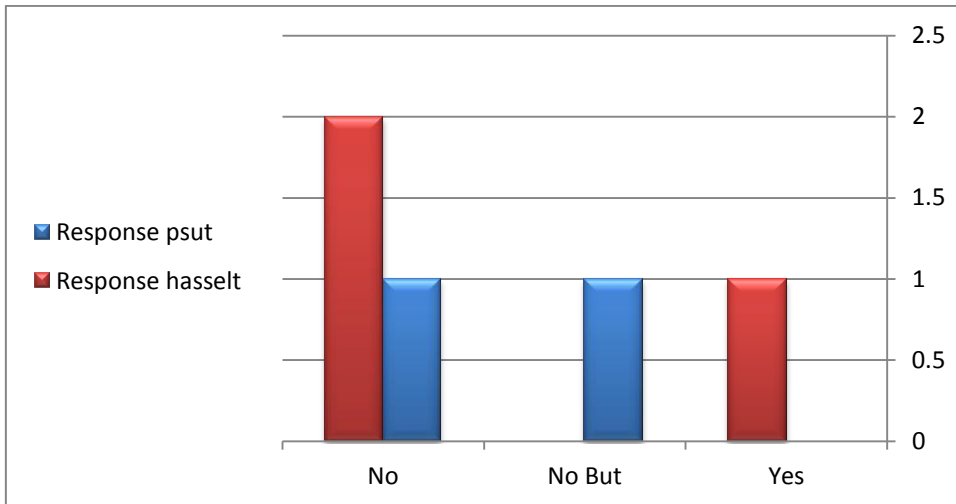


Figure 6.5: Selection of MOOC on a partnership base

6.1.6 What are the conditions to accept a proposed virtual exchange course as a candidate virtual exchange course, when comparing its content with the content of the course in the home university?

As shown below in Figure 6.6, it becomes clear that a majority of the respondents from both institutions agree that the virtual exchange course can cover MOST of the topics that are being taught at the university now, where the other agree that the virtual exchange course must cover the same topics.

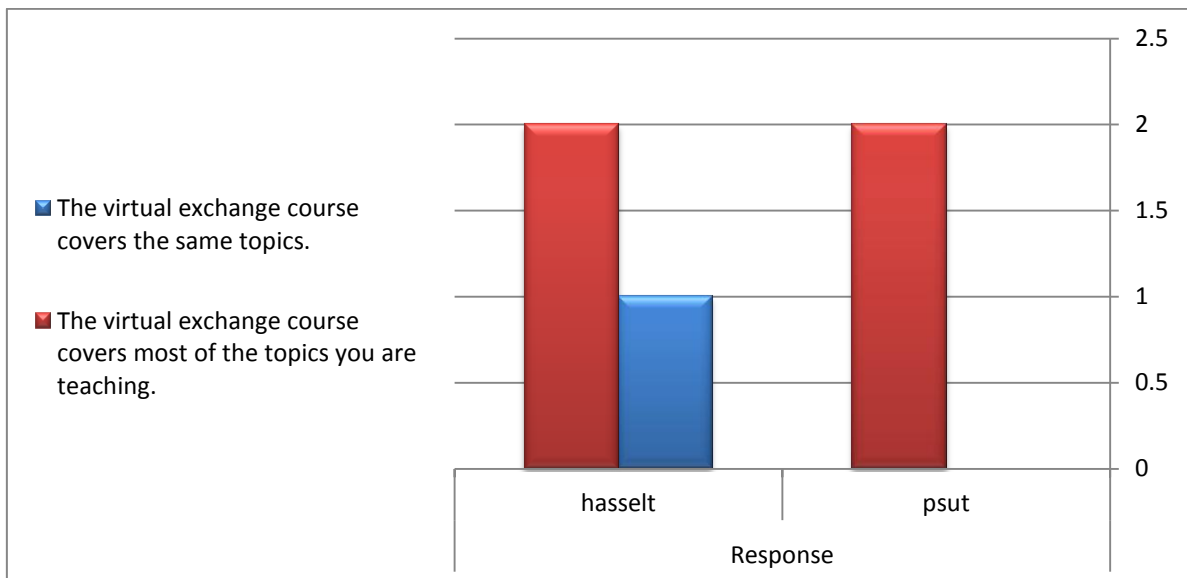


Figure 6.6: Contents of the virtual MOOC course

6.1.7 Are the characteristics of the online learning process (online content delivery, assignments, online exam) part of or are they having an impact on the decision to accept the course as candidate exchange course?

All the respondents from both universities replied positively to this question as they all believe that the characteristics of the online learning process have an influence on the decision of accepting the course as a candidate exchange course. They also added that alignment with the current own educational model in the university is required and important for the control of the quality of the teaching, as for "regular" exchanges, the process is based on the quality control of the other institution in general. In the case of MOOCs, this has to be yet invented or adapted in one way or another (see figure 6.7).

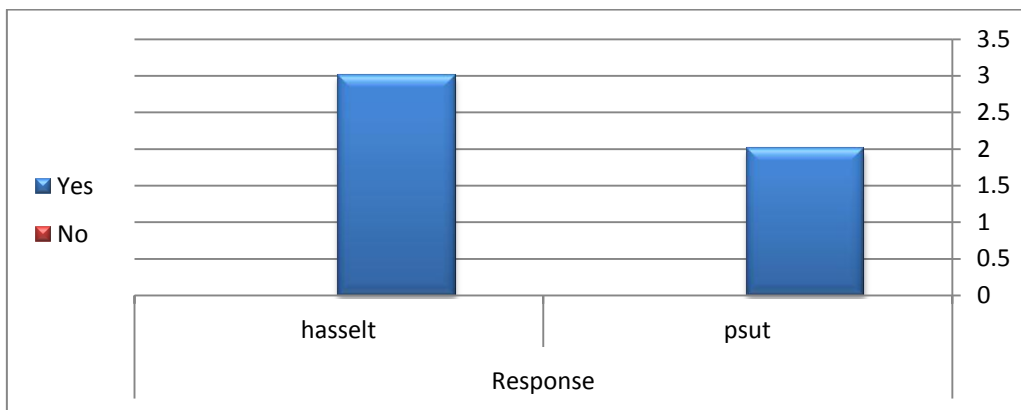


Figure 6.7: Impact of the online learning process on the selection of MOOC virtual courses.

6.1.8 Conclusion

With regards to the model of virtual exchange students, Based on results, we can conclude that the professors of management accept MOOC courses as part of the curriculum of the study program at their university and this will most probably improve the international image/cooperation of the faculty/university. They also say that the selection of partnerships can be organized from a global list of MOOCs, without necessarily havening a bilateral agreement between the universities. The requirements and conditions to accept a virtual exchange course are that the course must cover the same topics or most of the topics of the actual course.

6.2 Virtual exchange students: survey for professors of both universities.

The survey was sent to 19 members for professors of UHasselt and PSUT. The total numbers of responses from UHasselt are 10 and from PSUT are 9.

Following are the results of the analysis for each question of the survey data.

6.2.1 Can the selection be organized starting from a global list of MOOCs?

From Figure 6.8 it can be observed that, the professors from UHasselt and PSUT have similar impressions about the selection being organized from a global list of MOOCs. We can read from the Figure that although a large fraction of professors from both universities think the selection can be organized from a global list of MOOCs, a larger fraction (precisely 5 professors) from each group think the same but with some reserve. Also a very small portion (precisely 1 person) from each group of the sample thinks the selection cannot be organized from a global list of MOOCs.

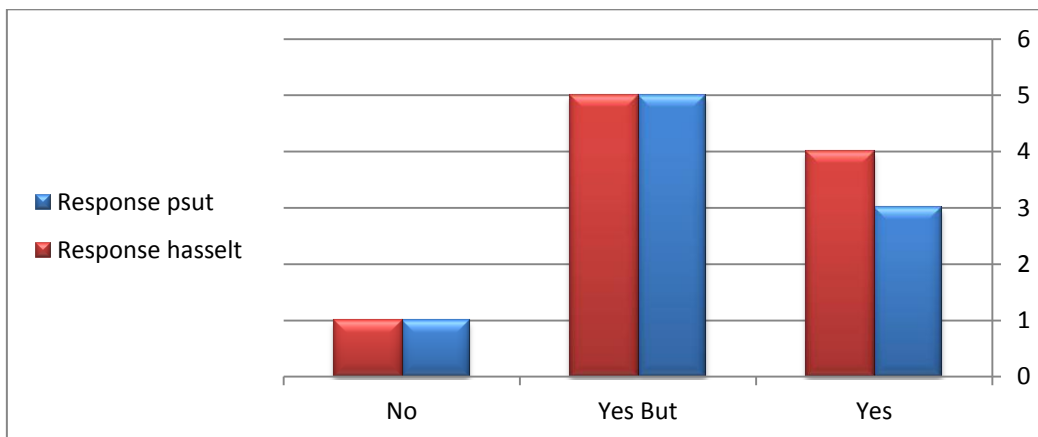


Figure 6.8: Organization of the selection from a list of MOOC

6.2.2 Must the selection be organized on partnership base? Do you see the virtual student exchange be framed in a bilateral agreement between the universities?

We can observe in Figure 6.9 that while the same number of respondents from both institutions (precisely 6 people) think the selection can be organized on partnership base and believes that the virtual student exchange can be framed in a bilateral agreements between the universities, a lesser fraction think otherwise. We moreover observe a slightly higher number (four) of people who are pessimistic about this from UHasselt compared to only three from PSUT.

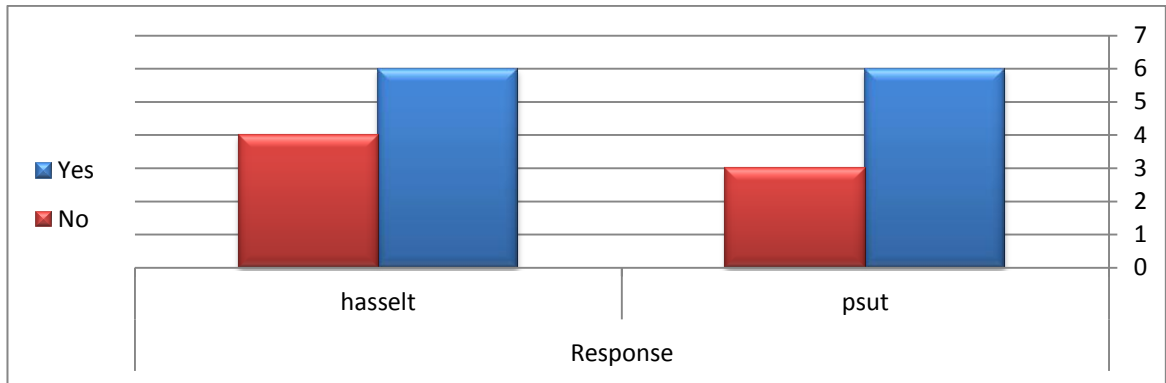


Figure 6.9: Selection of MOOC on a partnership base

6.2.3 What are the conditions to accept a proposed virtual exchange course as a candidate virtual exchange course, when comparing its contents with the contents of the course in the home university?

In Figure 6.10 it becomes clear that a majority of the respondents from both institutions think that the virtual exchange course covers most of the topics they are teaching, while a smaller number thinks the virtual exchange course is not covering the topics but can be situated in the same domain and is on the same level, where the other agree that the virtual exchange course must cover the same topics.

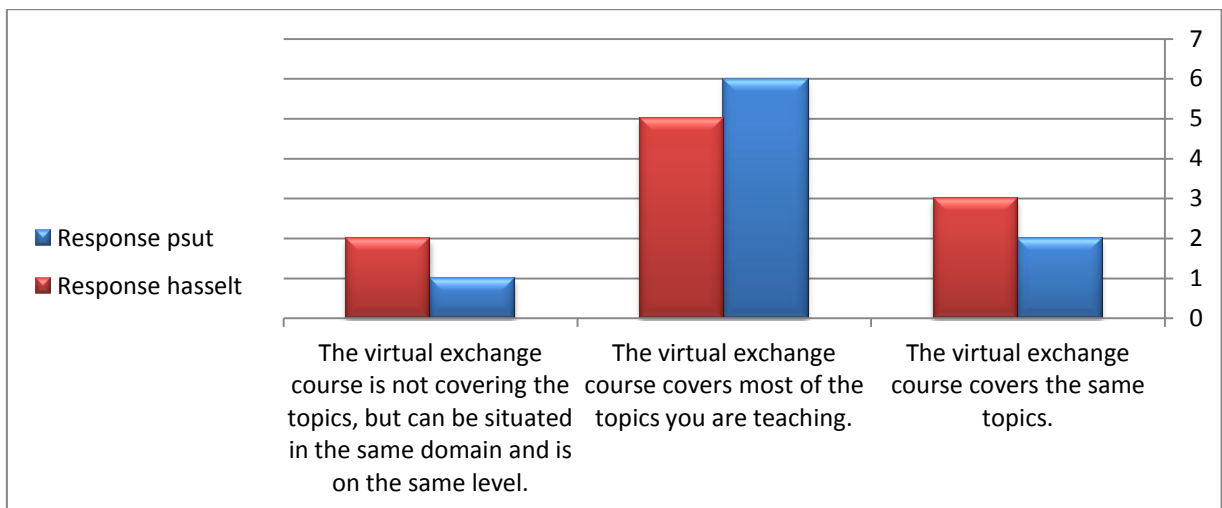


Figure 6.10: contents of the virtual MOOC course

6.2.4 Are the characteristics of the online learning process (online content delivery, assignments, online exam) part of or are they impacting the decision to accept the course as candidate exchange course?

Most professors from both institutions think that the characteristics of the online learning process (online content delivery, assignments, online exam) are having an impact on the decision to accept the course as candidate exchange course. Only a very small number from both institutions think otherwise (see figure 6.11).

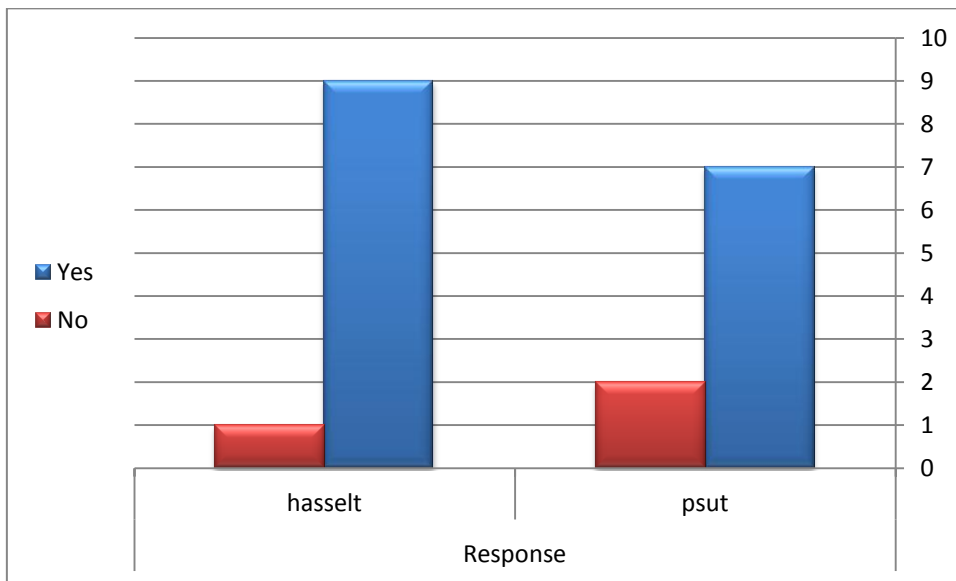


Figure 6.11: Impact of the online learning process on the selection of MOOC virtual courses.

6.2.5 Conclusion

With regards to the virtual exchange model, Based on these results, we can conclude that the professors says the virtual exchange students can be selected from a global list of MOOCs and must be framed in a bilateral agreement between universities. A majority of these respondents from both universities also say that the condition to accept a virtual exchange course is that the virtual exchange course covers most of the topics they are teaching.

6.3 Virtual exchange students: survey for students for PSUT.

The total numbers of responses from PSUT are 47. Following are the results of the analysis of the survey data.

6.3.1 Learning

In general two-thirds of PSUT students either agreed or strongly agreed with all of the statements regarding to the learning process, whereas maximum 15% of them disagreed. The detailed results are shown below. We can see the following pattern.

The participants were asked about the level of the educational quality. The results indicate that more than 74% of the participants agree with this, while only 9% were reluctant (See Table 6.1). We asked the participants if they liked to study anywhere and anytime. The results indicate that 68% of the participants like to study anywhere and anytime, whereas 21% of them are neutral. We asked the participants if they are flexible in selecting topics. The results indicate that 68% of the participants are flexible in selecting topics, while only 4% were reluctant. We asked the participants if they want to be able to discuss problem with peers online. The results indicate that 64% of the participants like to be able to discuss problems with others online, followed by 28% who are neutral, while only 8% were reluctant. We asked the participants if they needed support from tutors. The results indicate that 64% of the participants were in need of support from tutors, followed by 28% of neutral participants, while only 8% were reluctant. We asked the participants if the online tutor could support students in his/her learning. The results indicate that 66% of the participants consider the online tutors can help them in their learning, followed by 19% of slightly less positive participants. While only 15% were reluctant. As shown in Table 6.1, 94% of the participants needed contact with other students, while around 4% did not need contact with other students.

LEARNING: When you take a MOOCs course you have to study the course of that international university. That course will differ from that of your home university. The professor of your university has accepted the course as being equivalent. Please your vision about the strength and weakness for learning.					
	1	2	3	4	5
Quality of educational content is high.	23%(n=11)	51%(n=24)	17%(n=8)	9%(n=4)	0

I like to study anywhere and anytime.	21%(n=10)	47%(n=22)	21%(n=10)	9%(n=4)	2%(n=1)
I am flexible in selecting topics.	19%(n=9)	49%(n=23)	28%(n=13)	4%(n=2)	0
I am able to discuss problems/opportunities and exchange knowledge with peers	15%(n=7)	49%(n=23)	28%(n=13)	6%(n=3)	2%(n=1)
I need support from tutors.	15%(n=7)	49%(n=23)	28%(n=13)	6%(n=3)	2%(n=1)
An online tutor can support me in My learning's.	23%(n=11)	43%(n=20)	19%(n=9)	15%(n=7)	0
I need to be in contact with other students.	43%(n=20)	51%(n=24)	2%(n=1)	4%(n=2)	0

Table 6.1: findings of learning for students PSUT

6.3.2 Ready for e-learning

Again about two thirds of PSUT students seem to be ready for e-learning.

The participants were asked about if they have access to internet at home. The results indicate that all the participants have internet access at home (See Table 6.2). We asked the participants if they have experience with e-learning. The results indicate that 72% of the participants already have experience with online learning, followed by 17% with somewhat experience, while only 11% were reluctant. As shown in Table 6.2, 85% of the participants were willing and they flexible to work with another system, while around 2% did not feel flexible enough to work with another system.

READY FOR E-LEARNING: When you are taking a MOOCs course, you will study the course online and you are also obligated to access the learning system of that particular international university. *Please your vision about the strength and weakness for ready of e-learning.*

	1	2	3	4	5
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I have internet access at home.	87%(n=41)	13%(n=6)	0	0	0
I have experience with online learning.	38%(n=18)	34%(n=16)	17%(n=8)	11%(n=5)	0
I am flexible to work with another system that can be different from the one I am using now.	38%(n=18)	47%(n=22)	13%(n=6)	2%(n=1)	0

Table 6.2: finding of ready for e-learning for students PSUT

6.3.3 Evaluation

With regard to evaluation of the study process, the same pattern pops up again. We can see this in Table 6.3.

The participants were asked about if they like the online intermediate self tests. The results indicated that 66% of the participants like the online intermediate test (See Table 6.3), While 15% didn't like it. Also we asked the participants if they like do assignments and if they can respect the deadlines for them. The results indicate that 73% of the participants already do assignments in different fields of the course and respect the deadlines of them, followed by 19% who give a neutral answer, while only 8% were reluctant. We asked the participants if they think that the comments from the tutors are important. The results indicated that 85% of the participants think that the comments from the tutor are important. As shown in Table 6.3, only 51% of the participants agree with an online exam, 21% are neutral and 28% did not feel comfortable with an online exam.

EVALUATION: When you are taking a MOOCs course, you will be evaluated by the professor of that course in that international university. It means that assignments and tests will be online. *Please your vision about the strength and weakness for evaluation.*

	1	2	3	4	5
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I like the online intermediate self tests	26%(n=12)	40%(n=19)	19%(n=9)	13%(n=6)	2%(n=1)
I like assignments in different fields of the course, And I can respect the deadlines of them.	26%(n=12)	47%(n=22)	19%(n=9)	6%(n=3)	2%(n=1)
Comments from the tutors are important.	36%(n=17)	49%(n=23)	13%(n=6)	2%(n=1)	0
The final exam can be online.	23%(n=11)	28%(n=13)	21%(n=10)	13%(n=6)	15%(n=7)

Table 6.3: findings of evaluation for students PSUT

6.3.4 Living and Cost.

The participants were asked about if they like to study via internet while staying at home or at their university. The results indicate that 59% of the participants like studying online without travel to another country, 30% are neutral. (See Table 6.4). As shown in Table 4, 42% of the participants are prepared to pay tuition fees to participate in a MOOCs course, followed by 34% who don't mind, while 24% are not prepared to pay tuition fees to participate in a MOOCs course.

LIVING AND COST: When you are becoming a virtual exchange student, you will stay the whole time in your home university. Please your vision about the strength and weakness for living and cost.					
	1	2	3	4	5
I like to study online while staying at home Or at my university.	23%(n=11)	36%(n=17)	30%(n=14)	11%(n=5)	0

I am prepared to pay tuition fees To participate MOOCs course.	6%(n=3)	36%(n=17)	34%(n=16)	13%(n=6)	11%(n=5)
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Table 6.4: findings of living and costs for students PSUT.

6.3.5 Do you like to become a virtual exchange student? and if you answer **yes but**, what do you want to be changed to the model we proposed and what are the requirements accepted for you? In figure 6.12 it can be observed that, a majority of the respondents from PSUT Students like to become a virtual exchange student, while only 10 of the total number of respondents (47 in total) doesn't like to become a virtual exchange student. And who answers **yes but** they don't give any opinion for what he/she would like to be changed for the model proposed and for the requirements accepted for him/her.

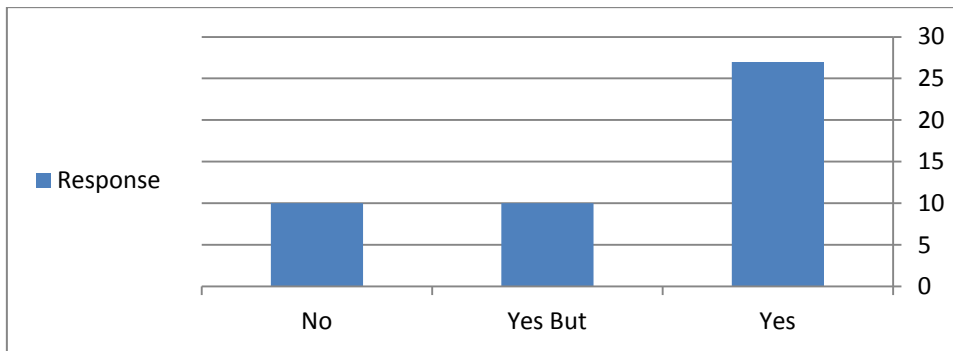


Figure 6.12 become a virtual exchange student.

6.3.6 Conclusion

For the model with virtual exchange students, Based on these results, we can see that the majority of answers on all statements about e-learning, readiness for e-learning, evaluation schemes, and living and cost conditions in the questionnaire are positive. We may safely conclude that the students are ready to participate in a virtual exchange student model course.

6.4 Virtual exchange students: survey for students for UHasselt.

The total numbers of responses from UHasselt are 36. Following are the results of the analysis of the survey data.

6.4.1 Learning

In general two-thirds of UHasselt students either agreed or strongly agreed with all of the statements regarding to the learning process, whereas maximum 22% of them disagreed. The detailed results are shown below. We can see the following pattern.

The participants were asked about the level of the educational quality. The results indicate that more than 72% of the participants agree with this, while only 3% were reluctant (See Table 6.5). We asked the participants if they liked to study anywhere and anytime. The results indicate that 56% of the participants like to study anywhere and anytime, whereas 19% of them are neutral. We asked the participants if they are flexible in selecting topics. The results indicate that 52% of the participants were flexible in selecting topics, while only 17% were reluctant. We asked the participants if they want to be able to discuss problem with peers online. The results indicate that 72% of the participants like to be able to discuss problems with others online, followed by 19% who are neutral, while only 9% were reluctant. We asked the participants if they needed support from tutors. The results indicate that 69% of the participants were in need of support from tutors, followed by 22% of neutral participants, while only 9% were reluctant. We asked the participants if the online tutor could support students in his/her learning. The results indicate that 69% of the participants consider the online tutors can help them in their learning, followed by 28% of slightly less positive participants. While only 3% were reluctant. As shown in Table 6.5, 86% of the participants needed contact with other students, while around 3% did not need contact with other students.

LEARNING: When you take a MOOCs course you have to study the course of that international university. That course will differ from that of your home university. The professor of your university has accepted the course as being equivalent. Please your vision about the strength and weakness for learning.					
	1	2	3	4	5
Quality of educational content is high.	19%(n=7)	53%(n=19)	25%(n=9)	3%(n=1)	0
I like to study anywhere and anytime.	56%(n=10)	28%(n=10)	19%(n=7)	22%(n=8)	3%(n=1)

I am flexible in selecting topics.	8%(n=3)	44%(n=16)	31%(n=11)	17%(n=6)	0
I am able to discuss problems/opportunities and exchange knowledge with peers	25%(n=9)	47%(n=17)	19%(n=7)	6%(n=2)	3%(n=1)
I need support from tutors.	8%(n=3)	61%(n=22)	22%(n=8)	3%(n=1)	6%(n=2)
An online tutor can support me in My learning's.	8%(n=3)	61%(n=22)	28%(n=10)	3%(n=1)	0
I need to be in contact with other students.	33%(n=12)	53%(n=19)	11%(n=4)	0	3%(n=1)

Table 6.5: findings of learning for students UHasselt

6.4.2 Ready for e-learning.

Again about two thirds of UHasselt students seem to be ready for e-learning.

The participants were asked about if they have access to internet at home. The results indicate that all the participants have internet access at home (See Table 6.6). We asked the participants if they have experience with e-learning. The results indicate that 78% of the participants already have experience with online learning, followed by 14% with somewhat experience, while only 8% were reluctant. As shown in Table 6.6, 80% of the participants were willing and they flexible to work with another system, while around 3% did not feel flexible enough to work with another system.

READY FOR E-LEARNING: When you are taking a MOOCs course, you will study the course online and you are also obligated to access the learning system of that particular international university. <i>Please your vision about the strength and weakness for ready of e-learning.</i>					
	1	2	3	4	5
I have internet access at home.	86%(n=31)	14%(n=5)	0	0	0

I have experience with online learning.	36%(n=13)	42%(n=15)	14%(n=5)	8%(n=3)	0
I am flexible to work with another system that can be different from the one I am using now.	33%(n=12)	47%(n=17)	17%(n=6)	3%(n=1)	0

Table 6.6: finding of ready for e-learning for students UHasselt

6.4.3 Evaluation.

With regard to evaluation of the study process, the same pattern pops up again. We can see this in Table 6.7.

The participants were asked about if they like the online intermediate self- tests. The results indicate that 67% of the participants like the online intermediate test (See Table 6.7), While 8% didn't like it. Also we asked the participants if they like do assignments and if they can respect the deadlines for them. The results indicate that 86% of the participants already do assignments in different fields of the course and respect the deadlines of them, followed by 3% who give a neutral answer, while only 11% were reluctant. We asked the participants if they think that the comments from the tutors are important. The results indicated that 89% of the participants think that the comments from the tutor are important. As shown in Table 6.7, only 50% of the participants agree with an online exam, 22% are neutral and 28% did not feel comfortable with an online exam.

EVALUATION: When you are taking a MOOCs course, you will be evaluated by the professor of that course in that international university. It means that assignments and tests will be online. <i>Please your vision about the strength and weakness for evaluation.</i>					
	1	2	3	4	5
I like the online intermediate self tests	14%(n=5)	53%(n=19)	25%(n=9)	8%(n=3)	0

I like assignments in different fields of the course, And I can respect the deadlines of them.	22%(n=8)	64%(n=23)	3%(n=1)	11%(n=4)	0
Comments from the tutors are important.	39%(n=14)	50%(n=18)	11%(n=4)	0	0
The final exam can be online.	14%(n=5)	36%(n=13)	22%(n=8)	11%(n=4)	17%(n=6)

Table6.7: findings of evaluation for students UHasselt

6.4.4 Living and Cost.

The participants were asked about if they like to study via internet while staying at home or at their university. The results indicate that 64% of the participants like studying online without travel to another country, 17% are neutral. (See Table 6.8). As shown in Table 8, 44% of the participants are prepared to pay tuition fees to participate in a MOOCs course, followed by 33% who don't mind, while 23% are not prepared to pay tuition fees to participate in a MOOCs course.

LIVING AND COST: When you are becoming a virtual exchange student, you will stay the whole time in your home university. Please your vision about the strength and weakness for living and cost.					
	1	2	3	4	5
I like to study online while staying at home Or at my university.	17%(n=6)	47%(n=17)	17%(n=6)	19%(n=7)	0
I am prepared to pay tuition fees To participate MOOCs course.	11%(n=4)	33%(n=12)	33%(n=12)	17%(n=6)	6%(n=2)

Table 6.8: findings of living and costs for students UHasselt

6.4.5 Do you like to become a virtual exchange student? and if you answer **yes but**, what do you want to be changed to the model we proposed and what are the requirements accepted for you? In figure

6.13 it can be observed that, a majority of the respondents from UHasselt Students like to become a virtual exchange student, while only 12 of the total number of respondents (36 in total) doesn't like to become a virtual exchange student. And who answers **yes but** they don't give any opinion for what he/she would like to be changed for the model proposed and for the requirements accepted for him/her.

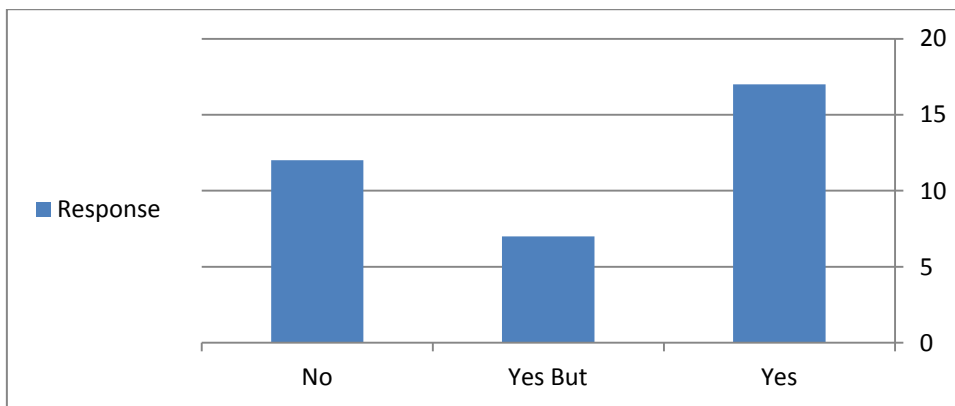


Figure 6.13 become a virtual exchange student

6.4.6 Conclusion

For the model with virtual exchange students, Based on these results, we can see that the majority of answers on all statements about e-learning, readiness for e-learning, evaluation schemes, and living and cost conditions in the questionnaire are positive. We may safely conclude that the students are ready to participate in a virtual exchange student model course.

6.5 Virtual international students: survey for faculty management of UHasselt University.

The survey was sent to 3 members for faculty managements of UHasselt. Following are the results of the analysis for each question of the survey data.

6.5.1 Can virtual international students be accepted in the International Master of management program from legal point of view? (Permitted by the government).

From figure 6.14, we observe that on the one hand 2/3 of the respondents believe that virtual international students can be accepted in the International Master of management program from legal point of view (Permitted by the government), but think that Part of the curriculum should be

"physical" that is requiring the presence of the student in Hasselt for a variable period of time, (1/ 3) participants do not agree with virtual international students.

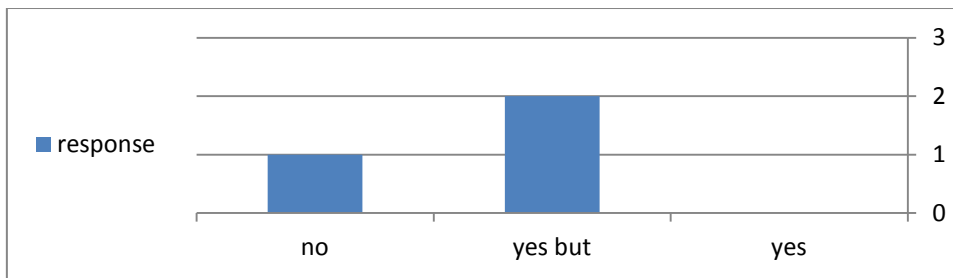


Figure 6.14: inclusion virtual international students in the International Master of management program.

6.5.2 What is the most important benefit resulting from the inclusion of virtual international students in the master of management program?

Respondents mentioned two potential benefits:

- International networking.
- Student number increase.

6.5.3 What is the most important risk resulting from the inclusion of virtual international students in the master of management program?

Respondents mentioned two disadvantages:

- Decrease of quality (difficulty in assessing the quality of recruited students)
- Studying at this level is a social learning opportunity and this might be lost.

6.5.4 Can the UHasselt courses become organized online?

All respondents answered yes but. They say that at least part of the evaluation process is difficult to organize completely online. Some courses can, some others cannot be organized online. (See figure 6.15)

6.5.5 Can the UHasselt courses be replaced by MOOCs?

All respondents answered yes but. They say that the teaching concept (student or learning-centered) must be kept. It would ask for a good preparation. (See figure 6.16)

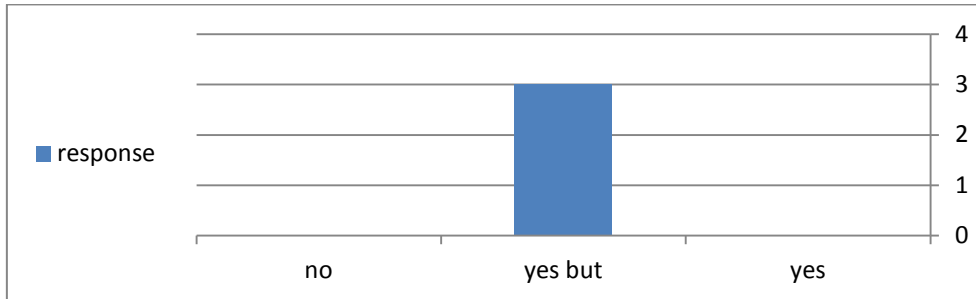


Figure 6.15: UHasselt courses online

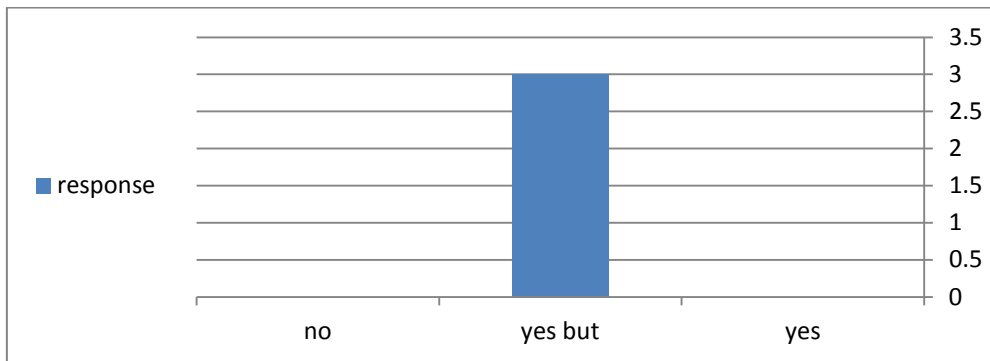


Figure 6.16: MOOCs courses

6.5.6 Can the student select himself the MOOCs courses? All the respondents answer for this question no, it is not possible for students to select by his/her self.

6.5.7 Can the online curriculum be built yearly by a curriculum commission, deciding on the list of acceptable online and MOOCs courses? On figure 6.17, we observe that on the one hand 2/3 of the respondents believe that online curriculum could build yearly by a curriculum commission, (1 / 3) participants do not agree with that online curriculum could build yearly by a curriculum commission.

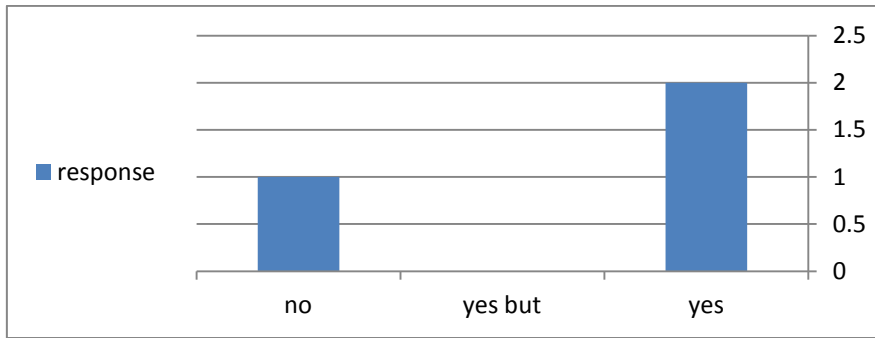


Figure 6.17: answers for the online curriculum be built yearly by a curriculum commission

6.5.8 Conclusion.

For model virtual international students, we can see that the results with the management of Hasselt University are almost all positive. Based on these results, we can conclude that the professors of management accept virtual international students as part of the international master of management program. The UHasselt staff thinks that online courses can be developed in their curriculum and/or accepted from a selection of MOOC courses.

6.6 Virtual international students: survey for professors of UHasselt University.

The survey was sent to 5 members for professors of UHasselt. Following are the results of the analysis for each question of the survey data.

6.6.1 Can the UHasselt courses become organized online?

From figure 6.18, we observe that majority of the respondents believe that UHasselt courses can be organized online and only 1/5 of the respondents say that UHasselt courses can be online but believe that technically this is possible. However, the implications on the workload will be unclear, yet very important to consider.

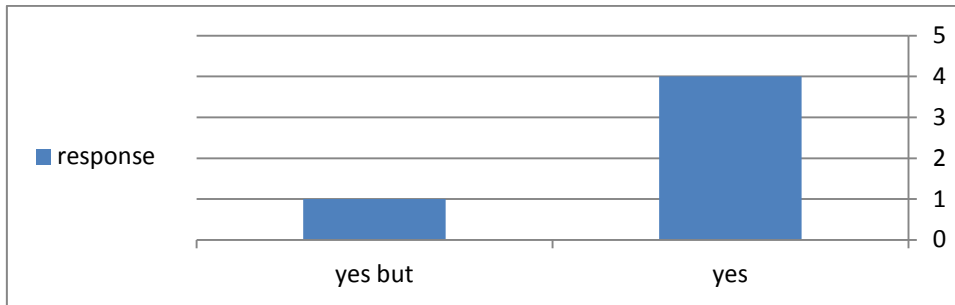


Figure 6.18: UHasselt courses online

6.6.2 Can the UHasselt courses be replaced by MOOCs?

We can say from figure 6.19, that 3/5 of the respondents think the UHasselt courses can be replaced by MOOCs, while 2/5 think the UHasselt courses can be replaced by MOOCs but are afraid UHasselt do not have the staff, or the expertise, or the money to managing massive online courses.

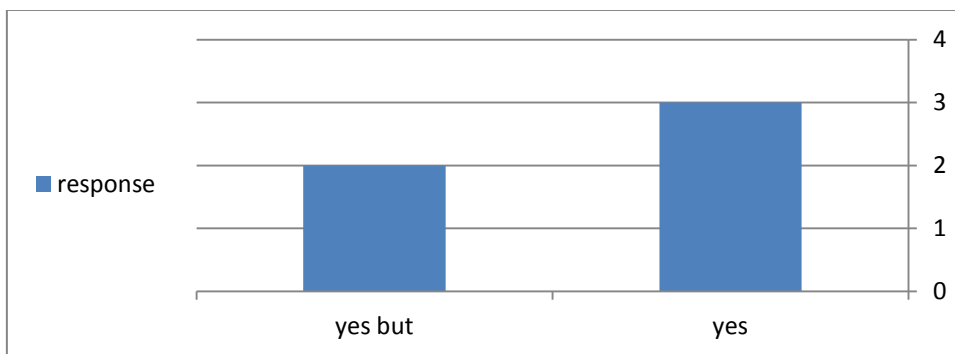


Figure 6.19: MOOCs courses

6.6.3 Can the student select himself the MOOCs courses? All the respondents answer for this question no, it is not possible for students to select by his/her self.

6.6.4 Can the online curriculum be built yearly by a curriculum commission, deciding on the list of acceptable online and MOOCs courses?

On figure 6.20, we observe that all the respondents believe that online curriculum can build yearly by a curriculum commission, but who answer yes but added that curriculum is a program with the goal of reaching a set of predefined learning outcomes. We traditionally organize this by dividing the learning process in courses. Hence, the composition of a curriculum is not arbitrarily done. Yearly

composing the curriculum again based on the available online courses cannot guarantee the necessary cohesion of the program in order to meet the learning outcomes.

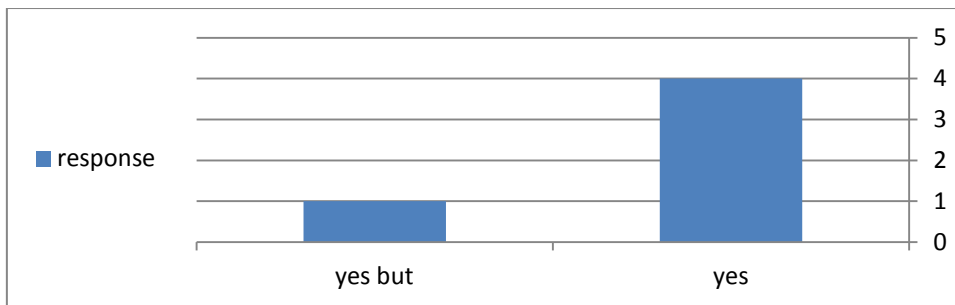


Figure 6.20: answers for the online curriculum be built yearly by a curriculum commission

6.6.5 Conclusion

For model virtual international students, we can see that the results with the professors of the Master of Management of Hasselt University are also almost all positive. Based on these results, we may conclude that the professors accept MOOC courses. They say that Hasselt University can develop online courses in their curriculum and/or select them from a selection of existing MOOC courses.

6.7 Virtual international students: survey for students for PSUT.

The total numbers of responses from PSUT are 30. Following are the results of the analysis of the survey data.

6.7.1 Learning.

In general two-thirds of PSUT students either agreed or strongly agreed with all of the statements regarding to the learning process, whereas maximum 13% of them disagreed. The detailed results are shown below. We can see the following pattern.

The participants were asked about the level of the educational quality. The results indicate that more than 83% of the participants agree with this, while only 7% were reluctant (See Table 6.9). We asked

the participants if they liked to study anywhere and anytime. The results indicate that 70% of the participants like to study anywhere and anytime, whereas 17% of them are neutral. We asked the participants if they are flexible in selecting topics. The results indicate that 73% of the participants were flexible in selecting topics, while 20% were reluctant. We asked the participants if they want to be able to discuss problem with peers online. The results indicate that 67% of the participants like to be able to discuss problems with others online, followed by 30% who are neutral, while only 3% were reluctant. We asked the participants if they needed support from tutors. The results indicate that 53% of the participants were in need of support from tutors, followed by 40% of neutral participants, while only 7% were reluctant. We asked the participants if the online tutor could support students in his/her learning. The results indicate that 50% of the participants consider the online tutors can help them in their learning, followed by 40% of slightly less positive participants. While only 10% were reluctant. As shown in Table 6.9, 73% of the participants needed contact with other students, while around 7% did not need contact with other students.

LEARNING: When you take a MOOCs course you have to study the course of that international university. That course will differ from that of your home university. The professor of your university has accepted the course as being equivalent. Please your vision about the strength and weakness for learning.					
	1	2	3	4	5
Quality of educational content is high.	23%(n=7)	60%(n=18)	10%(n=3)	7%(n=2)	0
I like to study anywhere and anytime.	20%(n=6)	50%(n=15)	17%(n=5)	13%(n=4)	0
I am flexible in selecting topics.	10%(n=3)	63%(n=19)	20%(n=6)	7%(n=2)	0
I am able to discuss problems/opportunities and exchange knowledge with peers	27%(n=8)	40%(n=12)	30%(n=9)	3%(n=1)	0
I need support from tutors.					

	23%(n=7)	30%(n=9)	40%(n=12)	7%(n=2)	0
An online tutor can support me in My learning's.	7%(n=2)	43%(n=13)	40%(n=12)	10%(n=3)	0
I need to be in contact with other students.	23%(n=7)	50%(n=15)	20%(n=6)	7%(n=2)	0

Table 6.9: findings of learning for students PSUT

6.7.2 Ready for e-learning.

Again about two thirds of PSUT students seem to be ready for e-learning.

The participants were asked about if they have access to internet at home. The results indicate that all the participants have internet access at home (See Table 6.10). We asked the participants if they have experience with e-learning. The results indicate that 53% of the participants already have experience with online learning, followed by 40% with somewhat experience, while only 7% were reluctant. As shown in Table 6.10, 73% of the participants were willing and they flexible to work with another system, while around 10% did not feel flexible enough to work with another system.

READY FOR E-LEARNING: When you are taking a MOOCs course, you will study the course online and you are also obligated to access the learning system of that particular international university. Please your vision about the strength and weakness for ready of e-learning.					
	1	2	3	4	5
I have internet access at home.	47%(n=14)	53%(n=16)	0	0	0
I have experience with online learning.	0	53%(n=16)	40%(n=12)	7%(n=2)	0

I am flexible to work with another system that can be different from the one I am using now.	20%(n=6)	53%(n=16)	17%(n=5)	10%(n=3)	0
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Table 6.10: finding of ready for e-learning for students PSUT

6.7.3 Evaluation.

With regard to evaluation of the study process, the same pattern pops up again. We can see this in Table 6.11.

The participants were asked about if they like the online intermediate self tests. The results indicated that 70% of the participants like the online intermediate test (See Table 6.11), While 3% didn't like it. Also we asked the participants if they like do assignments and if they can respect the deadlines for them. The results indicate that 63% of the participants already do assignments in different fields of the course and respect the deadlines of them, followed by 30% who give a neutral answer, while only 7% were reluctant. We asked the participants if they think that the comments from the tutors are important. The results indicated that 70% of the participants think that the comments from the tutor are important. As shown in Table 6.11, only 64% of the participants agree with an online exam, 23% are neutral and 13% did not feel comfortable with an online exam.

EVALUATION: When you are taking a MOOCs course, you will be evaluated by the professor of that course in that international university. It means that assignments and tests will be online. <i>Please your vision about the strength and weakness for evaluation.</i>					
	1	2	3	4	5
I like the online intermediate self tests	23%(n=7)	47%(n=14)	27%(n=8)	3%(n=1)	0
I like assignments in different fields of the course, And I can respect the deadlines of them.	10%(n=3)	53%(n=16)	30%(n=9)	7%(n=2)	0
Comments from the tutors are					

important.	27%(n=8)	43%(n=13)	27%(n=8)	3%(n=1)	0
The final exam can be online.	27%(n=8)	37%(n=11)	23%(n=7)	13%(n=4)	0

Table 6.11: findings of evaluation for students PSUT

6.7.4 Being a distance student, costs.

The view is in general a very neutral one maybe indicating that these students have not yet taken a stance on the issue or, as mentioned in the lower end statements of the table think of issues such as fees to be paid and dissertation work were mentioned in the table.

When we look at the different questions separately, we can observe from the table 6.12 that 80 % find distance learning attractive, 13 % have a neutral attitude and 7 % a negative one. The positive attitude increases to 80 % when the combination with professional work is taken into account, while in that case only 20 % of respondents remain neutral. 47 % of the international students say that even as a virtual student they would participate in the preparation week, 30 % remain neutral. 70 % of the international students say they would have to travel at least twice to Hasselt to work on their thesis under supervision of an UHasselt professor, while 30 % have a neutral opinion about this statement. 13 % only of the respondents expect an equal fee to be paid as virtual student, while 43 % have no idea and 17 % would disagree with this. 50 % would be prepared to pay more, but 40 % have no explicit opinion on this point and 10 % disagree or strongly disagree.

Being a distance student, costs.					
	1	2	3	4	5
On distance study while staying At home is attractive.	17%(n=5)	63%(n=19)	13%(n=4)	7%(n=2)	0
On distance study can be combined With a paid professional activity.	7%(n=2)	73%(n=22)	20%(n=6)	0	0
As a virtual international UHasselt student I have to Participate In the introduction week in UHasselt.	20%(n=6)	27%(n=8)	30%(n=9)	23%(n=7)	0

I have to do thesis work under supervision of an UHasselt Professor and I need to travel two times To UHasselt for my thesis work.	17%(n=5)	53%(n=16)	30%(n=9)	0	0
As a virtual international student, I pay the same tuition fee.	13%(n=4)	27%(n=8)	43%(n=13)	17%(n=5)	0
I am prepared to pay higher tuition fees dependent on which MOOCs Courses were included in the curriculum.	13%(n=4)	37%(n=11)	40%(n=12)	10%(n=3)	0

Table 6.12 findings of being a distance student for students PSUT

6.7.5 Do you like to become a virtual international student? and if you answer **yes but**, what do you want to be changed to the model we proposed and what are the requirements accepted for you? In figure 6.20 it can be observed that, a majority of the respondents from PSUT Students like to become a virtual international student, while only 8 of the total number of respondents (30 in total) doesn't like to become a virtual exchange student. And who answers **yes but** they don't give any opinion for what he/she would like to be changed for the model proposed and for the requirements accepted for him/her.

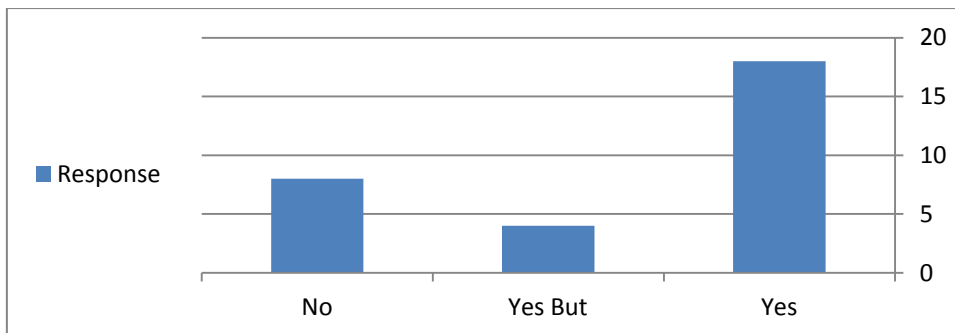


Figure 6.21: become a virtual international student.

6.7.6 conclusion

For model virtual international students, Based on these results, we can say that the majority of answers on all statements about e-learning, readiness for e-learning and evaluation in the questionnaire are positive. But when we look at the other statements about the dissertation work in

general, the answers are more neutral. We conclude that the students can participate in a virtual international student model.

6.8 Virtual exchange students: survey for students for UHasselt.

The total numbers of responses from UHasselt are 31. Following are the results of the analysis of the survey data.

6.8.1 Learning

In general two-thirds of UHasselt students either agreed or strongly agreed with all of the statements regarding to the learning process, whereas maximum 19% of them disagreed. The detailed results are shown below. We can see the following pattern.

The participants were asked about the level of the educational quality. The results indicate that more than 87% of the participants agree with this, while only 10% were reluctant (See Table 6.13). We asked the participants if they liked to study anywhere and anytime. The results indicate that 58% of the participants like to study anywhere and anytime, whereas 39% of them are neutral. We asked the participants if they are flexible in selecting topics. The results indicate that 68% of the participants were flexible in selecting topics, while only 13% were reluctant. We asked the participants if they want to be able to discuss problem with peers online. The results indicate that 71% of the participants like to be able to discuss problems with others online, followed by 16% who are neutral, while only 13% were reluctant. We asked the participants if they needed support from tutors. The results indicate that 68% of the participants were in need of support from tutors, followed by 13% of neutral participants, while only 19% were reluctant. We asked the participants if the online tutor could support students in his/her learning. The results indicate that 62% of the participants consider the online tutors can help them in their learning, followed by 16% of slightly less positive participants. While only 22% were reluctant. As shown in Table 6.13, 78% of the participants needed contact with other students, while around 3% did not need contact with other students.

LEARNING: When you take a MOOCs course you have to study the course of that international university. That course will differ from that of your home university. The professor of your university has accepted the course as being equivalent. *Please your vision about the strength and weakness for learning.*

	1	2	3	4	5
Quality of educational content is high.	13%(n=4)	74%(n=23)	3%(n=1)	10%(n=3)	0
I like to study anywhere and anytime.	16%(n=5)	42%(n=13)	39%(n=12)	3%(n=1)	10%(n=3)
I am flexible in selecting topics.	23%(n=7)	45%(n=14)	19%(n=6)	3%(n=1)	10%(n=3)
I am able to discuss problems/opportunities and exchange knowledge with peers	29%(n=9)	42%(n=13)	16%(n=5)	10%(n=3)	3%(n=1)
I need support from tutors.	23%(n=7)	45%(n=14)	13%(n=4)	16%(n=5)	3%(n=1)
An online tutor can support me in My learning's.	10%(n=3)	52%(n=16)	16%(n=5)	19%(n=6)	0
I need to be in contact with other students.	26%(n=8)	52%(n=16)	19%(n=6)	0	3%(n=1)

Table 6.13: findings of learning for students UHasselt

6.8.2 Ready for e-learning.

Again about two thirds of UHasselt students seem to be ready for e-learning.

The participants were asked about if they have access to internet at home. The results indicate that all the participants have internet access at home (See Table 6.14). We asked the participants if they have experience with e-learning. The results indicate that 58% of the participants already have experience with online learning, followed by 13% with somewhat experience, while 29% were

reluctant. As shown in Table 6.14, 77% of the participants are willing and they flexible to work with another system, while around 10% did not feel flexible enough to work with another system.

READY FOR E-LEARNING: When you are taking a MOOCs course, you will study the course online and you are also obligated to access the learning system of that particular international university. Please your vision about the strength and weakness for ready of e-learning.					
	1	2	3	4	5
I have internet access at home.	74%(n=23)	26%(n=8)	0	0	0
I have experience with online learning.	26%(n=8)	32%(n=10)	13%(n=4)	26%(n=8)	3%(n=1)
I am flexible to work with another system that can be different from the one I am using now.	29%(n=9)	48%(n=15)	13%(n=4)	10%(n=3)	0

Table 6.14: finding of ready for e-learning for students UHasselt

6.8.3 Evaluation.

With regard to evaluation of the study process, the same pattern pops up again. We can see this in Table 6.15.

The participants were asked about if they like the online intermediate self tests. The results indicated that 58% of the participants like the online intermediate test (See Table 6.15), While 3% didn't like it. Also we asked the participants if they like do assignments and if they can respect the deadlines for them. The results indicate that 68% of the participants already do assignments in different fields of the course and respect the deadlines of them, followed by 29% who give a neutral answer, while only 3% were reluctant. We asked the participants if they think that the comments from the tutors are important. The results indicated that 90% of the participants think that the comments from the tutor are important. As shown in Table 6.15, only 52% of the participants agree with an online exam, 29% are neutral and 19% did not feel comfortable with an online exam.

EVALUATION: When you are taking a MOOCs course, you will be evaluated by the professor of that course in that international university. It means that assignments and tests will be online. <i>Please your vision about the strength and weakness for evaluation.</i>					
	1	2	3	4	5
I like the online intermediate self tests	16%(n=5)	42%(n=13)	39%(n=12)	3%(n=1)	0
I like assignments in different fields of the course, And I can respect the deadlines of them.	13%(n=4)	55%(n=17)	29%(n=9)	3%(n=1)	0
Comments from the tutors are important.	29%(n=9)	61%(n=19)	10%(n=3)	0	0
The final exam can be online.	26%(n=8)	26%(n=8)	29%(n=9)	19%(n=6)	0

Table 6.15: findings of evaluation for students UHasselt

6.8.4 Being a distance student, costs

The view is in general a very neutral one maybe indicating that these students have not yet taken a stance on the issue or, as mentioned in the lower end statements of the table think of issues such as fees to be paid and dissertation work were mentioned in the table.

When we look at the different questions separately, we can observe from the table 6.16 that 61 % find distance learning attractive, 26 % have a neutral attitude and 13 % a negative one. The positive attitude increases to 77 % when the combination with professional work is taken into account, while in that case only 13 % of respondents remain neutral and 10 % have a more negative attitude. 45 % of the international students say that even as a virtual student they would participate in the preparation week, 39 % remain neutral and 16 % have a negative attitude. 68 % of the international students say they would have to travel at least twice to Hasselt to work on their thesis under

supervision of an UHasselt professor, while 19 % have a neutral opinion about this statement and 13 % do not agree or disagree strongly. 36 % only of the respondents expect an equal fee to be paid as virtual student, while 48 % have no idea and 16 % would disagree with this. 33 % would be prepared to pay more, but 32 % have no explicit opinion on this point and 35 % disagree or strongly disagree.

Being a distance student, costs					
	1	2	3	4	5
On distance study while staying At home is attractive.	16%(n=5)	45%(n=14)	26%(n=8)	10%(n=3)	3%(n=1)
On distance study can be combined With a paid professional activity.	16%(n=5)	61%(n=19)	13%(n=4)	10%(n=3)	0
As a virtual international UHasselt student I have to Participate In the introduction week in UHasselt.	13%(n=4)	32%(n=10)	39%(n=12)	16%(n=5)	0
I have to do thesis work under supervision of an UHasselt Professor and I need to travel two times To UHasselt for my thesis work.	16%(n=5)	52%(n=16)	19%(n=6)	10%(n=3)	3%(n=1)
As a virtual international student, I pay the same tuition fee.	10%(n=3)	26%(n=8)	48%(n=15)	3%(n=1)	13%(n=4)
I am prepared to pay higher tuition fees dependent on which MOOCs Courses were included in the curriculum.	10%(n=3)	23%(n=7)	32%(n=10)	19%(n=6)	16%(n=5)

Table 6.16 findings of being a distance student for students UHasselt

6.8.5 Do you like to become a virtual international student? and if you answer **yes but**, what do you want to be changed to the model we proposed and what are the requirements accepted for you? In figure 6.22 it can be observed that, a majority of the respondents from UHasselt Students like to become a virtual exchange student, while only 10 of the total number of respondents (31 in total) doesn't like to become a virtual international student. And who answers **yes but** they don't give any opinion for what he/she would like to be changed for the model proposed and for the requirements accepted for him/her.

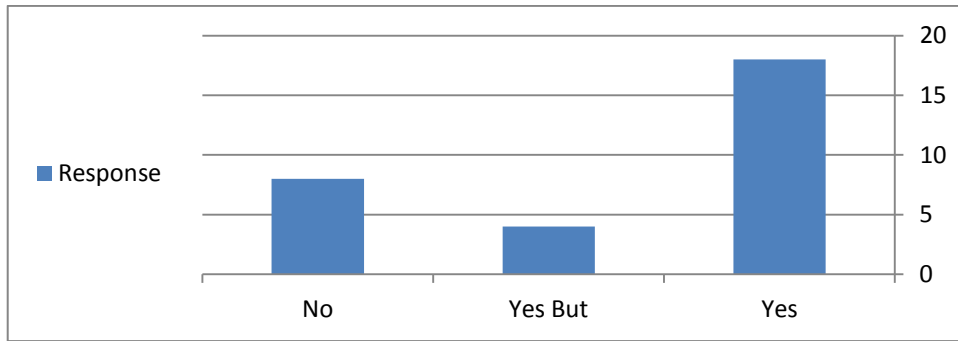


Figure 6.22 become a virtual international student.

6.8.6 Conclusion.

For model virtual international students, Based on these results, we can say that the majority of answers on all statements about e-learning, readiness for e-learning and evaluation in the questionnaire are positive. But when we look at the other statements about the dissertation work in general, the answers are more neutral. We conclude that the students can participate in a virtual international student model.

Chapter 7

Conclusion

Massive Open Online Courses offer a new business model of low-cost, high quality education that has the potential of transforming both higher education and corporate learning by making lifelong learning a tangible reality.

Through MOOC courses, students can take courses at any time and from anywhere which gives them the opportunity to gain knowledge and skills in a flexible way. On the other hand, students may feel isolated from the professors and other students.

There are different type of participants who enroll in MOOC courses : lurkers, drop-ins, passive participants and active participants. In general completion rates, being the number of participants finishing with a credit are relatively low. There are some universities offering an academic credit or a degree for MOOC courses when students complete the course and pass an exam such as SJSU, ACE, Uclan, and Georgia Tech. These courses are often offered in collaboration with education platforms of private companies.

To research and measure the feasibility and acceptance of both new educational models, we tested this out in a very real case, the actual collaboration between PSUT and Hasselt University. We identified a set of success indicators. Surveys were organized using a questionnaire, of which the questions were related to the indicators. The questionnaires were sent to faculty/ university management, professors, and students of both institutions.

Some students may not participate in the actual exchange student programs because they can't stay abroad for a year or a semester. In order to help these students we proposed two possible solutions: a virtual exchange student program in which student would take place via taking online courses and a virtual international student model in which students would follow online courses given by Hasselt University and/or selected courses from MOOCs delivered by other international universities.

For the virtual exchange program we can say that faculty management and professors from Erasmus program of both universities, UHasselt and PSUT, can accept MOOC courses to be included in their

curriculum replacing their own courses. And we can also conclude that students from both universities, UHasselt and PSUT, are ready to participate in a virtual exchange student.

For the other model, the virtual international study program, we can see that faculty management and professors of the master degree program at Hasselt University can accept virtual international students as part of the international master of management program. UHasselt accepts the possibility of developing courses online or of implementing MOOC courses in their curriculum. We can also see that the international masters of management of UHasselt and PSUT students like to become virtual international students.

The two types of virtual study programs that enable distance learning by (international) students are accepted in the two universities and considered to be a challenge to be realized in the future.

Two problems will have to be addressed by deeper research in a new project.

First, studying the problem of developing a hybrid international master of management study program has to be analyzed. In parallel to the study program, international students can take part in the master degree program as virtual students, participating in the virtual international study program.

Second, implementing MOOCs requires the organization of an optimal study process including virtual classes to support the communication and the exchange of knowledge by students with peers and with tutors. An optimal study process has to be developed.

References

- [1] Alexander McAuley, Bonnie Stewart, George Siemens and Dave Cormier (2010). *The MOOC Model for Digital Practice*. Prince Edward Island, Canada: Social Science and Humanities Research Council's "Knowledge Synthesis Grants on the Digital Economy".
- [2] Osvaldo Rodriguez (2012). MOOCs and the AI-Stanford like courses: Two successful and distinct course formats for massive open online courses. *European Journal of Open and Distance Learning*.
- [3] L I Yuan, Stephen Powell, MOOCs and open education :implications for higher education
- [4] Rita Kope, Helene Fournier, Social and Affective Presence to Achieve Quality Learning in MOOCs
- [5] Preeti Jasnani (2013) Designing MOOCs, principal learning at TATA interactive systems.
- [6] Christiane Reilly (2013). MOOCs Deconstructed: Variables that Affect MOOC Success Rates. In T. Bastiaens & G. Marks (Eds.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2013* (pp. 1308-1338).
- [7] Santosh Bhaskar ,(2013). How to use MOOCs in K-12 education?
- [8] Nathaniel Ostashewski, Michael Thorpe, David Gibson, Addressing the challenges of a bilingually delivered online course: design and development of the Australia china trade (ACT) MOOC.
- [9] Thomas Clarke, The advance of the MOOCs (massive open online courses) The impending globalization of business education?, UTS Sydney, Sydney, Australia.
- [10] Nathaniel Ostashewski, Building for massive scalability: the production case of an astronomy MOOC.
- [11] Sudy Kay, Peter Reimann, Elliot Diebold, Bob Kummerfeld, MOOCs: So many learners, So many potential.
- [12] <https://www.coursera.org>
- [13] <https://www.udacity.com>

[14] Rebecca Lindegren, (2013). Stanford and edx unite to build stronger open education platform.

[15] <https://www.edx.org/>

[16] <https://www.khanacademy.org>

[17] <https://iversity.org>

[18] Mark Smithers, (2013). 12 reasons why MOOCs will change the world.

[19] Kerry Wu,(2013). Academic libraries in the age of MOOCs. Portland State University, Portland, Oregon, USA.

[20] Stephanie Mcfeerers, (2013). Online courses create new learning methods.

[21] Martinez Torres, Toral Marin, Barrero Garcia,(2008). A technological acceptance of e-learning tools used in practical and laboratory teaching, according to the European higher education area.

[22] Mirjana Radovic-Markkovic, (2010). Advantages and disadvantages of e-learning in comparison to traditional forms of learning.

[23] Rachel Ellaway, E-learning : is the revolution over?

[24] Westbrook V, (2006). The virtual learning future. Teaching in Higher Education.

[25] Nantha Kumar Subramaniam , Maheswari Kandasamy, (2011) The virtual classroom: A catalyst for institutional Transformation. Open University Malaysia.

[26] Guy Posey, Thomas Burgess, Marcus Eason, Yawna Jones, *the Advantages and Disadvantages of the Virtual Classroom and the Role of the Teacher*, Address Alabama A&M University.

[27] Eunmo Sunga, , Richard E. Mayerb (2012). Five facets of social presence in online distance education.

[28] PIERRE.DILLENBOURG, Virtual Learning Environments, EUN CONFERENCE 2000: «LEARNING IN THE NEW MILLENNIUM: BUILDING NEW EDUCATION STRATEGIES FOR SCHOOLS». WORKSHOP ON VIRTUAL LEARNING ENVIRONMENTS.

[29] Florence Martin, Michele A. Parker, Deborah F. Deale,(2012). Examining Interactivity in Synchronous Virtual classrooms. University of North Carolina Wilmington, USA.

[30] Sheena Banks, Brigitte Denis, Uno Fors and Sébastien Pirotte, Staff Development and E-Tutors Training, networking learning conference 2004.

[31] Sharon Pittaway, Jill Downing ,Peter Osborne (2010). Online facilitation and the role of the Tutor.

[32] <http://www.e-tutor.com>

[33] <https://www.etutoring.org>

[34] Brian D. Voss, (2013). Massive open online courses (MOOCs): Primer for university and College Board members.

[35] <http://www.katyjordan.com>

[36] Pat Lopes Harris, (2013) SJSU and Udacity Partnership.

[37] CHRIS PARR, (2013) Uclan to offer credit for MOOCs.

[38] Steve Kolowich, (2013). American Council on Education Recommends 5 MOOCs for Credit.

[39] Georgia Tech Announces Massive Online Master's Degree in Computer Science. May 14, 2013.

[40] Scott Jaschik, 2013, MOOCs for credit

Appendices

Appendix 1: Questionnaire Virtual exchange students for faculty management.

Questionnaire

Which University do you work?

- UHasselt
- PSUT

Inclusion of MOOCs in the curriculum and an enhanced international image

1. Can MOOCs courses be included as part of the curriculum of a study program from legal point of view? (permitted by the government)

- Yes
- Yes But
- No

if you choose Yes But, Under what circumstances can MOOCs courses be included as part of the curriculum of a study program from a legal point of view?

2. Will the inclusion of MOOCs as part of the curriculum increase the international image of the faculty?

- Yes
- Yes But
- No

if you choose Yes But, Under what circumstances will the inclusion of MOOCs as part of the curriculum increase the international image of the faculty?

3. will the implementation of MOOCs, included in the curriculum, impact the international cooperation of the faculty?

- Yes
- Yes But
- No

if you choose Yes But, Explain

Selection of (partner) universities in the virtual exchange program.

In the Students Exchange Program, the university management is selecting partner universities based on the level of equivalence of their curriculum with the home university curriculum. What about the selection process in the virtual program?

1. Can the selection be organized starting from a global list of MOOCs?

- Yes
- Yes But
- No

if you choose Yes But, Under what circumstances can the selection be organized starting from a global list of MOOCs?

2. Must the selection be organized on partner base? Do we see the virtual exchange be framed in a bilateral agreement between the universities?

- Yes
- No But
- No

if you choose No But, Explain why.

Selection of courses and decision about equivalence of courses.

In the Students Exchange Program, the University management and the candidate students are selecting courses for the candidate exchange students. Professors are asked to evaluate candidate exchange courses and to decide on the equivalence with the courses of the home university. What about this process in the virtual case?

1. What are the conditions to accept a proposed virtual exchange course as a candidate virtual exchange course, when comparing its content with the content of the course in the home university?

- The virtual exchange course covers the same topics.
- The virtual exchange course covers most of the topics you are teaching.
- The virtual exchange course is not covering the topics, but can be situated in the same domain and is on the same level.

2. Are the characteristics of the online learning process (online content delivery, assignments, online exam) part of or are they impacting the decision to accept the course as candidate exchange course?

- Yes
- No

if you choose Yes, Why do you think these characteristics are part of or are impacting the decision to accept the course as candidate exchange course?

Appendix 2: Questionnaire Virtual exchange students for professor

Questionnaire

Which University do you work?

- UHasselt
- PSUT

Selection of (partner) universities in the virtual exchange program.

In the Students Exchange Program, the university management is selecting partner universities based on the level of equivalence of their curriculum with the home university curriculum. What about the selection process in the virtual program?

1. Can the selection be organized starting from a global list of MOOCs?

- Yes
- Yes But
- No

if you choose Yes But, Under what circumstances can the selection be organized starting from a global list of MOOCs?

2. Must the selection be organized on partner base? Do we see the virtual exchange be framed in a bilateral agreement between the universities?

- Yes
- No But
- No

if you choose No But, Explain why.

Selection of courses and decision about equivalence of courses.

In the Students Exchange Program, the University management and the candidate students are selecting courses for the candidate exchange students. Professors are asked to evaluate candidate exchange courses and to decide on the equivalence with the courses of the home university. What about this process in the virtual case?

1. What are the conditions to accept a proposed virtual exchange course as a candidate virtual exchange course, when comparing its content with the content of the course in the home university?

- The virtual exchange course covers the same topics.
- The virtual exchange course covers most of the topics you are teaching.
- The virtual exchange course is not covering the topics, but can be situated in the same domain and is on the same level.

2. Are the characteristics of the online learning process (online content delivery, assignments, online exam) part of or are they impacting the decision to accept the course as candidate exchange course?

- Yes
- No

if you choose Yes, Why do you think these characteristics are part of or are impacting the decision to accept the course as candidate exchange course?

Appendix 3: Questionnaire Virtual exchange students for students (the same for both university).

Questionnaire

which university do you study?

- U Hasselt
- PSUT

LEARNING:

When you take a MOOCs course you have to study the course of that international university. That course will differ from that of your home university. The professor of your university has accepted the course as being equivalent.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Quality of educational content is high	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to study anywhere and anytime	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am flexible in selecting topics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to discuss problems/opportunities and exchange knowledge with peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I need support from tutors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An online tutor can support me in my learning's	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I need to be in contact with other students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

READY FOR E-LEARNING:

When you are taking a MOOCs course, you will study the course online and you are also obligated to access the learning system of that particular international university.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I have internet access at home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have experience with online learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am flexible to work with another system that can be different from the one i am using now.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

EVALUATION:

When you are taking a MOOCs course, you will be evaluated by the professor of that course in that international university. It means that assignments and tests will be online.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I like the online intermediate self tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am willing to solve assignments in different fields of the course, and I can respect the deadlines.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comments from the tutor are important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the final exam need to be online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

LIVING AND COST:

When you are becoming a virtual exchange student, you will stay the whole time in your home university.

	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
I like to study online while staying at home or at my university	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i am prepared to pay tuition fees to participate a MOOCs course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you like to become a virtual exchange student?

- Yes
- Yes But
- No

If you choose Yes But, What do you want to be changed to the model we proposed to you as a solution for a virtual exchange student?

If you choose Yes But, What are the requirements of the model to be accepted for you?

Appendix 4: Questionnaire Virtual international students for faculty management.

Questionnaire

Acceptance of virtual international students in the UHasselt master of management program

1) Can virtual international students be accepted in the International Master of management program from legal point of view? (Permitted by the government)

- Yes
- Yes But
- No

if you choose Yes But, Explain

if you choose No, Why

2) What is the most important benefit resulting from the inclusion of virtual international students in the master of management program?

3) What is the most important risk resulting from the inclusion of virtual international students in the master of management program?

Online UHasselt courses.

1) Can the UHasselt courses become organized online?

- Yes
- Yes But
- No

if you choose Yes But, Explain

Curriculum composed of a set of MOOCs.

1) Can the UHasselt courses be replaced by MOOCs?

- Yes
- Yes But
- No

if you choose Yes But, Explain

Which MOOCs courses?

1) Can the student select himself the MOOCs courses?

- Yes
- Yes But
- No

if you choose Yes But, Explain

2) Can the online curriculum be built yearly by a curriculum commission, deciding on the list of acceptable online and MOOCs courses?

- Yes
- Yes But
- No

if you choose Yes But , Explain

Appendix5: Questionnaire Virtual international students for professor.

Online UHasselt courses.

1) Can the UHasselt courses become organized online?

- Yes
- Yes But
- No

if you choose Yes But, Explain

Curriculum composed of a set of MOOCs.

1) Can the UHasselt courses be replaced by MOOCs?

- Yes
- Yes But
- No

if you choose Yes But, Explain

Which MOOCS courses?

1) Can the student select himself the MOOCs courses?

- Yes
- Yes But
- No

if you choose Yes But, Explain

2) Can the online curriculum be built yearly by a curriculum commission, deciding on the list of acceptable online and MOOCs courses?

- Yes
- Yes But
- No

if you choose Yes But , Explain

Appendix 6: Questionnaire Virtual international students (the same for both university).

Questionnaire

which university do you study?

- UHasselt
- PSUT

LEARNING: When you take a MOOCs course you have to study the course of that international university. That course will differ from that of your home university. The professor of your university has accepted the course as being equivalent.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Quality of educational content is high	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to study anywhere and anytime	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am flexible in selecting topics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to discuss problems/opportunities and exchange knowledge with peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I need support from tutors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An online tutor can support me in my learning's	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I need to be in contact with other students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

READY FOR E-LEARNING : When you are taking a MOOCs course, you will study the course online and you are also obligated to access the learning system of that particular international university.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I have internet access at home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have experience with online learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am flexible to work with another system that can be different from the one i am using now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

EVALUATION: When you are taking a MOOCs course, you will be evaluated by the professor of that course in that international university. It means that assignments and tests will be online.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I like the online intermediate self tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am willing to solve assignments in different fields of the course, and I can respect the deadlines.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comments from the tutor are important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the final exam need to be online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

BEING A DISTANCE STUDENT, COSTS:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
On distance study while staying at home is attractive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On distance study can be combined with a paid professional activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a virtual international UHasselt student I have to participate in the introduction week in UHasselt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have to do thesis work under supervision of an UHasselt Professor and I need to travel two times to UHasselt for my thesis work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a virtual international student I pay the same tuition fee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am prepared to pay higher tuition fees dependent on which MOOCs courses were included in the curriculum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you like to become a virtual international student?

- Yes
- Yes But
- No

if you choose Yes But, Under what conditions would you want to study at the University of Hasselt as a virtual international student?

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Use of MOOCs in a university is an opportunity for international study.
Case: virtual exchange and international students in UHasselt and PSUT.

Richting: **Master of Management-Management Information Systems**

Jaar: **2014**

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