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Open and Flexible Online Courses - Reality or Fiction?

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1. Abstract

This article is about the openness and flexibility of online courses created during the Network University project at Chydenius Institute in 2001-2002. The aim of the present paper is to explore the foundations for open and flexible learning and to create basic principles for the openness and flexibility of online courses at Chydenius Institute using existing pedagogical theory. The principles are also tested through practical examples of online courses planned, designed and implemented at Chydenius Institute.

The created principles consist of student-centeredness, usability, publicity and relatively open and flexible implementation. These are accomplished through each teacher's own decisions. However, they are an important part of the main issues to be considered before starting designing any web-based course. Through these basic principles the openness and flexibility of online courses at Chydenius Institute will no longer be an empty phrase, instead they will play a central role in good practice.

2. Introduction

Information and communication technology has had a tremendous influence on education by providing new ways to expand the forms of education and to offer students more flexible opportunities to study. Educational institutions like traditional universities have encountered pressure to utilize information and communication technology in developing their course programs. "Some of the strongest pressures for changes in higher education are coming from students. A growing segment of working, self-motivated students want to acquire skills" in the ways most suitable for them. (Aggarwal & Bento 2000.) At the Chydenius Institute, which is part of the University of Jyväskylä, the response to this pressure has been the Network University project.

The Network University project is helping the staff at Chydenius Institute to create online courses utilizing technological innovations and better serving the purpose of meeting students' needs and expectations. Justification of these online courses is

based on the need for creating opportunities for everyone in Central Ostrobothnia to participate in academic education without limitations of time and place.

But can we truly say the online courses at Chydenius Institute are open and flexible? What do we mean when we talk about the openness and flexibility of our educational services? Is there any openness or flexibility in our online courses? How open and flexible can our online courses really be?

Many questions require answers. There's no turning back. With those promises we have made in many contexts (like the plans of the Network University project, the visions and the web pages and brochures of Chydenius Institute) we're now facing reality. This article is trying to redeem promises made at Chydenius Institute by creating basic principles for open and flexible learning. The basic principles are created using existing pedagogical theory and through practice accomplished by the staff at Chydenius Institute. Open and flexible learning is considered through the following criteria: accessibility, place, path of study, study methods, contents, evaluation and support services. Using these criteria open and flexible learning is commonly defined in pedagogical theory. Two examples of online courses are also presented in this paper. The principles created will hopefully guide our steps on the path of planning, designing and implementing as open and flexible online courses as is possible and in their own part they will engage us more deeply with the pedagogical theory of web-based teaching and learning.

This article reflects at the same time, both the fascination with, and the concern about the appearance of real openness and flexibility in online courses designed at Chydenius Institute from the writer's point of view. The article is only an overview of the writer's thinking about the openness and flexibility of the online courses designed at Chydenius Institute, not an overall review of the thinking among the whole work community at Chydenius Institute. While there are many examples of good practice at Chydenius Institute, there are relatively few critical discussions or shared thoughts about open and flexible learning. The subjective point of view is important in the sense that it is capable of arousing debate, which might lead to joint understanding about open and flexible learning among the staff at Chydenius

Institute. So this article can be seen as an outline to be considered by those of us designing online courses at Chydenius Institute and elsewhere.

3. Philosophy of the Network University project

The aim of this chapter is to present the Network University project of Chydenius Institute and its philosophy concerning open and flexible educational services. The main point is to explore the promises made and to present the intended actions to reach these goals.

The vision of Chydenius Institute is to be an international network university for adults in 2005. With the Network University project, funded by the European Union, the Ministry of Education and municipalities in the region, Chydenius Institute aims to provide open and flexible learning opportunities for everyone in Central Ostrobothnia. In this part of Finland there's no other university nearby, so people in Central Ostrobothnia have little or no opportunities to participate in academic education, apart from studying at Chydenius Institute. Chydenius Institute brings university-level services to the people living in Central Ostrobothnia and with the development of online courses these services are even more accessible.

On the web pages of Chydenius Institute it states: "Our highly developed data and telecommunication networks enable us to provide high-quality university-level services in our own region. These are constantly being developed to ensure maximum flexibility. Life-long learning is no longer bound to time or place." (Chydenius Institute 2001a.) It also says: "It is also possible to study at Chydenius Institute via the Internet, without restrictions of time and place. Some courses can be completed entirely in a network environment and others mostly so, as they may involve some face-to-face teaching as well. Each course is designed in the way that is best suited to its subject matter." (Chydenius Institute 2001b.)

Due to efficient use of information and communication technology the education and research services of Chydenius Institute are meant to be flexible with regard to time and place. One goal is to offer opportunities to participate in online courses only via the Internet. This way Chydenius Institute offers "distance education

programs to students who have physical and/or time constraints that make traditional face-to-face classrooms inaccessible" (Tetiwat & Igbaria 2000). The other goal is diversification of education, which is due to the pressure of the development of study methods in the wider field of education.

The Network University project produces synchronous and asynchronous opportunities to study using different Learning Management Systems (LMS) for eLearning, such as Discendum Telsi, Discendum Optima, and WebCT, videoconferencing is also used. The goal is to offer ten pilot courses (two credits each on average) concentrating on the fields of expertise at Chydenius Institute. With the experiences from these pilot courses the development work will be done and online courses of high quality will be created in the near future.

4. Open and Flexible Learning - Many Definitions

The aim of this chapter is to present some existing definitions of open and flexible learning, which are being used to create the basic principles of open and flexible learning for Chydenius Institute. Open and flexible learning has many definitions, almost every expert in the field of education seems to have his/her own. It can be about many things according to whom is referred to.

For example Maxwell (1995) writes: "Open learning is defined as a student-centered approach to education that removes all barriers to access while providing a high degree of learner autonomy". This definition can be considered as the basis for starting to create basic principles for open and flexible learning at Chydenius Institute. Maxwell adds that, "distance education may or may not be based on open-learning ideals". Many distance educational settings are meaninglessly described as being open and flexible, but it might be an impression without any real meaning in practice. Open and flexible learning has become a phrase we often talk about without considering its actual meaning.

The question of what open and flexible learning actually means has been a source of considerable debate in the literature (Calder 2000). Although many authorities

have attempted to define these key concepts, there's no overall agreement about the definitions of open and flexible learning among the experts of educational science. "Not until the mid-1980s did authorities such as Lewis, Rumple, Scriven, Robinson and Carr attempt to disentangle what was meant by the term open learning. No consensus emerged." (Calder 2000.) "The term flexible learning came via the vocational training field, and, as Smith points out, bears a distinct resemblance to the concept of open learning by virtue of two key determinants - "extended access to learning through the removal of barriers, and a philosophy of learner-centered provision where learner choice is the key"" (Smith 2000, 88 according to Calder 2000).

The same thoughts about open learning as a student-centered approach and the active removal of all study barriers, have widely emerged in the literature of educational sciences. Pyykkö and Ropo (2000) point out that the essential goal of open learning is to decrease obstacles of study. And Hannafin's (1999) opinion is, that with information and communication technology different opportunities for open and flexible learning can be created. "We need to stronger design technologies to optimize rather than minimize the reasoning capabilities of learners and support individual goals and needs. OLEs (writer's note: Open Learning Environments) attempt to address these needs by inducing (or supporting) frames for study, making resources available, providing tools to support and encourage analysis and interpretation, and guiding learners in accomplishing their goals or addressing their needs." (Hannafin 1999.) These thoughts about open and flexible learning are closely connected to the philosophy of the Network University project at Chydenius Institute. The decreasing of obstacles of study, using information and communication technology to increase opportunities for open and flexible learning, and supporting individual goals and needs are the three starting points to the basic principles of open and flexible learning at Chydenius Institute.

According to Race (1995) open learning is capable of accommodating the ways in which people learn naturally, opening up various choices of control to learners and helping learners to develop a positive feeling of ownership of their learning successes. He also claims that open learning is mostly based on learner-centered

learning materials, which are meant to be studied alone. In Race's opinion, therefore, open learning is lacking co-operation or collaboration with other students in many cases. But at Chydenius Institute co-operation and collaboration are frequently utilized study methods, so Race's definition can't be used as it stands for the principles of Chydenius Institute. In spite of this it can't be ignored. Race stresses that open learning allows students themselves to have control over their own learning processes; students are able to choose when, where and how they want to study.

According to all these definitions and writings, open and flexible learning can be elaborated as Rumble (1989, in Pantzar & Väliharju 1996, 26-27) presents it:

Criteria of Accessibility

- opportunity to participate regardless of age
- opportunity to participate without certainty of regularity of studies
- opportunity to participate regardless of status of employment
- opportunity to participate regardless of engagements of everyday life
- opportunity to participate regardless of economical resources
- opportunity to participate regardless of previous studies

Criteria of place and path of study

- right and opportunity to choose the place of studies
- freedom to choose the beginning time of studies
- freedom to choose the ending time of studies
- freedom to determine the rhythm of studies

Criteria of study methods

- freedom to choose study methods

Criteria of contents and evaluation

- freedom to choose courses
- opportunity to compensate previous studies
- opportunity to choose goals, the achievement of them and the evaluation of the achievement

Criteria of support services

- openness of guidance and tuition
- where, when, by whom, how

In addition to this freedom Meisalo et al. (2000) state that openness places students also a position of responsibility; students are free and responsible at the same time. They need inner motivation instead of external motivation. Students have to be active and they need to know how to evaluate their own improvement in their studies, and be self-motivated to do so. Aggarwal and Bento (2000) share this same opinion, when they write about web-based courses: "effective web-based teaching requires responsible, motivated students whose aims are to learn not to simply get a passing grades". Also when designing the online courses at Chydenius Institute, we presuppose that our students are self-motivated and take responsibility for their own studies.

Openness and flexibility in educational settings have been difficult to define. There have been many opinions and lots of diversified debate among educational scientists. If defining is so complex, how complicated can it be to create basic principles for open and flexible learning and to implement open and flexible learning in practice? What are those online courses like which are described as open and flexible? In the next two chapters the basic principles are created for Chydenius Institute and two examples of online courses are presented and tested through Rumble's criteria and the basic principles of Chydenius Institute.

5. Creating Basic Principles

The aim of this chapter is to gather pedagogical theory concerning open and flexible

learning into four basic principles. The basic principles of open and flexible learning created in the Network University project are meant to be practical guidelines for planning, designing and implementing web-based courses at Chydenius Institute. They are recommendations of topics that teachers and designers should be aware of if they are planning to develop their online courses to be more open and flexible.

Many technical, administrative and pedagogical issues arise when an educational institution creates basic principles for open and flexible learning relating to online courses. Technical issues involve technical solutions (both hardware and software) used in creating online courses. Administrative issues mainly include the attempts to provide the online students with the same support and services available to traditional students. These include for example library and advisory services. Pedagogical issues concentrate on challenges of control and student autonomy.

Student-centeredness

The main basic principle of open and flexible online courses is student-centeredness. This means taking into consideration the fact that there's no standard student. The target group of online courses at Chydenius-Institute is heterogeneous. All students are individuals with individual needs. This must be taken into consideration when planning web-based courses.

Student-centeredness can be increased with individualizing, which is for example taking into consideration different learning styles (visual, auditory and kinesthetic) and personal life situations (work, family and free time activities). There's also a tendency to pay attention to accessibility mentioned in Rumble's list in chapter Four. By accessibility is meant the opportunity to participate regardless of age, status of employment, engagements of everyday life, economical resources or previous studies or without certainty of regularity of studies. In addition, in every online course there should be opportunities for every student to choose the best way for him or her to complete the course.

One issue when taking into account the student-centeredness of online courses is

the decreasing of traveling. Potential students might live too far away from Chydenius Institute, when extended traveling might be inconvenient for them. Also many handicapped students with extreme physical constraints benefit from web-based courses, which allow them to avoid traveling. In addition, full-time working students or students with family responsibilities benefit from these distance learning arrangements. (Tetiwat & Igbaria 2000.) The decreasing of traveling is connected to Rumble's criteria of place; allowing students to choose the place of studies (see chapter 4).

In addition to the Rumble's criteria of accessibility and criteria of place, his other criteria should also be taken into consideration at Chydenius Institute. These other criteria, such as criteria of path of study, study methods, contents, evaluation and support services, are more difficult to take into account because they are the ones that, in many cases, are under the teacher's control. It depends on teachers and designers of online courses the kind of openness and flexibility they will have in their online courses, so they themselves will decide which criteria they will follow.

Usability

The second basic principle of open and flexible online courses is usability. The usability of online courses is mainly connected to the technical and visual elements of Learning Management Systems (LMS) like Discendum Optima and WebCT. Technical solutions should be transparent and the used media should be only a tool to achieve learning goals. The good visual solutions of the LMS can support the learning process as well.

The main base of selecting the suitable and most usable media for online courses is to take into consideration the differences of students. The essential consequence of diversity is the variation in people's technical abilities and interest in information and communication technology. (Pyykkö & Ropo 2000.) Students with little understanding or familiarity with computers may participate in online courses. They will need support in many ways, mostly guidance in using LMS and technical support in case of technical problems during the course.

Usability must be considered, when designing the technical solutions of online courses. Since most students connect via a modem, it's obvious that there should be "lighter" alternatives for extensive graphics, full-motion video or audio materials (Novitzki 2000). Students with technical or physical constraints should be taken into consideration by following the recommendations of The World Wide Web Consortium (W3C) like accessibility (services available to all people, whatever their hardware, software, network infrastructure, native language, culture, geographical location, or physical or mental ability) and evolvability (simplicity, modularity, compatibility and extencibility). (World Wide Web Consortium 2002.)

Publicity

The third basic principle of open and flexible online courses is publicity. This should mean that there are no limitations by audience. Online courses should be open to everyone so that contents, materials and study assignments are freely available when and where ever.

The openness and flexibility of an online course is however always more or less relative in the sense of publicity, because at Chydenius-Institute only students with passwords have access to web-based learning environments, where the study materials are placed. In the future there might be some attempts to follow examples like Massachusetts Institute of Technology, which has Open Course Ware system on the World Wide Web. Course materials are available on the web, free of charge, to any user anywhere in the world. (Massachusetts Institute of Technology 2002.)

A second limitation of publicity of online courses at Chydenius Institute is that most online courses are part of some other studies. This means that only those students who have entered these studies are allowed to participate on a particular online course. This fact puts pressure on development work and perhaps later on there will be a change regarding this.

Relatively open and flexible implementation

The fourth basic principle of open and flexible online courses at Chydenius Institute is something that can be called relativity. This means making a balance between openness and control. "An environment that is good for learning cannot be fully prepackaged and defined. If students are involved in choosing learning activities and controlling pace and direction, a level of uncertainty and uncontrolledness comes into play." (Wilson 1995.)

However, the main aims of online courses have to be carefully designed beforehand. The teacher or designer has to have a full vision about the online course, so there won't be any surprises while the course is going on. Therefore in every online course there has to be enough openness; so little that students don't get lost, so much that they have opportunities to choose what they really want.

The teacher's own decision

Regardless of the presented basic principles, it's obvious that teachers and designers of online courses at Chydenius Institute are free to choose what kind of openness and flexibility they will have in their online courses. There are no guiding principles teachers or designers are obliged to follow. This is one kind of openness and flexibility at Chydenius Institute.

6. Two examples of online courses at the Chydenius Institute

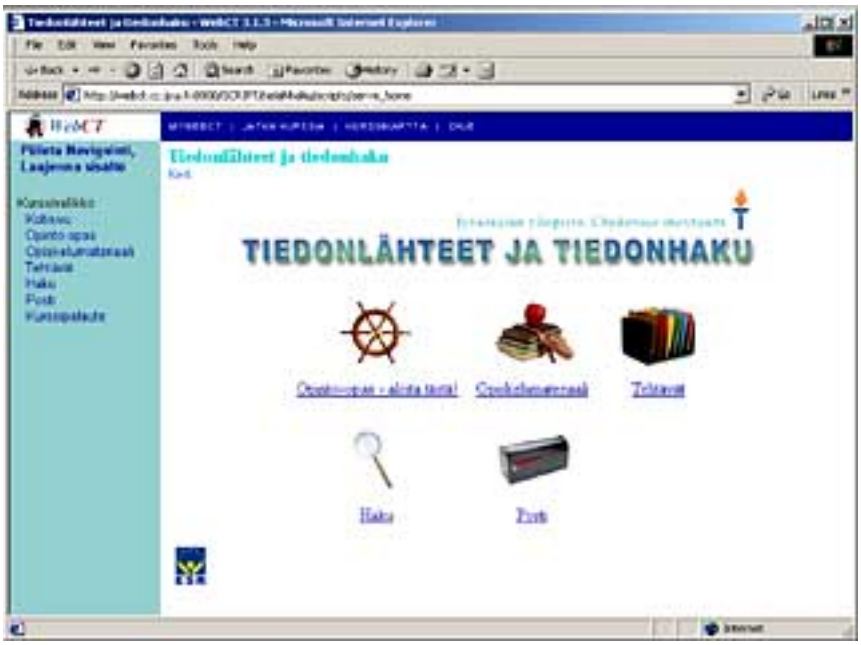
In this chapter two examples of online courses designed by the Network University project at Chydenius Institute are presented. They are also tested using Rumble's criteria (in Chapter Four) and the created basic principles of open and flexible learning at Chydenius Institute (in Chapter Five).

Both courses are offered by the Open University. "Chydenius Institute arranges Open University teaching for degree programmes and other courses in accordance with the curricula of the University of Jyväskylä. There are no formal entry qualifications. The Open University is not yet able to award degrees, but its courses can be used to cover part of the degree requirements at a conventional university.

It is also possible to complete the preliminary qualifications required for entry to Chydenius Institute's teacher training courses for mature students through the Open University." (Chydenius Institute 2001c.)

Sources of Information and Information Retrieval (1-2 credits)

This online course is about guiding students to become familiar with those concepts connected with sources of information and to variously utilize the sources of information of services, databases and networks in libraries. It's approved to be part of the Bachelor's and Master's degrees in the Faculty of Education at the University of Jyväskylä.



Picture 1. The first page of the online course of the Sources of Information and Information Retrieval (Stång 2002a).

This course is mainly implemented as self-study material. There is only one face-to-face meeting at the beginning of the course, but this meeting is not compulsory for students. The course is about studying the material placed in the learning environment created with WebCT and completing learning assignments. The tutor will guide students, whenever they need her help. She also gives feedback on assignments completed.

This online course can be seen open in many ways when analyzing it through both

the Rumble's criteria and the basic principles of Chydenius Institute:

Student-centeredness. Essentially this online course is open by the criteria of path of study, because students who don't choose to participate in the face-to-face meeting are free to choose the beginning and the ending time of their studies. They can also determine the rhythm of their studies.

This course is open also by accessibility in offering opportunities to participate regardless of age, status of employment, engagements of everyday life, economical resources and previous studies. In addition, there is no need for certainty of regularity of studies. The payment of the course won't be high according to the characteristics of Open University studies.

This online course can be thought to have openness also by place, because students do not have to be in a particular place while studying. This openness is however relative. Students are forced to study in those places with computers and network connections. Many of the students at Chydenius Institute still don't have the required equipment at home, so they need to go for example to the premises of Chydenius Institute or to a library nearby. So in reality there are few opportunities to choose where to study this online course.

According to the basic principle of student-centeredness this online course is and isn't open and flexible; some criteria are fulfilled, such as decreasing traveling, increasing accessibility and support services, but others like individualizing and criteria of contents and evaluation are not.

Usability. The second basic principle can be seen as fulfilled by the platform (WebCT) itself and by using light pages with small pictures and no audio or video materials. The visual solutions should also support usability as it helps novice students in navigation. There is also opportunity to have technical support if needed. However, the recommendations of the World Wide Web Consortium, like accessibility (services available to all people, whatever their hardware, software, network infrastructure, native language, culture, geographical location, or physical

or mental ability), are not completely fulfilled.

Publicity. The third principle also comes true, because everyone can take part in this course. The course is not, however, available freely in the Internet, but by registration it is open to everyone.

Relatively open and flexible implementation. According to all these other principles this online course is relatively openly and flexibly implemented; there's both openness and control, which together ensure the maximum success of an online course.

In summary: In the online course of Sources of Information and Information Retrieval open and flexible learning can be seen as Race (1995) pointed out: self-study materials without any co-operation with fellow students. They are only connected with their tutor. In this way it's more material-centered than student-centered. It gives an image of instruction as a package to be exported to learners to learn. Students don't have any opportunity to choose the study methods, the goals or the achievement of these goals, though the assignments are optional and applied. So mainly the implementation of this online course is not according to latest pedagogical approaches like constructivism, but it's however absolutely important for both Chydenius Institute and the students to have online courses with different implementations.

The Development of Expertise (3 credits)

The aim of this online course is to familiarize students with expertise and with the development of expertise. During the course students also become familiar with the teaching and learning processes which support the development of expertise. The online course is implemented with the model of inquiry learning. This course is part of the basic studies of education and adult education.

Picture 2. The first page of the online course of The Development of Expertise (Stång 2002b).

Student-centeredness. This online course is mainly open by place, because there's only one face-to-face meeting at the beginning of the course and the rest of the course is implemented via networks. The course is implemented with a Learning Management System called Discendum Optima. As did the previously presented online course this one is also questionably open by place because of the need for Internet access. Students are forced to study in the places with computers and network connections which mainly means studying at Chydenius Institute or libraries nearby, if they don't have the required equipment at home. When this course was carried out in spring 2002, almost every student studied at home, so the online course decreased traveling in a great sense.

In this online course there's some openness in accessibility. Students have opportunity to participate regardless of age and status of employment. However, this online course doesn't offer opportunities to participate regardless of engagements of life, because this course is inflexible by time. The course of three credits is meant to be completed in two months and there are many dead -lines for different assignments, so students are forced to study according to an intensive schedule. If students have many engagements in life, such as work, family and free time activities, they will face problems passing this online course.

Inflexibility of time shows also in the determined times of beginning and ending and also in the determined rhythm of studies. In addition, study methods are determined, too. What is open and flexible is the study materials. There are only a few documents and a couple of books which should be read by students. Students can freely choose other materials they want to utilize during the course.

Usability. The usability of this online course was high; there were light technical solutions and the visual solutions were designed to ease the navigation done by novice students. In addition, there were no audio or video materials to complicate the use of the online course. There was also opportunity to have technical support if needed. However, the recommendations of the World Wide Web Consortium, like accessibility (services available to all people, whatever their hardware, software, network infrastructure, native language, culture, geographical location, or physical or mental ability), should be better considered.

Publicity. The great barrier in this online course is that it forms part of the studies for education and adult education courses; only students who have entered these studies are allowed to participate on this online course. This means that the principle of publicity is not fulfilled in this online course.

Relatively open and flexible implementation. In this online course there is both openness and control. According to all mentioned above the online course of The Development of Expertise is not so open and flexible at all. This online course is, in many ways, teacher-centered rather than student-centered, although student-centeredness is the goal. The implementation of this online course is based on new pedagogical approaches, such as inquiry learning and socio-constructivism, but there are many boundaries set by the tutor.

During the early autumn of 2002 the development work will be done and there is pressure to make this online course more open and flexible, although the limits may be relevant for students' achievements because students may not be as self-directed as was assumed. This means that the fourth principle, relatively open and flexible implementation, is suitable for this online course and has to be fully put into

practice.

7. Conclusion

As it was said in the Introduction there's no turning back. There is a need for creating basic principles for open and flexible learning. Mainly this need arises from the fact that "increasing competition between institutions of higher education and training means that we have to be able to cater more flexibly for a wide variety of learner needs and expectations" (Race 1995). The basic principles created in this article will guide our steps on the path of planning, designing and implementing open and flexible online courses, which take into consideration students' needs and expectations.

After reviewing existing pedagogical theories about open and flexible learning there can be found four basic principles for open and flexible learning: student-centeredness, usability, publicity and relatively open and flexible implementation. These principles were also tested and explored through the practices accomplished at Chydenius Institute.

The adoption and utilization of these basic principles requires open discussion at Chydenius Institute. This can be done with the support of the whole working community. Open discussions and strategy meetings will help to build a common ground for openness and flexibility of online courses and support the whole staff in adopting and following the strategy and basic principles created. In practice the adoption and utilization of the basic principles means that every teacher and designer has to pay attention to them and strongly consider and plan, how he/she will promote openness and flexibility in his/her own online course. Open and flexible learning needs careful designing, it won't develop by itself.

The need for more careful planning and designing of open and flexible learning arises also from the existing online courses at the Chydenius Institute. Two examples were presented in chapter six. These examples pointed out that in spite of intentions, the online courses weren't so open and flexible as was thought. With the existing practices we are not yet able to ensure maximum openness and

flexibility. However, we should not think of this as an obstacle. Instead, it's a challenge to reach for through ongoing development.

Much has yet to be considered, tested, evaluated and refined until Chydenius Institute will have a holistic vision about the openness and flexibility of the online courses planned, designed and implemented in the Network University project. This joint vision enables the effective development of the practices at Chydenius Institute. The ongoing debate on the issues of learner-centeredness and organizational agreement concerning open and flexible learning is therefore needed. This is not, however, a mission impossible.

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