SUSTAINABILITY EDUCATION AT THE FINNISH UNIVERSITIES OF APPLIED SCIENCES

Sustainability focused Master Degree Program at Lahti University of Applied Sciences

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Abstract

The purpose of the paper is to introduce the sustainability focused Master Degree Program in International Business Management at the Faculty of Business Studies, Lahti University of Applied Sciences, Finland. As background information, there is a short overview to the sustainability and corporate social responsibility issues as a part of business studies at higher education institutions globally and especially at the Finnish professional higher education institutions (at the Finnish Universities of Applied Sciences).

The paper is focused on presenting an international Master Degree Program that is focused on sustainable development and responsible business management in the international business context. The program aims 1) to create new business and find sustainability oriented business opportunities between Finland and emerging markets, and 2) to create sustainable growth on Asian and other emerging markets.

In addition to the content, structure and teaching methods of the program, the paper gives some examples of previous sustainable focused research made by the students of the Master Program. These previous studies include issues such as use of renewable energy (especially business opportunities related to the wind but also other renewable energy sources), possibilities to decrease energy consumption (market potentials of eco-friendly cellulose insulation materials in India), and development of recycling and waste

management systems, for example e-waste recycling and solid waste management in India and China.

Keywords

Higher education, Master degree program, International business management, Emerging markets, Finland.

1 Introduction

The need to teach about sustainability exists (e.g. Sibbel, 2009). For example the UN has established Regional Centres of Expertise (RCEs) on Education for Sustainable Development around the world (Arburhnott, 2009). In addition to general sustainability education, there is also a need for business-oriented sustainability education. Business schools have a responsibility to acquaint their students with all of the challenges they will face in the world of work. One of the goals of business education is to ensure that the students are aware of the consequences of their decisions and that they have a wide view of the different aspects, also sustainability and sustainable development aspects, of their decisions. From this point of view, the key benefit of sustainability education is students' increasing awareness of the concept of sustainability (Davis et al., 2003) which often leads to increased acceptance of sustainability (Leal Filho, 1999) and more sustainable behaviour in business life. Thus, students need to be educated about laws, regulations, and business models but also about how they can contribute to make changing business more sustainable, responsible and ethical. For this reason, many business schools (and other higher education institutions, HEIs) have increased their attention to sustainability issues in graduate and undergraduate business curriculum (e.g. Egri & Rogers, 2003; Cordano et al., 2003; Bradbury, 2003; Kearins & Springett, 2003; Rusinko, 2005; Davis et al., 2003; Marshall & Harry, 2005; Stubbs & Cocklin; 2008; Lau, 2010; Boyce, 2008; Prinsloo, Beukes & Jongh, 2006; Felton & Sims, 2005). Against this background, it is surprising that the integration of the concept of sustainability into teaching has been given very little attention (Davis et al., 2003) before last few years.

In this paper, we introduce one Finnish example of sustainability focused Master Degree Program. The paper is organised as follows. First, there is a short overview to the sustainability issues as a part of business studies at higher education institutions globally based on the previous theoretical and empirical studies. Next, the Bachelor's and Master's Degree business programs of Finnish professional higher education institutions (the Finnish Universities of Applied Sciences, FUASs) are briefly analysed. Following this, we focus on introducing the new sustainability focused Master Degree Program in International Business

Management (SIBM Program) at the Faculty of Business Studies, Lahti University of Applied Sciences (LUAS), Finland. In addition to the content, structure and teaching methods of the program, finally the paper gives some examples of previous sustainable focused research (Master's Thesis) made by the students of the SIBM Program.

2 Sustainability issues in business studies at universities globally

HEIs play an important role in sustainability (e.g. Posch, 2009; Sterling & Thomas, 2006; Axelsson et al., 2008). They can be important leaders and models for the adoption of sustainable behaviour and policies (Davis et al., 2003). According to Stephens et al. (2008) the HEIs' role can be viewed in two ways: HEIs can be seen as institutions that need to be changed, and on the other hand, HEIs can be seen as a potential change agent. This means that HEIs can contribute to the societal transition toward sustainability in different ways. First, HEIs can be as a model of sustainable practices for society by its own behaviour (e.g. Mulder, 2004; Rappaport, 2008). Second, HEIs are places of concentrated learning through their teaching and curriculum, promoting and advancing sustainability (Colucci-Gray et al., 2006). Third, HEIs are places of thinking, creating, and also exchanging sustainability related knowledge Fourth, HEIs integrate with and influence the rest of society not only as an institution but also as individuals. (Stephens et al., 2008)

As presented in the introduction part, there seems to be a coherent opinion about the importance of sustainability-related issues as a part of business studies. This can be seen from many business schools' curriculum. For example, Christensen's et al. (2007) research of the top 50 global MBA programs shows that over 70% of them offer sustainability related topics.

There are many changes to be met before sustainability can truly be mainstreamed into business training programs. Students need to be prepared to balance between business and society. Sustainability is not only an environmental issue but also social and ethical issues as Marsella (2007) reminds. Students need to know how to align social and environmental objectives with financial goals. University academics should balance the humanistic and vocational aspects of education. Educators should actively consider their positions in relation to the global hegemonic balance. Educating students in sustainability issues is about giving them tools to understand the issues and apply them in different business environments, especially in traditional business areas that most will be entering. (Weybrecht, 2010; Symonds, 2009; Boyce, 2008)

The sustainability framework relates basic concepts and assumptions within the ecocentric, ecological modernization and neoclassical paradigms to organizational practices and behaviour. Only one version of sustainability should not be presented to the students.

Students need to develop their critical and reflective thinking concerning sustainability. For the most part, business students have only been exposed to neoclassical economic thinking within the other business subjects. The aim is not to convert the students to any particular viewpoint but rather to help them understand and articulate all the sides of the sustainability. (Stubbs & Cocklin, 2008) The problem is that most business training programs do not provide a deep understanding of what sustainability is and how graduates can apply sustainability within their jobs and careers. In general many students are interested in doing something more with their lives; they want to "make a difference" for this they need to know about work opportunities and what their interest in sustainability could bring them even when working in traditional business areas. Sustainability is often taught as an add-on. The implicit message is that sustainability is only relevant to those who have the word "sustainability" in their title. Students do not learn how to translate and integrate their ideas about sustainability into the real world. Students feel that sustainability and corporate social responsibility are not directly useful to their careers. (Weybrecht, 2010)

2.1 Integration level and optionality of sustainability studies

At the same time of growing interest of sustainability-oriented business studies, there are different views about integration level of sustainability issues and optionality of sustainability courses (Stubbs & Cocklin, 2008; Christensen et al., 2007; Tilbury et al., 2004).

Page and Collins (2010) have divided the green MBA programs into four archetypes (the all-green MBA, the conventional MBA with a green concentration, the dual degree green MBA, and an MBA that offers selective green options such as one class) based on their empirical study from 168 US colleges and universities. In the all-green MBA programs, sustainability is completely integrated into the program, These programs are located exclusively at small private institutions. In the dual degree MBA programs (MBA and Master of Science in an environmental field), the level of integration is much less than in the all-green MBA programs. The dual degree programs are located at mid-sized or large institutions. In the conventional MBA programs with a green concentration include in addition to the conventional majors certain sustainability courses either integrated in core business courses or as standalone courses. The fourth type of program, MBA with a touch of green, has one course focused on green business practices. Both the green concentration/major programs and green course offerings exist at a variety of institution types.

As mentioned before, sustainability issues can be taught as standalone courses or integrated into business courses in the curriculum. For example Monash University has taught sustainability as a standalone course for more than ten years. (Stubbs & Cocklin,

2008) One reason for standalone sustainability courses might be that the concept of sustainability is too abstract and broad (e.g. Leal Filho, 2000; Anderberg et al., 2009). The standalone courses are good and useful starting points for sustainability studies. A standalone course is an easy and cheap way to test the levels of interest in sustainability in the HEI. One problem of teaching sustainability issues as a standalone course is the educational disconnect between core business issues (business strategy, the legal environment, economics, accounting, corporate finance, marketing and international business) and sustainability issues (Stubbs & Cocklin, 2008). Integrated courses help students to realize that sustainability is embedded in all business decision-making. It is not a stand alone or abstract discipline. In some cases, quality management (QM) has been used as a theoretical bridge that helps to link the concept of sustainability to the traditional business issues in sustainability teaching (Rusinko, 2005). The pedagogical approach of teaching is important.

2.2 Teaching methods and assessments

A large variety of teaching methods is used when teaching sustainability issues. The used methods include lectures, videos, audio outlining, class discussions, case studies, project based-learning, problem-based learning, field trips, guest speakers as well as different literature (books, academic and practitioner articles) and websites of international and national organizations such as UN, European Union, World Health Organization (WHO), Global Reporting Initiative (GRI), World Business Council for Sustainable Development (WBCSD), International Chamber of Commerce (ICC) etc. (e.g. Davis et al., 2003; Marshall & Harry, 2005; Buchan et al., 2007; Arthnott, 2009) In addition to all other activities, it is important to have sufficient time for detailed discussions with students (Buchan et al., 2007). Despite variety of used methods, students' understanding of sustainability is mainly limited by the classroom learning experiences and assigned readings (Davis et al., 2003). As well as teaching methods also assessment of sustainability courses varies. In most of cases it is some kind of combination of essays, group and case assignments, oral presentations, and written examination (Stubbs & Cocklin, 2008; Buchan & Blum, 2007).

Stenvenson (2007) highlights a process-driven approach and a competence-driven curriculum with problem-solving and critical thinking instead of a content-focused and subject-based curriculum.

Education for sustainability subsequently differs from traditional approaches to education in its structure, context and pedagogy. Teaching sustainability should be inductive, not deductive. Students are interested in real life experience in which managers are

encountering tough ethical situations that demand action. Students generally want to share their views, thus teaching ethics should be highly interactive. The case studies based on real management situations are particularly effective in creating inductive, interactive, real-world based learning experience. The case study scenarios utilising codes of ethics and ethical decision making models used in teaching is critiqued, and it is argued that it is necessary to transcend the individualised conception of ethics implicit in such approaches. Carefully crafted field exercises can expand students' perspectives and understanding and can enhance their capacity to deal with ethical dilemmas found in the business world. Reflective learning requires students to assess consequences in which professionals have been held accountable. When students consider the impact of faulty moral reasoning, they view accounting ethics as something other than just an intellectual exercise. In the learning process the students move through different stages in the model of moral reasoning. Singe exercise is neither untended nor likely to raise students to the highest level of moral reasoning. Higher levels of moral reasoning develop slowly and not universally. The proper role of education is to assist in this development process. (Frank, Ofobike & Gradisher, 2010; Felton & Sims, 2005; Boyce, 2008)

When thinking of teaching for example, business ethics, which is an important part of sustainability, outcomes should be considered by asking what the students ought to be able to do better when they finish the course or what they may not be able to do as well as when they began. The students at the conclusion of the course should understand their core values and be aware of their ethical and leadership accountabilities. Ethical decision-making is a complex process weighing the conflicting interests of stakeholders and making an optimal and most responsible, rather than ideal decision. For a long time now, private sector enterprises have viewed investors as primary stakeholders, but more recently customers' and employees' perspectives are also considered. Business ethics teaching effort should broaden the cultural perspectives of the students because ethics emerge out of and reflect cultural values. The view of what is considered ethical change over time. Students need to be made aware of the importance of considering the second and third generation consequences of a managerial decision. An effective business ethics teaching effort enhances the comfort levels of students to discuss ethical issues in managerial and other settings. (Felton & Sims, 2005)

The study of undergraduate business education at the discipline level the curriculum coordinators' perception of the level of inclusion of ethics and social responsibility at the level of specific programs and majors in 380 AACSB International undergraduate member schools in North America indicated that there is a perceived deficiency in the degree of integration of

sustainability into various disciplines. On the surface, it seems that sustainability issues are taught in business schools but the content level in business programs is not adequate to meet the needs of business graduates. (Nicholson & DeMoss, 2009)

As a conclusion, students need to learn critical thinking and to learn how to make the most reasonable decision taking in to consideration also the ethical, sustainable and responsible aspects. Students need to learn to balance between business and society by aligning social and environmental objectives with financial goals. Students need to be prepared to apply these issues in a real business environment. Schools need to include courses about sustainability, responsible business, business ethics and related topics in their curriculum. Learning objectives of the course must take into consideration the students' readiness. The purpose of business education is expand the ways students view these topics and not just to give a narrow idea about the topics. Absence of teachers training programs can be a barrier in integrating sustainability, responsible business and business ethics to the teaching.

The biggest challenge related to teaching sustainability issues includes time (time to train faculty, to collect study materials, and to assess progress), support (support integrates the concept of sustainability into core courses), assessment, and students' understanding (Davis et al., 2003; Clugston & Calder, 1999). The collection of study materials is challenging due to the amount of available textbooks on the topic of sustainability (Marshall & Harry, 2005). Especially the amount of business-oriented sustainability literature is very limited. Besides literature, students need realistic classroom experiences (Davis et al., 2003). Experiences from Portland State University (Marshall & Harry, 2005) show that in sustainability teaching, there is greater need for the real institutional, industry and corporate level examples than in traditional business courses. This demands a lot from methods used on teaching and the used information sources (currently teachers used information sources consist of literature, training, personal influences, professional organizations and networking, conferences and workshops (Davis et al., 2003)). Thereby, it is important to remember that teachers need support and sufficient training for teaching sustainability issues. This is supported by the Holdsworth et al. (2008) study which identified both the lack of organizational and resource support for staff and the absence of staff training programs as key barriers for change in universities. Professional development in education for sustainability is a key providing academics with the capabilities and drives to re-orientate their teaching, the organizational structures, as well as the development of understanding for the need to change the culture in the universities. Professional development not only introduces academics to the concept of sustainability but it also provides them with capacity to undertake such curriculum change.

Sustainability knowledge and content is important but so too is the pedagogy associated with individual teaching practices. (Frank et al., 2010; Holdsworth et al., 2008)

2.3 Does the sustainability education matter?

According to Lau (2010) ethics education improves students' ethical awareness and moral reasoning. For example, students with ethical education show a significantly stronger agreement that business should have higher moral values other than profit maximization. Lämsä et al. (2008) have studied the effect of business education on students' attitudes on corporate responsibility in society was studied by performing a survey among Finnish business students. The sample comprised 217 students pursuing a master's degree in business studies at two Finnish universities. The results show that, although as a whole, students value the stakeholder model of the company more than the shareholder model, the attitudes differ according to gender. Female students place more weight on corporate ethical, environmental and social responsibilities than their male counterparts both at the beginning and at the end of their studies. Business school education had no gender socialization effect in this sense. The gender difference may be based on past socialization and the current business school experience may be too short to override gender attitudes and values that have been socialized at an earlier stage. Business school education faces a challenge to try to influence the attitudes of male students in particular. Tomorrow's Finnish business professionals' attitude on corporate responsibility seems to be that the primary role of a firm is to help meet the expectations of the different corporate stakeholders, among which employees and customers are the most important. Business education was found to shape students attitudes so that valuation of the shareholder model increased and the importance of equal-opportunity employment decreased in the course of education. Observed socialization effect towards the shareholder model indicated that business education may be contributing to a narrow idea of corporate responsibility in society. The findings that students' attitudes about the importance of equal-opportunity employment decreased as a result of business education indicates that the Finnish business school context lack a well-developed awareness and willingness to deal with equality problems between genders in working life. A useful way to influence attitudes about ethical, environmental and social responsibilities of business is through persuasive communication of business leaders and experimental and critical reflective learning.

When the research focuses on the relationship between business schools and environment dimensions, they do it so in a microscopic and disintegrated way. Therefore, a more complete and systematic perspective is needed. In order to better assess the contributions

of business schools for the generation of environmental knowledge teaching activities, research, extension community and university management are articulated in three bases of analysis: creation, diffusion and adoption of environmental management knowledge. The creation of knowledge on environmental management is closely related to research activities, which are developed within the business schools. The diffusion of environmental knowledge relates with environmental education promoted by business schools. The knowledge diffusion of environmental management can be accomplished by teaching the issues in undergraduate and graduate levels and by extending knowledge generated within business schools to the community. Business schools are often not equipped to teach these issues. Often the institution itself is not engaged in sustainability. Adoption of environmental knowledge in business schools means that business schools are themselves organizations like any other and therefore should apply the environmental management knowledge to reduce the impacts they cause to the environment. (Jabbour, 2010; Weybrecht, 2010)

3 Sustainability education at the Finnish Universities of Applied Sciences

The purpose of this empirical study is to analyse to which extend the Finnish Universities of Applied Sciences teach sustainability, responsible business, ethics or corporate responsibility in their business degree programs. The analysis is based on qualitative research, conducted by first gathering information about the Universities of Applied Sciences from the web-page provided by the Ministry of Education. After the schools that offer the Bachelor's and Master's degree programs in Finnish (the degree programs taught in Swedish or English were not covered), business studies were identified, each school's web-page was visited and the curriculum of the business studies was studied. If the name of a course in a curriculum included some words related to the topic, the course description was studied. This means that the analysis includes mainly standalone sustainability courses. Thus some information of sustainability education integrated into core business courses might be missing.

The other limitations of this study arise also from the method used and information analysed. First, the analysis is a cross-sectional study based on information obtained from the newest on-line curriculum (curriculum of academic year 2009 – 2010 or 2010 – 2011). Second, the analysis is based only on the curriculum of universities of applied sciences. Thus the study doesn't give an extensive description of business-oriented sustainability education in the scientific universities. Despite the limitations, the analysis gives a snapshot of the current situation of sustainability focused business studies at Finnish professional universities and at

the same time provides a starting point to the issues which should be definitely studied in detail.

According to the performed study in 2010 there are 21 Universities of Applied Sciences were students can study the Bachelor degree of Business Administration. 13 of these schools had included in their curriculum course about sustainability, responsible business, business ethics or related topics. There are 9 subtitles of business study degree programs available, such as Business Administration and International Trade etc., and an uncountable number of specialization options within the degree programs. One University of Applied Science can have several degree programs and again several specialization options within the different programs. In total there are 33 different degree programs available for the students in youth education programs with main language Finnish. From these 33 degree programs 18 degree programs included courses about sustainability, responsible business, business ethics or related topics. In 12 of the degree programs the course was compulsory. To sum up, only from 12 of 33 BBA curriculum investigated included compulsory course(s).

In 2010, there are 10 Universities of Applied Sciences were students can study the Master of Business Administration degree in Finnish. There are 3 subtitles business study degree programs and several specialization options. In total there are 12 different degree programs available. Thus altogether 12 Master program curriculums were investigated for this study. From those curriculums, we found only 3 that included a compulsory sustainability course. These courses were provided by 3 different schools. No optional courses about sustainability, responsible business, business ethics or related topics were offered.

Ethical knowledge and sustainability is mentioned in many schools' competence map, but at the same time these schools are not offering courses dedicated to these issues. One can only assume that the schools expect that the students will get the competence about these issues from some business course.

This preliminary study indicates that Universities of Applied Sciences vary a lot on how many courses about sustainability, responsible business, business ethics and related topics they include in their curriculum. If a student is interested in learning extensively about sustainability relationship with business studies, s/he is able to find a suitable degree program for them.

There are 8 schools that offer Bachelor's degree business studies and 7 schools that offer Master's degree business studies that have no courses, compulsory or optional, about these topics in their curriculum. If this is thought of in terms of the number of students, there are a lot of students entering the business world without education about sustainability,

responsible business and business ethics. This study indicates that attention to this issue is needed in future.

4 Sustainability focused Master Degree Program at LUAS

As discovered above, the Master Degree Program in International Business Management at LUAS is one of the Master programs including sustainability studies. There are three reasons to have this kind of sustainability focused Program at LUAS: 1) sustainability plays an important part in the strategy of the university, 2) the faculty of business studies expertise of South-East Asian business and Bachelor's level international business programs, and 3) the City of Lahti and the Lahti Region have very strongly stated that their strategic objective is to be the centre of the environmental business in Finland. Thus the regional strategies have an important role behind the SIBM program. Meanwhile the role of the government has been almost non-existent whereas in some other countries for example in Japan (Namura & Abe, 2010) the government has been the major driver in sustainability education development. The regional strategies and environmental companies can be seen as the major drivers when focusing the program to the sustainability issues.

The SIBM Programme aims 1) to create new business and find sustainability oriented business opportunities between Finland and emerging markets, and 2) to create sustainable growth on Asian and other emerging markets. The objectives of the SIBM Program are described as follows in the study guide: The Master Degree in International Business Management focuses on bridging the need for business development between markets in transition and Europe. The purpose of the degree program is to develop business professionals' analytical skills, managerial skills, and multicultural team skills by focusing on developing real business opportunities.

The full-time degree program is a modular series of courses. The new curriculum (totally 90 ECTS) consists of five modules: 1) Module A: Responsible Business and Sustainability (10 ects), 2) Module B: International Business Management (30 ects), 3) Module C: International Communication (10 ects), 4) Module D: Research Methods and Writing (10 ects), and 5) Master's Thesis (30 ects). The modules are built by focusing on the segmentation of selected markets initially as a team, and then as individuals resulting in co-ordinated deliverables. These deliverables ideally focus on creating real business opportunities with associated revenue models. The students work as a multicultural team to analyze the target market, create market segmentation and develop a focused approach to creating or developing international business opportunities. The aim of this method is to bridge the gap between academic learning processes and business needs in emerging markets.

A study group normally consists of 12 to 18 students. The SIBM program is marketed especially in China and Vietnam. For this reason, most of students come from South-East Asian countries. The biggest group is the Vietnamese students. In addition, there are normally one or two Finnish students. In recent or most resent years, there could also be some individuals from European and African countries. Most students also return to their home countries after studies. The international group means that multidisciplinary, multilingual, multilevel and multicultural approaches need to be recognized and promoted in education (Marsella, 2007; Anderberg et al., 2009). From this point of view, two important questions arise: how a global perspective of sustainability can be integrated and how learning in a global context is best developed (Anderberg et al., 2009). Recognizing the differences in student groups based on backgrounds, the shaping experience, the exposures to the world of work etc. is one of the first tasks in teaching (Felton & Sims, 2005). International study group means that we have the same kind of challenges in teaching sustainability as at Portland State University has in their own MBA program. At Portland State University the main challenges in designing sustainability teaching have been conceptualising sustainable development and sustainability for international business students, and establishing relevance for developing and developed country students (Marshall & Harry, 2005). Because of the different backgrounds of students, their diverse perspectives had to be taken into consideration when teaching sustainability issues. This means that the approach to the sustainability and sustainable development have to be global in nature.

4.1 Module A: Responsible Business and Sustainability

Module A, “Responsible Business and Sustainability” is a new module. With this module, we like to highlight and clearly show the focus of the program. The objective of this module is that students understand the scientific background of sustainability, are able to use different tools in developing environmentally-friendly solutions in business development, and understand the importance of ethics in business. The module consists of two standalone sustainability courses: 1) Sustainable Development (5 ects), and 2) Responsible Business Management (5 ects).

After the first course, Sustainable Development, students should be able to see the real effects of sustainable development in various business operations, be able to evaluate future possibilities of the sustainable development as a key factor of competitive edge, know the environmental regulations at least in the EU, in Finland and in his/her home country, and are able to analyze the situation of sustainable development in Finland and in his/her home

country. The course content consists of sustainable development in the philosophic context, the relationship between sustainability and corporate strategy, performance measurement of sustainable development solutions, as well as regulations and recommendations. This course is designed especially for the SIBM program but the course is offered as an optional course to students of the Finnish Master Degree Program in Entrepreneurship and Business Management (FEBM). Exchange students can also study the course.

The second course, Responsible Business Management, is taught together with FEBM. After this course, students should understand the characteristics of responsible business management and corporate social responsibility. In addition, students should be able to adapt the theories and practices of responsible business management. The content consists of the concept and utilization of responsible management, ethics in business, social responsibility business models, corporate accountability, corporate governance, responsible stakeholder communication and reporting.

In both courses, the study methods include lectures, visiting lectures, and real business case studies. The study material consists of package of scientific journal and professional magazine articles as well as web-based information. The assessment is based on learning assignments and written test.

During this module, students get basic understanding about different approaches to the sustainability, sustainable growth and development, as well as sustainable and socially responsible investments and innovations, their impacts on business etc. On the other hand, the idea is to get students thinking about different views of sustainability, what they mean for organizations, how different organizations approach sustainability, how different organizations interpret and implement sustainability, how sustainability influence, how it is integrated into business activities, and how organizations measure, report and communicate sustainability issues with internal and external stakeholders. Based on this understanding together with substantial business know-how and business management competence, students have possibilities to behave in a more sustainable way in their personal life, improve sustainable development in their future business life, and in the best cases to find potential sustainability focused business opportunities.

4.2 Sustainability issues in other modules

In addition to the special module, the responsible business management and sustainability issues are partly integrated into other modules, especially the International Business Management module, and individual core business courses such as international operations, marketing and sales management, corporate strategy, accounting and finance etc. In the new curriculum, for example, differences in sustainability reporting, harmonization and

standardization of reporting, reporting audit and assurance, the role of corporate governance in corporate financial reporting, possibilities to finance sustainable innovations, and sustainable investments are discussed more deeply during the International Accounting and Finance course. In the same way the sustainability issues are deepened in other core business courses.

Sustainability focus is not a totally new aspect of the program. These issues have been discussed in previous years too. As a concrete example of previous years is the International Project Management course which is shortly described below. This course is a good example of how the sustainability issues and business subjects can be integrated in teaching.

4.3 Project and problem-based learning in sustainability focused Project Management course

The Project Management course, as well as most of the SIBM courses, was carried out using project based learning (PBL) which is "a model for classroom activity that shifts away from the classroom practices of short, isolated, teacher-centered lessons and instead emphasizes learning activities that are long-term, interdisciplinary, student-centered, and integrated with real world issues and practices" (San Mateo County of Education, 2001). PBL is also a process where the students learn using the project management processes and techniques. The same method is used in sustainability education in other universities too, for example at RMIT University in Australia (Jayasuriya, 2009).

Project based learning is very close to problem based learning. The idea is to solve an issue using project tools, techniques and methods. The main objective of project-based learning is for the student to learn how to think and find solutions to the issues that arise by them selves. The importance of the project is not on the end result, but on the process, the experiences the students have to reach the results of the work done.

In the project, the learning experience happened on two levels: Firstly, the aim of the project was to identify the required amount of topics, decided by the students themselves, and the same amount of target countries (focus was on emerging markets) of which the students would search information and evaluate and analyse business opportunities for Finnish environmental companies. On the other level of this project, the students were to learn how to develop a project organisation and to run the organisation and different roles in order to get the best possible results.

At the beginning of the course, the students set their own goals based on the program goals and objectives. They built a team to manage the project to achieve the goals and objectives set in the program: Learning about sustainability issues and social responsibility, to find

business opportunities for Finnish companies in the environmental business in the emerging markets and how these can be developed and implemented in the companies and the countries. The project started with the theory of project management and the different organisation models. The master students were then given a task to identify the relevant tasks and roles in the project and to form an organisation. After they had agreed on a suitable organisation model and tasks, they chose people for different roles. The first meeting of the organisation also agreed on three topics and three countries that the study would focus on: water, energy and waste and India, China and Vietnam. Even if the main target of the course is to introduce project management concepts, to describe the process management process and teach how to manage international teams, the project based learning allows the student to develop skills (such as problem solving skills, research for information, thoughtful decision-making, teamwork, multicultural communication, organizational skills, motivation and presentation skills) which are needed by today's companies to ensure success in their business operations. At the same time they learn something new about the subjects, in this case about sustainability and environmental business (cf. Burns, 2009 about teaching sustainability in skills-based courses). In the classroom, PBL also provides opportunities for teachers to build relationships with students (San Mateo County of Education, 2001), which is very important when working with a multicultural study group.

The project faced some challenges mainly related to the multicultural communication. Instead, the integration of sustainability issues was very easy. In this first case the course focused on some special issues (water, energy and waste) of environmental sustainability. These issues are only one very small part of sustainability. In future there are several other sustainability issues to which students can focus on in their own projects. Now the project theme was based on the regional business environment in the Lahti Region. In the next time the project can be based on those sustainability issues which are important for the students. The final report of this project is also useful. It can be used as study material in the other sustainability and project management courses.

The biggest benefits from working with project based learning, was on the other hand that the students got a real life experience of a strict scheduled, multicultural project where they had to learn how to control the workflow and schedules so that all the work was done in time and the workload divided as evenly as possible among each other.

The other benefit was that the students were highly motivated, as is usual in project-based learning, when they saw the impact the project has their real life, the benefits for them and the society. In this case, the project-based learning also helped students to understand the

broad concept of sustainability and its relationship with core business issues. It helped students to understand that sustainable framework is not only environmental protection but it can also create profitable new business. The project also provided background information about environmental issues in the chosen target countries. This information was very important later when the students planned their thesis research. The result of the project was used in most of the cases as a starting point for the thesis research.

4.4 Sustainability focused Master's Thesis

As mentioned before, the master students acquired knowledge and understanding of these topics and then later they were able to choose their own individual topic for the master's thesis.

Above we mentioned that the City of Lahti and the Lahti region strongly focused on environmental business. On of the important actors is Lahti Science and Business Park Ltd which is a non profit organization partially owned by the city of Lahti. It develops the Cleantech business and acts as a co-ordinator of the Finnish Cleantech Cluster mandated by the Ministry of Employment and the Economy of Finland. One of the methods, Lahti Science and Business Park has to enhance the growth and internationalisation of the Cleantech companies is to gather company consortiums and facilitate their market studies and efforts in finding projects and partners in foreign countries. The main target markets are China, Russia and India. This is a huge opportunity for the master students to co-operate with these consortiums to find real cases for their master's thesis. There is a plan for starting a consortium of companies concentrating on water and another one on waste management issues with target countries Russia and India. The master's students from these countries along with the Finnish students could provide these companies first hand information of the cultural differences and working methods in these specific countries. The benefits would be mutual to the companies as well as to the students needing real cases for their master's thesis studies.

In the previous master study group the students accumulated knowledge of water, energy and waste issues in India, China and Vietnam during the project management course. Based on that preliminary study, most of the students focused on sustainable energy issues such as the use of renewable energy (especially business opportunities related to the wind but also other renewable energy sources), possibilities to decrease energy consumption (market potentials of eco-friendly cellulose insulation materials in India), and the development of recycling and waste management systems, for example, e-waste recycling and solid waste management in India and China in their Master's Thesis. Only three out of the 13 students were able to co-operate with a Finnish company while working on their thesis because there

was no built-in model for co-operation with the companies. To increase the level of application of the master's thesis studies there needs to be more companies involved already in the stage when the students plan their thesis topics. Even if Finnish companies of the Lahti region co-operate with the LUAS students in many ways and even if there have been international students for several years in the Lahti Region, especially the small and medium sized companies have only gained very little experience from working with international students.

Some of the previous group's theses are briefly described in the next few chapters.

Do Thi Bich Hang's (2009) study "Wind power supply to the Phu Quoc Island district, Kien Giang province, Vietnam" presents a proposal for a wind power plant project in the Phu Quoc island district. The study proposes a business model for Finnish companies to invest in wind energy business in Phu Quoqc. In the empirical research, Hang has interviewed local authorities, hotels, and residents as well as Electricity Vietnam and Hanoi University of Technology. The empirical research shows that there are sufficient wind resources and encouraged investment policies for this kind of business. As a business model Hang proposes 100 % foreign investment entry.

Nina Harjula's (2009) study "Marketing strategy for retailing small-scale wind energy turbines in Indian market" analyses the small-scale wind energy markets in Mumbai. The study is focused on questions: How feasible is the wind energy for SME businesses in Mumbai? What are the main challenges and opportunities of small-scale wind energy in Mumbai? Based on the observation and interviews with wind energy sites and companies, potential customers and other stakeholders, small-scale wind energy solutions would bring ease to some energy problems such as energy peak times in the main grid. Due to the low level of regulations, this kind of wind energy solutions would be quite easy to access. Harjula recommends direct sales of wind turbines and power purchase agreements as most appropriate marketing strategies. The best way to enter to the market seems to be a joint venture with an Indian company.

Rakhshanda Khan's (2009) study "Market analysis of environmentally friendly cellulose insulation material in the construction business in Srinagar, India" analyses the market for environmentally-friendly cellulose insulation material in Srinagar. Khan's study focuses on the following questions: What is the demand for cellulose insulation in Srinagar? How can cellulose insulation be sold in Srinagar? According the study there is a real need for this kind of insulation. Based on interviews with the structural engineers, construction companies, architects, government officials, printing agencies and retailers, Khan sees tremendous potential for cellulose insulation business in Srinagar. According to her, the most important

factors are the weather conditions, lack of competition and high environmental awareness among the government.

Yang Xun's (2010) study "Evaluate business opportunity to invest in large scale e-waste processing facility in China" introduces the market situation of e-waste business in China. Based on the market analysis (including analysis of business potentials and risks, entry modes, products and services, suppliers, distribution channels, and revenue models), Yang proposes a joint venture as the most suitable business model to help European investors to achieve a successful business of large scale e-waste processing facility in China.

Mervi Suni's (2010) study "Renewable energy for base station and local economy in developing countries" analyses business potential of telecommunication sector in rural villages in developing countries. The main research question was: What is the role of local economical and social development in rural villages in order to create sustainable business possibilities for telecommunication equipment and service provider in developing countries? The research objectives were to collect together the characteristics of local economic development and social growth in rural areas in developing countries and thus increase the understanding of the local economy concept from telecommunication equipment and service provider point of view, to analyse and compare the renewable energy solutions regarding how they create wealth for villagers and benefit the local economy, to define the potential long-term business opportunities for telecommunication equipment and service provider that are based on the usage of renewable energy sources and the development of local economy in rural areas, and to present a business case for electricity production based on the technology chosen. As a result, Suni presents a model for a business coalition to enter to the markets.

All of these briefly presented theses, as well as other Master's Thesis or this Master Program, are published at The electronic library Theseus (http://www.theseus.fi/web/guest/etusivu). And some of them have already led to real business enterprises. As a result of the new curriculum, we will get more of these kinds of sustainability focused real business cases in the future.

5 Discussion

The current state of business education related to these topics varies depending on the degree program. We strongly believe that sustainability, responsible business and business ethics should be introduced to all business students. Our opinion is that a standalone course for these topics is needed. Of course, the teachers of other business courses should be also encouraged to integrate these issues to their courses. The level of "readiness" of the

students as well as the positions where they will enter in the business world should be considered, when planning the learning objectives and study methods of the course.

In Finland, the Ministry of Education has granted the schools a right to emphasize courses specialised in the environmental issues in their curriculum. There are also high schools that are specialized in environmental issues in Finland. However, most students do not learn these issues during their high school studies. Thus, it is important to include at least some basic information about sustainability, responsible business and business ethics to the Bachelor's and Master's degree studies. The business education of University of Applied Science does not respond to the need of today's business life, if it does not include any education about sustainability issues.

An important point to be noted is that most students in Master's degree program will work in the traditional business field after studies. Thus the sustainability courses should help students to learn how these issues can be applied not only in the environmental business but also in the other business sectors too. Sustainability, responsible business and business ethics can all be impacted by small things and decisions done by individuals. Of course, changes on a large scale are also needed, but the students should concentrate on thinking, how they can affect these issues.

As one of our alumnus said, companies have paid very little or even any effort in practice to achieve sustainability: "I have worked in logistics as a forwarder, a buyer and logistics co-ordinator responsible for reverse logistics and inventory management. All the companies that I have worked for have obeyed the applicable laws and regulations, but unfortunately the companies have not made any effort in practice to achieve responsible business practices, sustainability or corporate social responsibility. All the three companies of course advertise in the intranet pages and one of them even publicly that they will do everything to be environmentally and socially sustainable. The companies are publishing reports where they praise themselves. These actions are not visible in anyway in the logistics and purchasing department. In my current job, I have not even heard once that some decision would be based on the environmental or social sustainability. On the contrary, environmental issues are not assessed at all when making some transportation decision. Items are not booked to direct flights from the production site to the customer site, but instead the items fly around the world via consolidation points and warehouses so that the company's internal procedures can be followed. In this or in my previous positions transportation routes or transportation means have never been selected based on any environmental criteria's. The criteria's have always been costs, time and some company's internal procedures. I am really

sceptical about the environmental and social sustainability of logistics. Currently logistics is far from being responsible business."

Equally important to the topics which are taught is the way in which they are taught. The most challenging task is to make the students expand their way of thinking. Many students have strong and narrow opinions about these issues. Using case studies in the teaching is good as long as the case is realistic and related to the reality that the students face in their jobs. A visiting speaker from some company is excellent as long the visitor does not only praise their company's achievements, but also tells about how sustainability, responsible business and business ethics are really dealt within the company. The students need to hear what problems and challenges there have been and still are and how those problems are tackled. Real honesty is expected from the visitors. Finding such a visitor is often difficult. Individual learning assignments are appropriate because these issues are about the personal view of each student. These issues are somewhat subjective and reflect the thinking of each person. Group discussions are also good. Tests can measure the knowledge of the scientific background of sustainability, responsible business or business ethics, but when the purpose is to make students think and question their own way of thinking then in my opinion demanding learning assignments are better. The evaluation needs to be based on numeric scales, because if it is only pass or fail, then it does not motivate students. The numeric scales present the degree of knowledge the student gains and the applicability of this knowledge in real life. Depending of the criteria for valuation selected by the teacher, some students get their motivation from learning new things, but there are also students who will get motivated from the grades they get from courses. It is important to remember that the development of an individual's knowledge of sustainability requires a combination of personal commitment and involvement in HEI initiatives as Davis et al. (2003) said.

If we look at the sustainability focused Master degree program in International Business Management at LUAS in the international context we can see that this program and the Master of International Program at Portland State University (Marshall & Harry, 2005) are similar in many ways. Both programs offer traditional business courses with an international focus. Both programs are intensive full-time programs with both international and domestic students. What is more important is that the majority of the international students come from developing countries (mostly from South-East Asian countries) where HEIs play an important role in sustainability development (Anderberg et al., 2009). Despite similar backgrounds, there are differences in organizing curriculum. At Portland State University, the master program consisted of one core course (the introductory course) and three optional courses

of sustainability issues, whereas the LUAS Master Program includes two compulsory standalone sustainability courses and some kind of integration with core business courses. The intended stage in the green matrix presented by Page and Collins (2010) is a green (or sustainable) major. At the moment the SIBM Program is more or less something between green course offering and a green major.

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