

THE NETWORK FOR INTERACTIVE AND INTEGRATED LEARNING (NIIL) IN BUSINESS STUDIES

Eija Koskivaara¹, Riitta Koskimies² and Pasi Jokinen³

¹*Department of management, Institute of Information Systems Science
Turku School of Economics, Rehtorinpellonkatu 3, 20500 Turku, Finland*

²*Finnish language and communication
Turku School of Economics, Rehtorinpellonkatu 3, 20500 Turku, Finland*

³*International Business
Turku School of Economics, Rehtorinpellonkatu 3, 20500 Turku, Finland*

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Abstract: Teaching students to understand, debate, and solve problems is one of the largest challenges educators face in business education. Creating an interactive and integrated learning environment is one of the largest challenges universities face in Finnish society. Due to feedbacks Turku School of Economics (TSE) decided to increase the integration between subjects by approaching the study of business from modern, process-based point of view. One reason for this was that TSE aims to be an internationally recognized actor in the development of business expertise and it has defined interactive teaching and learning methods as a key success factor. This paper describes the process and the present status quo of the developed network of interactive and integrative learning (NIIL) in business studies. The NIIL has been real success case and rewarded several times. Furthermore, the paper proposes some improvements proposals for the networks like the NIIL.

1 INTRODUCTION

The challenges of teaching teamwork in management and business communication programs are endless (Cockburn-Wooten, Holmes and Simpson 2008). For example, teaching students to understand, debate, and solve problems is one of the largest challenges educators face (Paladino 2008). Creating an interactive and integrated learning environment is one of the largest challenges universities face in Finnish society. In business schools, various disciplines are traditionally taught in a fragmentary way. While graduates, bachelors or masters, in business studies place themselves on demanding management or specialist positions, in which a total view on business operations is required. This imbalance was also recognized by local business community in the nineties. In addition, the business community argued that besides multidisciplinary thinking a graduate in business studies needs good personal skills in information gathering, communication and team work.

At the same time, Turku School of Economics (TSE) was in the middle of its strategy process. TSE decided to reply to the call of enterprises by increasing the integration between subjects. Indeed, a process-based study approach was launched to familiarize students with real business life cases. Most of these cases were provided by local business community which is one way to deepen the collaboration with local companies. This kind of collaboration is important as results of Buys and Burshall (2007) study indicate that university-community partnerships provide many benefits to university research, teaching and learning, community recognition and status. Another adjustment was set on a way of teaching and learning. High priority was set on a public performance of students as well as communication and team working skills. In order to succeed, the team work needs organisational support (Kolb and Sandmeyer 2008), and that was provided in our case organisation from the beginning of the project.

In practice, the above meant inside the university that different subjects jointly committed to

implement a new interactive and practice-based learning environment. This was a starting shot for the network of interactive and integrative learning (NIIL) in business studies at the university. The rest of the paper is organized as follows. The framework of NIIL is presented in the next section. Then we describe the planning process in the NIIL. Next section represents different learning environments such as business simulation. After results and implication section we discuss some improvements proposals for the networks like the NIIL.

2 THE FRAMEWORK OF NIIL

The NIIL is a unique multidisciplinary teaching and learning environment in the Finnish university community. The teaching of subjects is integrated, and emphasis placed on developing student skills in applying learned knowledge to practical business problems. The purpose is that, as early as the initial stage of studies, the student develops an understanding of the link between specialist work and theoretical studies, and learns to apply knowledge in a real business environment.

Within the NIIL framework students learn (Hirokawa and Poole 1996, Bacon 2005, Boyer, Weiner and Diamond 1984):

- to form an overall understanding of theoretical knowledge associated with different disciplines
- to apply theoretical knowledge to resolution of typical questions in the business world
- to develop personal skills in presentation, group work, project management and negotiation.

In practice, the NIIL consist of two long-term study modules (called I1 and I2 in this paper). Each module lasts for one academic year, and each degree student takes them during his/her first two years of study. The study modules have part-time coordinators. Figure 1 depicts the timing of different modules as well as their relations to the different subjects.

In total, some 30 teachers and researchers are involved in the NIIL. They represent practically all university departments and several special units, such as the library and information services and the continuing education unit. Through these personal contacts the network has a highly interdisciplinary nature.

Through the rotation of teachers involved in the network, the important transmission of tacit knowledge in the training of new teachers is

achieved in an effective way. To this end, for example, pairs of teachers in the I1 module are selected so that a junior teacher is always paired with a senior, and the pair comprises teachers of different subjects.

Marketing and competition in business	1st year study module I1:	2nd year study module I2:
• Marketing		
• International business		
• Microeconomics		
Operational environment of business		
• Macroeconomics		
• Economic geography		
• Economic sociology		
• Business law		
• Accounting		
Management and entrepreneurship	Business and entrepreneurship tasks carried out in teams: case studies, presentations, familiarisation visits and a development project done for a mentor company	A Media monitoring B Business simulation tasks carried out in teams
• Management and organisation		
• Logistics and competitiveness		
• Information systems		
• Entrepreneurships		

Figure 1: The NIIL framework.

The coordination of NIIL circulates among departments every two to three year. At the moment, the NIIL is coordinated by the Department of Management, but the university is widely committed to its practical implementation. University management has provided the work of the NIIL with strong support. Teaching is included in the subjects' own curricula, which adds a significant injection of resources for the benefit of the study modules. The university also finances the activity through funds allocated to part-time teaching.

The NIIL is a result of long-term development work, and is unique in structure. To our knowledge, no other university would commit itself to such broad cooperation transcending subject and departmental boundaries, cooperation which prepares students for the challenges of working life, and which, by concrete means, creates an interactive learning culture between teachers and students.

3 THE PLANNING PROCESS OF NIIL

The teachers of the NIIL are united and motivated by the common principles of course planning and learning methods used, rather than by organizational structures. The cohesive force of the network of more than 30 people is cooperation based on extensive dialogue and interaction, aimed at finding and using innovative forms of teaching, and deploying the latest scientific research in teaching.

The principle of planning is that, instead of teaching, the study modules create a learning environment enabling in-depth learning, in which the student:

- can apply the theoretical knowledge he/she has learned in real world tasks or in tasks simulating working life, and thereby can build up his/her expertise by selecting and analyzing new information in conjunction with previous knowledge
- gains experience in personal skills by participating actively in tasks required by the interactive teaching methods, for example as team leader.

Teaching is carried out using the principles of experimental and problem-based learning and the method of learning by doing. To facilitate this some twenty mentoring companies have been committed to course implementation over the years. Student tuition stresses the significance of independent study. The study modules are planned so that they enable the student to challenge him/herself and to receive extensive feedback.

Course planning is directed by the study module coordinators. The 20 person group of teachers of study module I1, Business and Teamwork Skills, congregates four times a year at planning meetings. The final meeting of the spring is devoted to considering feedback from the past year, and deciding on the curriculum for the following year. Smaller groups of teachers are responsible for the updating of both tasks and teacher and student guidelines. All study module specialists take part in the planning of study module I2A by proposing topical themes related to the degree course content for Media Monitoring. Study module I2B, Business Simulation, is also planned by a group of teachers representing a range of subjects.

4 LEARNING ENVIRONMENT IN STUDY MODULE I1

The NIIL begins with the taking of study module I1 during the first year of studies. When the student is sent his/her letter of acceptance of university, he/she also receives a task, which helps in orientation to academic studies and in setting one's own targets for the studies. Setting targets and single-mindedly aiming for them is emphasized throughout the course.

In the module I1, the students work in teams, each of which is led by a pair of teachers (a total of 40 teams and 10 pairs of teachers). During the autumn, these teams solve case studies and other tasks. During the spring, the teams work for mentor companies, and carry out project work for them – usually a business research and development project. The course program progresses so that the team solves and reports on each task received in turn, always learning from the previous one.

The applicable tasks are interrelated to other studies undertaken during the first year. The I1 module proceeds simultaneously with subject based theoretical studies, and in the subjects, care is taken that information required in the applied tasks is taught in the basic courses.

The module I1 has got the following feedback from the 1st year student: "If the I1 module didn't exist, it would certainly have to be created. I've noticed clear progress, even if you (the teachers) don't even teach us anything."

5 LEARNING ENVIRONMENT IN STUDY MODULE I2

During the second year of studies, students in the I2 module are encouraged on the one hand to follow and analyze topical economic events, and on the other hand to develop and assess their own business expertise. Media Monitoring (I2A) increases knowledge of the economy, and inspires students to observe and analyze current business phenomena. Topical events are monitored over a period of six months, and a report on a theme selected from a given list of subjects is then prepared. These themes are linked to subjects studied in basic courses during the first and second years. The report should also demonstrate a theoretical competence in the subject. The analysis is assessed and feedback given by a researcher versed in the subject.

In Business Simulation (I2B), the students work as the management group for a company which is competing in a simulation gaming against other companies. The students independently draw up a business plan, check it and produce a written analysis of companies competing in that particular field. The students receive immediate feedback concerning the operations of the company they are managing and the reports they have drawn up. In order to succeed during the game, the student must be able to make operational and strategic decisions. Their decision-making is based on various kinds of information, such as economic indicators and annual accounts information, and information concerning the operating environment of the business.

Through tasks issued in the study modules, students increase their business expertise in such fields as problem solving and project management, group work and other social skills, information gathering and communication. The tasks based on teamwork are assessed for the team as a whole, whilst individual tasks are assessed personally. In the grading of tasks, the feedback received by the student is more important than the grade. Feedback is received from other students, teachers and mentor company representatives, and thus learning takes place in a convincing social context. We argue, that these tasks assessments are novelties in this kind of educational program and help student in attaining a deep understanding of the field.

6 RESULTS AND FEEDBACKS

The NIIL was examined more extensively in a licentiate study carried out in 2004 entitled 'An action research into the development of learning strategy at TSE' (translation). These results show a positive change in study culture and an increase in interactivity, both in course planning and in learning situations. The teachers report that they have felt the effects of change in student work in relation to such areas as time management, project expertise, group work skills and information acquisition.

In 2006, the I1 module was awarded the prize for 'the Teaching Achievement of the Year' by the Finnish Association of Business School Graduates. The theme of the award was 'the interactive skills of the business school graduate'. The NIIL has also had a major impact on the internal activities of the university. Joint planning has increased the use of interactive methods in all departments and sharpened the core subject analysis in each case. It has been possible to eliminate overlaps between

courses, and to increase the logical progression of the degree of difficulty of studies.

On the basis of a follow-up study by the Finnish Association of Business School Graduates (Suomen Ekonomiliitto, SEFE), the following targets have been achieved. For example, the study "Five years in working life" (Viisi vuotta työelämässä 3/2007) states that, for knowledge and skills considered important in the work of a business school graduate, 'the overall assessment of TSE is best when the opinions of graduates from all educational units are taken into account'. The next individual areas received the highest assessment on a national scale: information gathering skills, knowledge of the foundations of business, communication in English and Finnish, negotiation skills and the development of analytical, systematic thought.

In a survey conducted in 2008, 67% of undergraduate students themselves assess that the basic courses, including the NIIL modules, have succeeded in creating an integrated view on business. All in all, it is considered that through interactive teaching and functional methods, the NIIL has had a particularly great impact on both teaching and learning.

Mentor company relations have been long-term, which shows that the business community is satisfied with the work and results of the students. The mentor company projects have been genuine business problems, and according to the feedback received, the companies have utilized the students' reports. Recruitments have also been carried out on the basis of personal contacts. Since 40 development projects are undertaken in companies every year, teaching also has a positive impact on regional business activities.

7 DIALOGUE-BASED DEVELOPMENT

The development has been, and will be, based on continuing dialogue with the business community and feedback given by the Finnish Association of Business School Graduates. Student feedback concerning all study modules is also being collected and put to use. For example, at the end of the I1 module, the teams prepare a learning report, which reflects targets set in the previous year of study. These reports are sent to the Rector of TSE, who prepares a summary of them and gives the teachers feedback. Over the years, the number of areas requiring improvement has decreased.

Based on the reports, in the first year all students learn project-based working methods, written reporting and successful presentation skills. As far as many skills are concerned, the students also become more self-critical, as a result of the concretization of working life requirements. This concern, for example, the social skills required for group work. Of the students who took the I2A study module in 2008, 67% reported in their course assessment that the module supported their economic studies either well or excellently. The students were, however, critical of the length and workload of the study modules, which is natural in experimental learning.

The study modules are updated annually to maintain their topicality. For example, company case studies are developed every year, and make use of research and other corporate cooperation being carried out at the university. The coordinators and teachers meet regularly and analyze the achieved results and the areas requiring development. The feedback received is also monitored by the university's Council for Academic Research and Education, which approves the plans for each study module for the coming year. The strengthening of skills for superiors has been identified as the next target for development.

8 DISCUSSION

The quality of teaching at TSE is improved in an innovative way which transcends traditional subject boundaries. TSE has developed a multidisciplinary, multi-method environment for learning the skills required for the application of theoretical knowledge and the skills required for business. Similar targets could not have been achieved in individual subjects.

The NIIL has been developed iteratively for ten years, during which time pedagogical courses for teachers have been progressively organized. Network-based cooperation will continue to be indispensable to the achievement of teaching goals, and to the search for unconventional approaches to learning.

Recent globalization of organizations has raised the question of internalization possibilities of the NIIL. Indeed, virtual collaboration and virtual teams have become common in many organizations. Therefore, in the future, the NIIL will seek cooperation with international partners to achieve team work learning experience in a virtual multicultural environment.

So far, the teaching in the NIIL relies strongly on problem based learning which makes it possible to learn by experience and face-to-face feedback. But, if the NIIL moves partly into the virtual environment, opens it several questions (Siivunen 2007, Ocheney, Cristensen, Zorn and Ganesh 2004) such as:

- what is the learning object that can be attained?
- what are the special skills to be learned?
- what can not be learned?

One open ended nature of the student assignments, including the NIIL, presents a challenge in ensuring that the workload stays within the appropriate boundaries. Research in the workload analysis has revealed that students perceptions of workload correlates more with the motivation of the individual than with the actual hours spent in learning (Cow and Kember 1990). A positive correlation exists between high working hours and perceived educational value of the course, since highly motivated student are willing to work more.

Traditionally workload analyses are conducted at the end of the course using standardized feedback forms or similar means. Findings from these questionnaires are used in re-adjusting the course for the following years. We argue that 1st generation of information and communication (ICT) based feedback mechanisms mirror the old traditions and do not utilize its full potential.

ICT could provide means for measuring students real and perceived workload in real-time with little administrative work and could be utilized, for example, to (Cow and Kember 1990, Weerakoon 2003):

- find and address discrepancies between the estimated and the real workloads
- analyze the strain on per team/individual basis
- acquire information of concurrent high workload assignments in other study modules.

This information could be used e.g. to provide flexibility with schedules when needed, to emphasize assignments that resonate well with students and to direct extra attention to areas where learning goals can be best met, all these to lower the perceived workload of the course.

In many cases, iterative course development has brought the average workload to parity with the awarded credits, but the same does not necessarily hold true on individual level. Can ICT-based tools be used to effectively mitigate this problem? Are

individual teachers and lecturers ready and willing to plan ahead and restructure their courses on account of real-time feedback? More detailed research in the area is urgently needed.

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