

# PBL Applications in the BBA Programme in Business Administration in the School of Business and Services Management at JAMK University of Applied Sciences, Finland

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## Abstract

The first aim of the present study was to describe three different Problem Based Learning (PBL) applications utilized in 2004 to 2012 in the Business Administration programme in the School of Business and Services Management at JAMK University of Applied Sciences, Jyväskylä Finland. These three PBL applications were: Transforming a Business Administration Programme into a Problem Based Learning Curriculum, Finnish Products in Foreign Markets, and a publication process using the Freinet PBL method. The second aim was to discuss the learning outcomes in the form of student experiences from using the PBL framework.

*Keywords:* PBL learning, PBL application, business learning competence

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## 1. Introduction

The present study focuses on three kinds of PBL applications. The first application, transforming a BBA Programme in Business Administration into A Problem Based Learning Curriculum was started in 2004. The students complete all of their basic studies (60 ECTS) during the first academic year in a PBL context. The second PBL application, Finnish Products in Foreign Markets, discusses teacher exchange in 2006 to 2012, in which the network of firms, teachers and students were utilizing the PBL method. The third application describes how to use the Freinet PBL method in sales studies. The issue is approached by using curriculum descriptions and written empirical material, individual reports, group presentations and the feedback given by the students. The empirical material is mainly explored using a qualitative content analysis.

The pedagogical strategy of JAMK University of Applied Sciences accentuates the use of innovative pedagogical methods. The School of Business and Services Management have applied the PBL method. The issue of this study is to describe three different models of Problem Based Learning (PBL) applications that the BBA program in Business Administration in the School of Business and Services Management at JAMK University of Applied Sciences, Finland was utilizing in 2004 to 2012 and discuss the learning outcomes as student experiences using a relevant background of the PBL framework. The first application, Transforming a BBA Programme in Business Administration into A Problem Based Learning Curriculum, was started in 2004. The students completed all of their basic studies (60 ECTS) during the first academic year in a PBL context. The second PBL Application, Finnish Products in the Foreign Markets, discusses teacher exchange in 2006 to 2012, in which the network of firms, teachers and students were utilizing the PBL method. The PBL process used Finnish products as triggers. Finnish firms wanted to find out how the PBL method can produce business ideas and promote the possibilities of the Finnish products in the foreign markets. The third application describes how to use the new method of Freinet PBL in sales studies. The specific objective was to acquire the central knowledge of sales both in theory and practice. The teacher's objective was to develop an innovative way of learning by writing a publication.

## 2. Background theory

This study is based on the theoretical background provided by the pedagogical framework of Problem Based Learning. Several schools and disciplines have for years been promoting BPL, mostly through applications in medical and nursing education (Portimojärvi, 2006). Fagerholm and Helelä transformed a BBA Program in International Business into a PBL curriculum. The PBL approach is based on solid academic research on learning and on the best practices that promote it. Fagerholm and Helelä state that the PBL approach stimulates students to take responsibility for their own learning. "PBL is

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unique in that it fosters collaboration among students, stresses the development of problem-solving skills within the context of business practice, promotes effective reasoning and self-directed learning, and is aimed at increasing motivation for lifelong learning.” (Fagerholm & Helelä, 2003.) PBL and the development of leadership skills have been discussed by Mierson and Friert (2004). Hansen shows how an accounting problem can be converted to a PBL problem. Wee and Kek (2004) rewrite business education through PBL. PBL applications in disciplines of education such as nursing, social health care, law, business, machine industry, architecture were described by Boud and Feletti (1999). The University of Maastricht developed its undergraduate curriculum in marketing and management around PBL (Hansen 2006, 221). Theoretical evidence of the usefulness of PBL in marketing and business management can also be found (see e.g. Hansen 2006, 22; Fagerholm & Helelä 2003; Wee & Kek 2004).

Table 1. Average Retention Rate of Different Teaching and Learning Approaches (Learning Pyramid by National Training Laboratories)

Teaching and Learning Approaches	Percent
Lecture	5 %
Reading	10 %
Audiovisual	20 %
Demonstration	30 %
Discussion Group	50 %
Practice by Doing	75 %
Teaching Others	80 %

The classic Learning Pyramid summarizes the results of the research conducted by National Training Laboratories in Bethel, Maine in 1994. (Table1). The retention rate varies enormously for different teaching and learning approaches. According to the Learning Pyramid, the best teaching and learning approaches are practice by doing and teaching others. A PBL graduate is able to apply what has been learned (Knowledge), reason and solve problems (Skills), conduct lifelong learning (Skills), work in teams (Skills), communicate (Skills) and uphold the values, ethics and professionalism of his/her professional practice (Attitude). The skills, knowledge and attitude comprise the profile of a PBL graduate (Figure 1).

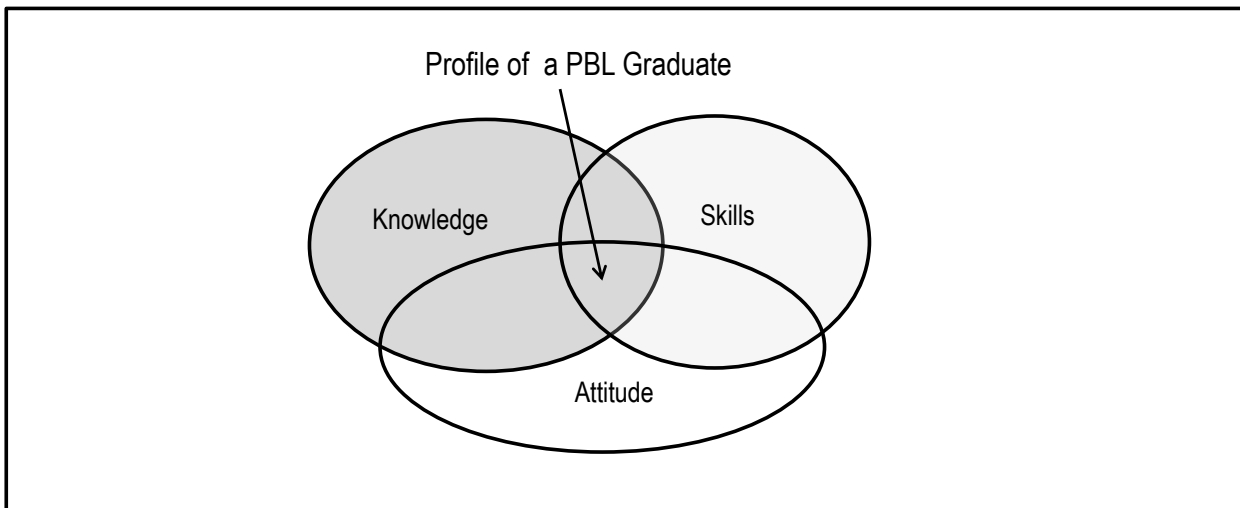


Figure 1. Profile of a PBL graduate

Prince, Van Eijs, Boshuizen, Van Der Vleuten & Schephier (2005) have reported graduates' opinions about how often they use competencies in their work. The research group compared the opinions of junior doctors of problem-based learning (PBL) and non-PBL schools and analyzed the responses to the questions in a questionnaire survey of 1159 graduates from 1 PBL school and 4 non-PBL schools. The survey had been conducted 18 months after their graduation. The competencies were Expert knowledge, Profession-specific skills, Computer skills, Communication skills, Teamwork skills, Planning and organization skills, Leadership skills, Independence, Creativity, Initiative, Dealing with change and Accuracy. According to Prince et al. (2005), a statistically significant higher usage by PBL graduates was found for expert knowledge, profession-specific skills and communication skills. Compared with their non-PBL colleagues, the PBL graduates gave higher ratings for the connection between school and work, their medical training and preparation for practice. More PBL graduates than non-PBL graduates indicated that they had learned profession-specific methods, communication skills and teamwork at school. (Prince et. al 2005.)

### 3. The first application: Transforming a Business Administration Programme into a Problem Based Learning Curriculum

Transforming a BBA Programme in Business Administration into A Problem Based Learning Curriculum was started in 2004 and it ended in 2008. The Degree Programme in Business Administration followed the pedagogical strategy and took the challenge of innovative learning methods. The students complete all of their basic studies (60 ECTS) during the first academic year a PBL context. The annual intake is 102 students. The students also complete their basic studies (60 ECTS) during the first academic year in a PBL context. The aim of the basic studies is to create a common ground for the elective professional studies (90 ECTS Cr) (Table 2).

Table 2. Structure of the Studies in Degree of Programme in Business Administration

Structure	ECTS Cr
Basic Studies	60
Professional Studies	90
Elective Studies	15
Practical Training	30
Bachelor's Thesis	15
<b>Total</b>	<b>210</b>

In the first academic year, the students solve problems in the areas of entrepreneurship, business economics, business law, marketing, marketing law, accounting, management, human resource management and international business (Table 3). The problems presented in a PBL context are either real-life problems presented by enterprises and the students or selected and designed by a group of teachers according to the specific learning outcomes to be achieved.

Table 3. Periods, Tutor teams and the Problems of the first Academic Year in a PBL context

Periods	Period 1	Period 2	Period 3	Period 4
Disciplines	Entrepreneurship Business Economics Business Law	Marketing Marketing Law Accounting	Management Human Resource Management Accounting	International Business
Tutorial Teams	3 Tutors	3 Tutors	4 Tutors	3 Tutors
Problems	3-5	5-8	5	4

The weekly schedule was made up of lectures, tutorials, self-study, group work, group presentations and exams (Table 4).

Table 4. Weekly Schedule of the first Academic Year in a PBL context

Monday	Tuesday	Wednesday	Thursday	Friday
Lecture Self-study	Project work Self-study	Tutorials 6 tutorial groups Workshop	Lecture Project work Self-study	Group presentations Exams

The problems (triggers) in the Basics of Marketing and Marketing Law were based on real business cases, normally written by a group of tutors (Table 5). The goal was that all the disciplines of the on-going (or former) periods include a trigger.

Table 5. Problems in the Basics of Marketing and Marketing Law

Problems	Subjects
Problem 1	Direct Marketing and Marketing Law
Problem 2	Product Development and Marketing Channels
Problem 3	Advertising Sales Promotion Public Relations and Marketing Law
Problem 4	Personal Selling
Problem 5	Marketing Plan and Programme

### 3.1. The Main Experiences of the PBL Curriculum in the course Basics of Marketing and Marketing Law

Table 6 shows the students' learning outcomes from the course Basics of Marketing and Marketing Law. At the beginning and at the end of the course, the students were given one written question "What is marketing?" The research time was the 2nd period in the autumn of 2005. The respondents were first year students ( n=87). The answers were reported using a qualitative content analysis by classifying the marketing concepts based on the definition of marketing by Kotler & Keller 2009. Table 6 shows how many times a student has recognized each concept.

Table 6. The transformation of the marketing concept during the course Basics of Marketing and Marketing Law

Frequencies Marketing concepts	Before	After	Change
Product/Service	5	15	+10
Price	1	15	+14
Place	3	26	+23
Advertising	90	77	-13
Personal Selling	25	35	+10
Sales Promotion	9	23	+14
Public Relations	26	22	-4
Marketing mix; Marketing plan; Relations to accounting and human resource management	6	88	+82

The main result of using the PBL Curriculum in the course Marketing and Marketing Law was related to how the concept of marketing had changed. At the beginning, the students said that marketing was only about advertising and selling. At the end of the course, the students seemed to have a deeper understanding of marketing and its relations to accounting and human resource management (Table 6).

#### 4. The Second PBL Application: Finnish Products in the Foreign Markets in 2006 to 2012

The goal of the second PBL application is to indicate how the network of firms, teachers and students is utilizing the PBLmethod in teacher exchange. In 2006 to 2012, two teachers visited universities in Brazil, Turkey, Slovenia, Germany, Croatia, Italy, Spain and France. The real business life triggers were given by the Finnish companies Panda, Harvia, Globe Hope, Kalevala jewelry including several design factories and a shoe factory. The informants of the study were students of the partner University of the JAMK University of Applied Sciences.

Figure 2 shows the steps and the weekly schedule of the PBL Application in teacher exchange. The used pbl steps were brainstorming, classification of ideas, defining the problem and the learning task, individual processing, collaborative problem solving and presentation. The study week starts on a Monday with a short lecture on International Marketing. After the week.

After study week: Business Ideas of the Finnish Products on the foreign Markets  <b>7. Feedback to the companies</b>		Monday  Lecture: International Marketing  <b>1. Brain storming, mind maps and Ideas.</b>
Thursday <b>6. Presentation of the group report and assessment by students</b>	Assesment by tutors by students	Monday <b>2. Classification of the ideas</b>
Thursday <b>5.Solving the problem in your tutor group, based on the individual reports</b>	Wednesday <b>4. Individual processing of the problem by using new knowledge and new theories. Return the individual report of one page on Wednesday</b>	Monday <b>3. Choosing and designing the problem areas and defining the learning task(s) Tutoring available on</b>

Figure 2. The PBL Application Finnish Products on the foreign Markets

#### 4.1. Results of the PBL Application

In Genoa, the students' task is to find out the business ideas of the Finnish products Harvia sauna and Panda licorice in the Italian markets. The triggers were sauna oven brochures and Pepe licorice. After the classification of the ideas, the groups formulated their learning tasks as shown below. The students recognized the international marketing concepts of the of product adaptation, tools of marketing communication, the selection of the customer segment and the nature of customer behavior (Albaum & Duerr 2008). The learning tasks in Italy were:

- how to make "Panda" very popular among kids,
- how to reintroduce licorice culture in Italy,
- how to make sauna an everyday activity for everybody in Italy.

In Sevilla, the PBL trigger was Finnish shoe factory. The table 7 shows the results of the brainstorming. The ideas were classified into the groups of marketing communication, product attributes and product collection and price.

Table 7. The Classification of the brain storming ideas for marketing Finnish shoes

<b>Ideas</b>	<b>Classification criteria</b>
The commercial name is difficult for Spanish pronunciation worldwide ad logo and sentences to sell the shoes it is necessary to show on tv and social networks by celebrities by internet symbols for the brand more beautiful For introducing in Spain:Program (tv), Fana, Big Brother, Famous Persons, Networks	<i>marketing communication</i>
water-proof? product for all sizes not only do shoes and bags Problem: Irregular weather in Spain These shoes are red and it's made of ecologic material This product is for cold country because you have to keep your feet warm- maybe these shoes can be used in north of Spain it's great for stay at home because these shoes are comfortable An innovative collection combining traditional, different and very original ideal for the childrens Fashion in Spain? it is an original product in Spain you won't find another similar	<i>product attributes and collection</i>

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Itchy

low prices

Value for money

Standard price (Rival products)

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price

The students gave proposals to Finnish companies in Germany. In their report, the students summarize the results of *positioning the brand KALEVALA-Jewelry*. “The main instrument for branding KALEVALA is advertising, opera, musicals or theatre events and product placement.” The students suggested a *brand slogan* “bold, timeless and genuine” and define *the target group* as middle class women. “We are all convinced that advertising KALEVALA effectively needs mass media, like TV spots, radio spots or magazines.” The students in Germany gave proposals to Globe Hope. Globe Hope is an innovative Finnish design company that makes ecological design products from recycled materials. *Target group and price*: “The products of the Globe Hope have to be sold to ecologically minded people, who are interested in ecological and environmental issues. These people have to be rich or at least wealthy because the products are placed in a high price segment. We think these people should be older than 25 and younger than 40 years old because they are more interested in such products.” *Distribution channels*: “The product of globe Hope has to be sold in small so called third world shops or via the Internet. *Communication strategy*: “Globe Hope has to be identified as a world saving company and globe Hope has to communicate these strategies to the customers. The supported projects in particular have to be communicated in a better way.” *Competitors*: “Before Globe Hope start to penetrate the German market, they have to know more about the potential competitors.”

#### 4.2. Student feedback

All the students gave strongly positive feedback about the new way of PBL learning. They like to find solutions for problems and they also liked group work and the real business cases.

”This experience was really interesting and satisfying and intercultural. Is has been a great time opportunity to revive my English and be in touch with the Finnish teaching method. Thank you for this great opportunity.” “Let’s have a sauna bath with the Panda licorice”

“First of all thank, you for this possibility. This experience has been very useful and satisfying. I got familiar with a new way of learning found it interesting, and I think I improved my knowledge of on the subject and my English, too.”

“It was a different session, which I enjoyed a lot because I had the opportunity to compare my ideas with other students. Thank you for the opportunity you offered to us.”

“I liked this kind of experience because for me is so useful to work in group with other students and explain the work done by a presentation.”

“It is a useful method to learn, a new method to work making experience of group work. It’s fun to try to seek solutions for problems.”

### 5. The third PBL application: a publication process using the Freinet PBL method in sales studies

The sales study module was carried out using a new method. The special objective was to learn the basics of selling both in theory practice. The teacher's objective was to develop an innovative and interesting way to learn. A publication was created as the final result. The Freinet pedagogy and problem based learning were utilized. The publication consisted of articles consisting of clear-cut theory and research parts.

The method of learning can be named ”Freinet Pbl Method”. Freinet developed his own method of learning in the beginning of the 1900's. In 1923 Freinet purchased a printing press. Originally the aim was to assist him in teaching. The students would write their own works on the press. In this method, the learner has the responsibility for the learning. The students gather information, discuss and edit them as a group before presenting and printing them as a team effort. The Freinet pedagogy is based on the principle of the students learning best through their own experiences by doing, observing and writing. The learning takes place through motivating and sensible tasks.

Constructivist pedagogy is another foundation of this new learning method. At the initial stage, we utilized a problem based learning approach. Every group of 4-5 persons was given a problematic sentence, a so-called trigger which is related to selling. On the basis of the trigger, every group (nine groups in all) developed a learning task for themselves. Table 8 illustrates the examples of triggers, learning objectives and final names of the articles provided by two groups.

Table 8. Two examples of different triggers, learning objectives and final names of articles

Trigger	Learning objective	Final name of article
Salesteam success depend on co-operation	What is role of teamspirit and individualized work to team’s success?	Individual salesman have a great impact to team’s success
Salesman can affect a lot of customer decision.	What kind of salesprocess do we need to influence customer decision?	Quality Salesprocess

Every student had about seven weeks for writing a theoretical article. In the next meeting, a synthesis was made of the contents of these articles. In this meeting, students also made a decision which company and what kinds of methods they would use to gather practical information on the problem and theory. The students got instructions but they were also responsible for their own decisions and solutions. For this, they were given four weeks.

Figure 3 shows the process of the “Freinet PBL” learning circle. The learning circle includes five stages: 1) introducing a problem, 2) a group discussion, 3) resource development, 4) a group reflection and 5) the solution and presentation. The learning process will generate a memo, individual report, group report and presentation. The main goal is to edit the group report and write an article for a mutual publication.

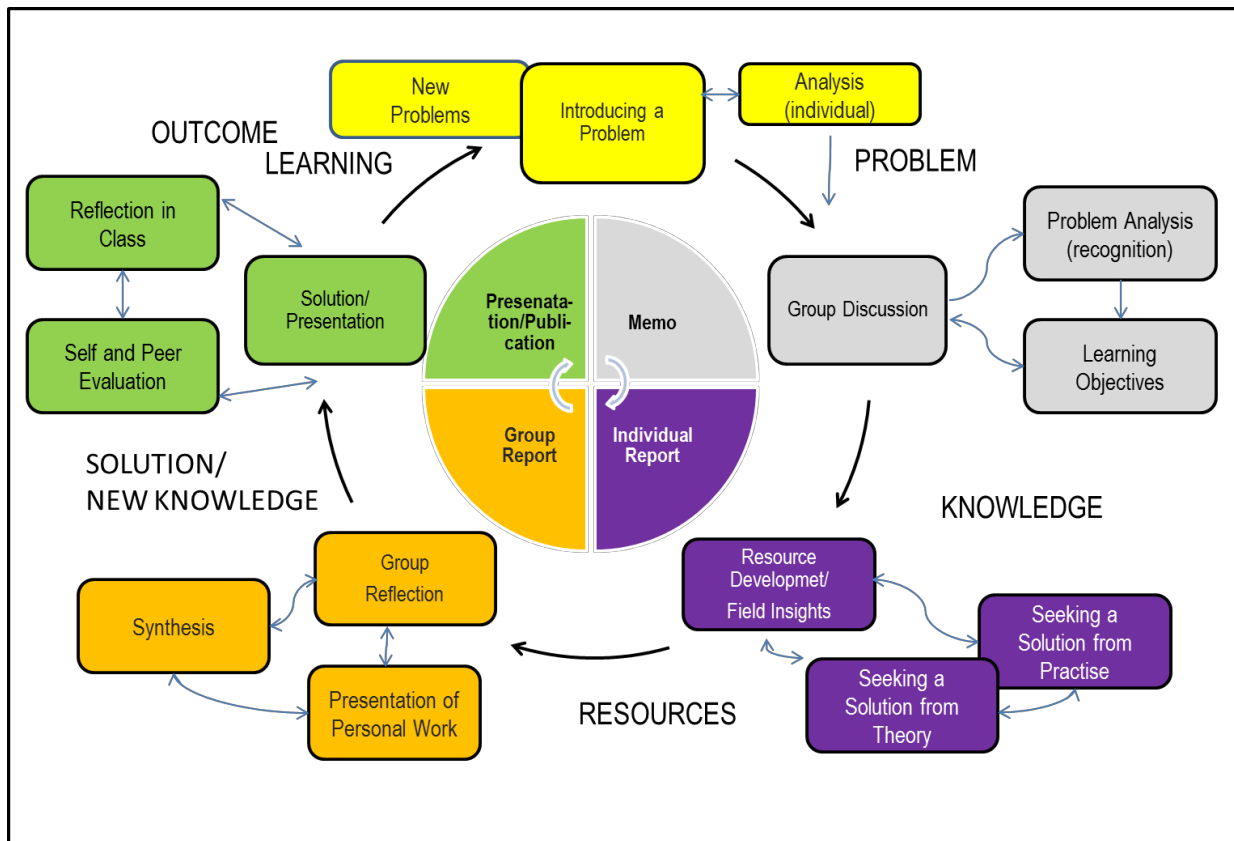


Figure 3. The process of the “Freinet-PBL” learning circle

### 5.1. Results of the PBL Application

As a final result, the publication “Interaction in the selling” was created. The articles consist of diverse subjects, for example stages of a successful sales process, a productive way in solution sales and the significance of feelings in sales. Everyone presented the central results of their own article. The students experienced a new, very different way to learn. The majority of them were extremely positive. In their opinion, the study method was a motivating and responsible way to learn. There were also those who experienced this new way a really laborious way to learn. The new method of learning requires a tolerance for uncertainty during the process of both student and teacher. At the end of the study module, every student got their own publication.



Figure 4. The new publication: “Interaction in Selling – keys to selling, 2011”

## 6. Conclusions

We are presenting the following as a summary of the PBL applications. The main result of using the PBL curriculum in the course Marketing and Marketing Law was the diversification of the concept of marketing. At the end of the course, the students seemed to have a deeper understanding of marketing and its relations to other disciplines, for example accounting and human resource management.

The study of the Finnish Products on the Foreign Markets shows that the PBL application works in business learning and in the internationalization process of firms. Finnish firms have got new information of the foreign markets. In most of the universities visited, the PBL method was unknown. Even group work was a new thing in learning. As for the implications, contribution or relevance of the study: This study brings out practical results based on native information of the foreign markets and gives a contribution to business education and international marketing.

The new way to learn selling using the “Freinet PBL method” was, mainly, an extremely positive learning experience to the students and the teacher. The students wrote high-quality theoretical articles based on their observations and the research material from the firms studied. The students learned from each other, and the teacher's role was to be a trainer and the controller of the learning. The students' role was extremely independent and responsible. The Freinet PBL method fulfilled the promise of the University of Applied Sciences to combine theory and practice. Next goal could be to explore this method using a new technical device (I Pad) and write an online book.

This article shows the innovativeness of the applications of the teaching methods in the School of Business and Service Management. Future research is needed to find out the broader impacts of the PBL applications. The PBL method makes it possible to strengthen the network between firms, students and universities. The parties can interact with and influence each other. Perhaps the parties will be co-creating business developing programs in the future. (see Vargo & Lusch 2004.)

## References

- Albaum, G., & Duerr, E. (2008). *International Marketing and Export Management*. Gosport: Ashford Colour Press.
- Boud, D., & Feletti, G.I. (1997). *The Challenge of Problem-based Learning*. 2<sup>nd</sup> ed. London: Kogan Page Limited.
- Fagerholm, H., & Helelä, M. (2003). *Handbook for transforming a BBA program in international business into Problem Based – Learning Curriculum; Case: Liibba Program at Helia*. Helian julkaisusarja A:8.
- Hansen, J.D. (2006). Using Problem-Based Learning in Accounting. *Journal of Education for Business*, 81 (4), 221-224.
- Kotler, P., & Keller, K. L. (2009). *Marketing Management*. (13rd ed.). New Jersey: Upper Saddle River.
- Mierson, S., & Freiert, K. (2004). *Problem-Based Learning*. (pp.15-17). American Society for Training & Development.ASTD.
- Prince, K., Van Eijs, P., Boshuizen, H., Van Der Vleuten, C., & Schephier, A. (2005). General competencies of problem-based learning (PBL) and non-PBL graduates. *Medical Education*, 39,(4), 394–401.
- Potimajärvi, T. (ed.) (2006). *PBL Ongelmaperustaisen oppimisen verkko*. Tampere: Tampereen yliopistopaino.
- Rasinkangas, A. (2004). *Matka ongelmalähtöiseen oppimiskulttuuriin*. Hämeenlinnan ammattikorkeakoulun julkaisu A:2/2004. Hämeenlinna.
- Vargo, S.L., & Lush, R.F., (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*, 68, 1-17.
- Wee, K.N., & Kek, Y.C. (2004). *Authentic Problem-Based Learning*. Rewriting Business Education. Singapore: Prentice Hall.
- Wood, E. J. (2004). Problem-Based Learning: Exploiting Knowledge of how People Learn to Promote Effective Learning. *Bioscience Education*, 3. <http://bio.itsn.ac.uk/journal/vol3/beej-3-5.htm>