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Eessõna

Eesti Ettevõtluskõrgkooli Mainor Toimetiste teine kogumik sisaldab valikut kõrgkooli 20. juubelile pühendatud teaduskonverentsi ettekannetest. Ettekannete sisu peegeldab meie tänast seisu uuringute vallas kuid ühtlasi annab märku meie soovist saada arvestatavaks tegijaks konkreetsetes akadeemilistes valdkonnades juhtimises, ettevõtluses ja loomemajanduses. Kuna moodne kõrgkool ei saa läbi ilma eneseanalüüsita, siis on paratamatut ka uuringud ettevõtluse õpetamise laias ja arenevas valdkonnas.

Esmakordselt võtsid kogumiku koostamisest toimetuskolleegiumi liikmetena osa meie koostööpartnerid Saksamaa ja Belgia kõrgkoolides. Nende akadeemiline kriitika võimaldas autoritel konkreetsemalt formuleerida oma eesmärke ja saadud tulemusi selgelt esitada. Akadeemiline kvaliteet sünnib ja areneb läbi koostöö.

Kogumiku koostaja ja toimetajana tänan kõiki autoreid ja toimetuskolleegiumi liikmeid nede panuse eest, samuti kõiki teisi, kelle julgustav suhtumine ning toetus kogumiku koostamisel abiks olid.

Jaanus Kiili

Do Vocational Standards Support Access to Study and Work of Disabled Persons

Merle Talvik, Mati Talvik

Keywords: *accessibility, entrepreneurship education, vocational standards*

On March 21, 2012 the Parliament of the Republic of Estonia ratified (Ratification…, 2012) the Convention on the Rights of Persons with Disabilities together with its optional protocol (Convention…, 2012) passed by the UN General Assembly on December 13th, 2006 (Convention…, 2006). This has again brought into limelight noticing, caring and considering people with special educational needs.

Today in Estonia, however, we have to admit that vocational standards, which are accounted for when compiling study curricula, self assessment and evaluation on the basis of competence, professional descriptions, career planning and building basis for life-long learning, explaining training need and planning training, compiling job directives and recruiting workers – contain requirements for people's mental and physical abilities as well as characteristics which are presented in a way that restrict disabled people's right to open, inclusive and accessible work environment and equal, undiscriminating access to education.

The legislation regulating vocational and university education (Standard of Vocational …, 2011; Standard of Higher…, 2012) requires that the corresponding curricula meets the descriptions laid out in vocational standards (in case these exist), and this forms the basis for evaluating vocational competence.

In addition to competences the vocational standards also lay out personality traits and abilities supporting vocational activities (The Order of Compiling, Changing…, 2008). According to The Order of Compiling and Drawing Up Vocational Standards (2011), since 2011, personality traits are defined as physical and mental abilities, features and attitudes which are required for a certain job. Abilities are defined in the Order as mental and physical expectations for successful subsistence, and according to the Order the compilers of vocational standards have to lay out requirements for people's physical and mental abilities which are essential for certain tasks, and to list personality traits (up to five recommended) which support and are needed for a certain job.

The compilers of vocational standards have on the basis of the Order laid out abilities and personality traits which according to them are absolutely essential for certain professions and which support working in that particular field.

Estonian Explanatory Dictionary (2012) defines ability as a mental or physical feature upon which success in some work or other activity depends. Ability is the capacity to do something. Abilities are

separate from knowledge, skills and proficiency; they influence the speed, depth and stability of an activity. Thus, for example, performing a task requiring stability may be difficult to do for a restless person.

Abilities as such are not inborn, though certain anatomic-physiological specificities that affect the development of abilities may be so. Abilities are formed by activities and they cannot evolve outside a specific activity – thus abilities are rather the result of an activity than a prerequisite.

Each individual has their own set of abilities. Individual abilities develop throughout a person's whole life and success in achieving a result is the result of the mutual effect of abilities on each other. Success in one or another activity is achieved via different abilities and thus the lack of one specific ability can be compensated by another or a set of different abilities. Therefore in modern psychology competences are dealt with as integrated abilities (Sternberg et al., 2000; Sternberg, 2000) that are focused on achieving success. It is possible to argue that the competences in vocational standards are described from the employers' perspective, nevertheless, employers are not interested in people's internal abilities that secure the performance of a set task, they are rather interested in the achievement itself and more than abilities and personality traits they care about will and motivation. This means that descriptions of competences via personality traits and abilities as prerequisites for tasks are unjustified; it is not really important via which internal resources results are achieved. Essential factor in the evolution of abilities is systematic and focused effort and will.

It is important to note that the demands in vocational standards should not be merely declarative but have to be obtainable via studying and activities; of such nature are the competences in vocational standards that are achievable and acquirable. In certain professions the presentation of limits in terms of personality traits and abilities is justified, but it is doubtful this applies to all professions.

1. Method and Results

There are 717 vocational standards for 321 professions in Estonia (Vocational…, 2012). We analysed the personality traits and abilities described as supporting the presented profession and it turned out that there are 409 words describing either personality traits or abilities which are essential for the profession or support activities in that profession. The names of supporting traits and abilities were: in 195 cooperativeness, in 163 accuracy, in 159 stress resistance, in 128 responsibility, in 125 adaptability, in 119 decisiveness, in 111 logical thinking, and in 106 diligence.

According to the vocational standard cooperativeness was the most important ability for a secretary (5th level). However, when we look into the competences described in the standard which are documentation, organising document administration, working with documentation systems, organising archival work, internal communication (compiles and passes on messages), one has a justified question why cooperativeness is a prerequisite for such job if all tasks refer to documents and not to people. Analysis of vocational standards demonstrates that the choice of personality traits and abilities does not correspond with the competences the person working in the field has to obtain via learning or working and which ones they have to have "from nature".

Personality traits and abilities such as stability and stress resistance hint that emotionally more stable secretaries would be more successful in their job. We studied individuals working as secretaries (N=229), using EPQ1 questionnaire (Eysenck & Eysenck, 1975). It turned out that among the 229 successful secretaries 61 are emotionally unstable (scored higher than 13 on the neuroticism scale).

Emotional stability is required on 23 professions. Thus electricians, security and fire protection systems technicians, teachers and barmen have to be emotionally stable. Among personality traits and abilities required for secretaries is “good oral and written expressiveness”, which is rather a skill obtainable in secretary training and not a personality trait or ability.

In vocational standards such personality traits and abilities as independence (in 96 standards), trustworthiness (87), correctness (77), analytical powers (74), stress resistance (73), interpersonal skills (65), creativity (61), willingness to study (61), concentration skills (60), self-discipline (58), empathy (57), sense of responsibility (56), coordination skills (53) were laid out. Other traits were presented in less than 50 professions.

In each profession there certainly occur critical situations in which stress resistance is really needed. But it is more doubtful if coping with critically complicated situations is needed every day in each profession which laid stress resistance in its vocational standard. There are many professions in which individuals wait for the client by sitting, standing or walking. It is often the case that the personality traits and abilities which are presumed are needed only in rare cases. On the other hand, it is possible to support the idea of the importance of certain traits and abilities that even though they are not needed on everyday basis, a person should be able to perform their tasks at every given moment.

Many personality traits, including mental capability (in one vocational standard) are largely inborn (Johnson, Vernon & Feiler, 2008; Segal & Johnson, 2009), physical capability (in eight standards), on the other hand, can be developed via training (Whetstone, 1996). It is questionable to lay out in vocational standards abilities that can be developed, because the aim of presenting them is to discourage those people from obtaining the profession who have no suitable prerequisites. The abilities that can be acquired via training and working should rather be expressed as competences.

Vocational standards also contain personality traits and abilities referring to health: thus 32 professions presume precision of movements, 30 physical resistance, 27 speed, 25 good vision, 19 dexterity, 16 workload resistance, 15 physical resistance, 14 good health, 11 good hearing, and 6 clear diction.

When comparing the list of personality traits and abilities with curricula in educational institutions, it turned out that there is no attempt to develop these traits. A list of abilities that are not developed during the study period contain good physical health and resistance, advanced sense of beauty, empathy, stress resistance, creative and logical thinking, good vision, hearing and smelling, routine resistance, etc. These are also not tested when students are admitted into higher or vocational educational institutions.

There are ten valid vocational standards in Estonia that does not contain presumed personality traits and abilities. These are: open-sea fisherman, mechanic, emergency medical technician-intermediate, IT system support specialist, processor of fresh meat, meat products maker, butcher, farmer, radiographer, and coastal fisherman.

[1] The EPQ questionnaire (Eysenck & Eysenck, 1975) is modified for Estonian conditions in 1994–1997 by Mait Raava, Mati Talvik and Merle Talvik.

In conjunction with employing people with disabilities Estonian enterprisers have begun to declare in vocational standards that the profession is executable for them as well (The New…., 2012). For example "assistant waiter helps waiter in service process preparations by laying out instruments for serving. They assist waiter during serving process by serving food and drinks, and in cleaning tasks. Assistant waiter treats clients in a friendly manner and as good custom expect. Willingness and ability to work in teams and under instructions is required." The work is practicable for disabled people, but on the other hand the standard lays out presumed traits and abilities: „Serving clients presumes willingness to serve and communicate, concentration, calm nature, stress and physical resistance, expressive skills, clear diction, and tolerance." If willingness to serve and communicate are matters of will then concentration and calm nature are activities requiring effort. Expressive skills and clear diction, on the other hand, are something that may fall out of the field of disabled people, not to mention physical resistance. When personality traits and abilities are laid out in this way they become merely declarative and raise a question why they are presented at all. People who despite their disability are able to acquire competences laid out in the standard, should be suitable for the profession.

Working as assistant cooks should also be executable for disabled people but according to the vocational standard even that profession lays out good physical health as its prerequisite. For arborists, that is specialists of tree maintenance, on the other hand, who plant and take care of trees in inhabited regions, requirements such as height tolerance, coordination, quick reaction and physical resistance are justified.

According to the Article 27 clause 1f of the Convention it is necessary to encourage disabled people's activities in sole proprietorship, as members of cooperatives and founders of their own enterprises. Nevertheless, the vocational standard of forestry enterpriser lays out such required traits and abilities for the profession as organisational skills, entrepreneurial spirit, courage to take risk, decisiveness, independence, responsibility, cooperativeness, adaptability, mathematical skills. It is doubtful that such a list encourages disabled people to become entrepreneurs, rather they discourage such people because not all of the above mentioned traits can be learned, and even those which can, are not taught at the institutions. According to the Convention the term disabled people includes individuals with long-term physical, mental, intellectual or sensory injury which may hamper their full and effective participation in social life on equal terms with other people. Thus it is doubtful that the personality traits and abilities listed in vocational standards motivate disabled people to become entrepreneurs.

The abundance of listed personality traits and abilities in vocational standards is also of questionable value. Thus, for example, the standard for business administration specialist lists 20 personality traits and abilities, such as adaptability, stress resistance, cooperativeness, ability to learn, responsibility, trustworthiness, correctness, precision, conscientiousness, self-discipline, decisiveness, intelligence, mental skills, verbal intelligence, cognitive abilities, logical thinking, concentration abilities, mathematical skills. Business administration specialists are people who can work as sales assistants, sales representatives, sales consultants, marketing assistants, assistants of sales managers, administrators, consultants of business information, assistants of production managers, etc.

The vocational standards of wilderness guide list 34, tourist guide 29, geodesist 27, traffic controller 27, and barman 26 personality traits and abilities.

2. Discussion

It is known that human productivity and activity depends on the individual's will. People are motivated by the wish to achieve the feeling of success and the interest to obtain professional capability. People oriented on success are purposeful, have a clear vision of their future; they do not accept tasks or obligations they cannot fulfil. It is important to enable a wilful person to acquire competences that are necessary for working in a particular profession.

Vocational standards, however, do not present a clear picture how the personal traits and abilities presumed for the profession are connected to success in that profession. If everybody is admitted to studies without testing the traits and abilities listed in the standard, there is a question why they are laid out in addition to competences. In most cases these traits and abilities are presented in the way that they discourage disabled people to enter the world of studies and work. Vocational standards should be expressed in language that would support the will of disabled people and encourage them to study and work in areas interesting and exciting to them.

There are, of course, professions, in which the presumption of certain personality traits and abilities is justified. But in order to avoid the declarative nature of the importance of such traits and abilities, thorough research is needed to make sure which traits and abilities are absolutely necessary in a profession, and only these should be listed in vocational standards, so that people with impaired vision or low physical capacity would know what to avoid. It should also be clear if the traits and abilities described in the vocational standard are achievable by learning or there exist such traits and abilities the lack of which would limit people's choices in their studies or careers. That is an important message that should be expressed in vocational standards.

It should also be pointed out that the usage of modern technologies may change the work character or coping on a chosen profession. Thus such requirements as "good vision" or "good hearing" in standards can be compensated by modern means, such as glasses, contact lenses or hearing aids. Good hearing was a requirement in 11 professions, in 3 the standard required "normal hearing". Good vision was expected in 25 professions and "normal vision" in 4.

Is it possible to say that presenting personality traits and abilities in vocational standards are indirect discrimination because some individuals are placed in an unequal situation in comparison with others according to personality traits and abilities? In order to state whether it is discrimination or not we have to know if these traits and abilities are essential for performing the tasks required by the profession, and if the existence of these traits and abilities would predict higher productivity. If it is so, then there is no discrimination (Albrant, Meiorg, & Papp, 2012) – for example, it is sensible to expect in plater whitesmith height bearing but to expect stress resistance in an expert or creativity in explosive ordnance disposal technician is more than doubtful.

Listing personality traits and abilities in vocational standards in addition to competences, is a much more complicated theme than it seems. This has not been the focus of attention in Estonia. Despite the seeming validity of personality traits and abilities, we do not have such sample who would defend themselves in the matter court. Therefore we have no knowledge which personality traits and abilities listed in vocational standards restrict the fundamental rights of disabled people.

When analysing personality traits and abilities laid down in vocational standards and comparing them with competences, it seems that the first express the subjective evaluation of the standard compilers rather than any objective proof. Often decision makers seem to know better what the truth is rather than invest in serious research. Most descriptions are often based on “gut feeling”, not on research and analysis. “Gut feeling”, on the other hand is often based on stereotypes and media image of the profession. In the society as a whole people often make decisions based on their convictions and legal norms that in turn are dependent on political environment. Behind the descriptions of personality traits and abilities we find society’s expectations – one is expecting to see capable representatives of professions who would meet “clients’” expectations. From the 1990s until very recent times the prevalent attitude in Estonia concerning long-haired young man wearing pony-tails working in banks as IT specialists is that they should enter their offices via back door because their appearance would not suit the conservative appearance of bank personnel. Rebuffing disables people may reflect some employers’ fears – thus these people may not meet the expectations of clients and then employers have to look for a new worker, and it makes life harder for employers. Often disabled people are offered lighter tasks than they could do. Surely the efficiency of disabled people depends on the job and the environment in which they work, as well as on the individuals themselves.

Even when personality traits and abilities listed in vocational standards are justified, there is no convincing evidence presented how these affect work. Disabled people who look at the list, ask doubtfully if the expected traits and abilities meet the work requirements and remain unsure how justified is the presentation of the listed traits instead of some others. That problem would cease to exist if the described abilities would be fully justified.

Personality traits and abilities should be something that would predict how the work is performed and have to match well competences. The analysis of vocational standards, on the other hand, indicates that this is often not the case. In the police, for example, research has demonstrated (Sanders, 2003) that essential inborn preconditions for police work are mental capability and fortitude. The latter predicts conscientiousness and work discipline whereas mental capability predicts readiness for constant change and learning new skills and knowledge (Moustafa & Miller, 2003). When looking at the police officer’s vocational standard in Estonia we do not find these above mentioned traits.

It is obviously difficult to compile easily understandable requirements for a profession in terms of personality traits and abilities, because people are very different. If these are deemed necessary, they have to be fully justified.

3. Conclusion

It is obvious that personality traits and abilities are important for coping with work but there are few proofs which traits and abilities are essential for which profession.

In order to ascertain that the importance of personality traits and abilities would not be merely declarative in vocational standards in-depth research is needed to make sure which traits and abilities are essential for professions and how they could be assessed in admittance to higher educational institutions or in employment process.

We need studies to ascertain personality traits and abilities by competences that would predict work performance. These studies would identify the minimal personality traits and abilities for satisfactory work performance. Vocational standards should clearly express if listed traits and abilities are inborn or could be trained. Minimal health requirements for professions and their clear connection to work performance should also be ascertained. We have to comprehend that efficient use of modern technologies may help to compensate some personality traits and abilities of disabled people. It is essential not to place unjustified limits to the tasks disabled people can perform.

When we list personality traits and abilities in vocational standards we should be able to explain their role in work performance. Often performance is affected by factors in which situations are not to be resolved alone but in collaboration with others. There is often help by side, in teams roles are divided, there are possibilities to use aids and so on, including individual characteristics that may compensate the missing personality traits and abilities.

The heretofore practised listing of personality traits and abilities in vocational standards could be replaced by describing only the required competences. If needed, the vocational standard should present justified features that would rule out coping in the profession but in a manner that would not exclude disabled people.

We have no studies to point out that people who lack personality traits and abilities listed in vocational standards have lower productivity in their chosen professions. A great number of personality traits and abilities (N=409) in vocational standards indicate that the situation in decision making is unclear and there are no lucid premises upon which personality traits and abilities are laid down in the list. If we comprehend that work in one and the same job can be very different we understand that it is impossible to standardise and list personality traits and abilities. Much more important than those are achieving competences. It is not personality traits and abilities that are to be expected but competences. Thus the former are not to be expected to exist per se but rather that they are something that can be obtained by learning and training and that they are expressed as competences.

We have to issue from the principle that if people can perform the work and have obtained required competences for it, their personality traits and abilities are not really essential.

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Developing the Skills of Different Thinking in Design Education

Ülle Linnuste

Abstract: Design requires novel innovative approach to problems. One of its components is the ability to think 'differently'. The author of this paper has studied multiple theorists' views on creativity, design thinking and thinking strategies, and the methods of applying them in design education. Several theorists have been concerned with the question of how designers think and reach new design solutions. The author has emphasised the differences between design thinking and common thinking and given examples of applying it in design activities.

By giving the design students the assignment of designing some practical object differently, to look for a new solution, they get the chance to use their i magination and creative thinking. Yet there is a question whether they can abandon their conventional (analytical) thinking and devise original solutions. One of the hindering factors in the pursuit for an original solution is setting out to 'making an object' immediately. There's no design without creative thinking, and in order to induce the students to think creatively and use different thinking strategies in the process an active learning environment must be created where the tutor fills the role of an analyser and facilitator.

Keywords: *design, innovation, creative thinking, 'different' thinking, active learning environment*

Introduction

Design shapes artificial world and it is closely connected to creativity. Design would be unthinkable without creativity and creative thinking of designers. Creativity and human ability to be creative are phenomena that have been described and analysed since ancient times. Psychologists have taken great interest in creative activities, numerous researchers and scientist have tried to analyse the act of creation, and discussions on it continue (Wallas, 1926/2008; Guilford, 1968, MacKinnon, 1978; Rogers, 1954; Davis, 1986; Csikszentmihalyi, 1997; Eysenck, 1998; Gropley, 2001; de Bono, 1973/1990, 2003, 2009).

The author of this paper has studied how theorists understand creativity in general, and particularly, creativity in design, got acquainted with their different standpoints and interpretations. Basic similarities and differences in addressing the subject matter have been compared by using content analyses. Herself being a design instructor the focus has been on design thinking. The paper presents an overview of main standpoints and interpretations on design thinking and the strategies of its implementation. Relying on theorists gives confidence for applying these strategies in one's own teaching process.

The meaning of creativity

Cropley characterises creativity through 4 properties. Firstly, creativity always involves **imaginative** thinking or behaviour. Secondly, this imaginative acting is usually **purposeful**, i.e. it has a specific aim. Thirdly, these processes must lead to something **original**. Fourthly, the outcome must have some **value** to the purpose. Imagination is definitely an essential part of creativity. (Cropley, 2000:147)

Quite often creativity is regarded as something mystical, intangible and uncontrollable. However, theorists who study and analyse creativity are not of the same mind. Edward de Bono concedes that it may be the case in the field of art where creativity involves aesthetical sensibility, emotional resonance and expressiveness, but it is not justified outside the art world. He disagrees also with the notion that creativity can't be controlled, just like the moments of inspiration that come unexpectedly. De Bono says that people still believe in simply having to wait and hope for the new ideas to come, since nothing can be done for creative thinking. He finds it a very old fashioned yet still prevailing view. (de Bono, 1973/1990:11).

De Bono is convinced that distinction should be made between artistic creativity and idea creativity. While wholeheartedly appreciating artistic creativity he insists that what we really need is idea creativity. Idea creativity is coming to be valued more and more as the essential ingredient of change and innovation. (de Bono, 1973/1990:13)

This standpoint is supported by theorist Bryan Lawson who confirms that in design, as in every other field of art, creativity is self-evident and unavoidable factor but there's nothing mystical or mysterious about it. In his book "How designers think: the design process demyst*i*fied" Lawson claims that designing is controllable process that requires active and creative thinking. (Lawson, 2005) De Bono acknowledges that a lot of people are simply not aware that formal and deliberate ways of generating ideas exist, e.g. the tools of lateral thinking. (de Bono, 1973/1990:14)

A crucial difference exists between designer's creativity and artist's creativity. While an artist generates his own ideas and sets his own challenges, a designer always has to deal with problems presented by someone else (a client). Therefore in addition to specialty skills a designer needs to have plenty of empathy for better understanding of client's wishes.

Since the standpoint of design theorists that design is an individual discipline (Buchanan, 2004; Cross, 2004) have become prevalent in the last decade, the idea that a thought process of its own kind exist in design has also started to gain ground. Several theorists are confident that design is based on special skill of thinking that they call 'design thinking'. Lots of researchers have discussed design thinking (de Bono 2003, 2009; Lawson, 2005, Middleton, 2005; Forster & Kruez, 2007; Brown, 2008, 2009, 2011; Cross, 2011; Lockwood, 2011; Michalko, 2011; Kimbell, 2012).

According to Tim Brown "Design thinking balances analytical thinking and intuitive thinking, enabling an organization to both exploit existing knowledge and create new knowledge. A design-thinking organization is capable of effectively advancing knowledge from mystery to heuristic to algorithm, gaining a cost advantage over its competitors along the way." (Brown, 2008a)

When addressing the role of creativity in design process different theorists and researchers use different platforms that depend on how much they connect design to handicraft, art or industry. When an artist

in engaged in designing forms for manufacturing he is obliged to take into account the possibilities of the industry; i.e. he must think differently from a craftsman. Researches have created several different thinking models, and they also try to make a distinction between creativity and being creative, yet it appears that in regards to thinking process there's no general consensus on how ideas really get birth (Wong & Siu, 2011, *cit* Howard et al., 2008).

Design theorist Peter Dormer contemplates: "There is a difference between 'craft' and 'the crafts'. Craft, or the workmanship of risk, or knowledge of personal know-how, cuts across the design and making of all kinds of objects, from hand-thrown pots, sculpture and painting, to the making of vessels which contain the fuel rods in nuclear reactors (there is a lot of craft there). But 'the crafts' refers to a wide range of objects made with craft but which are identified as art-craft, design-craft and studio craft. Each category has different ambitions and aspires to a different status from the others. Each has a different relation-ship to the dominant culture of technology." (Dormer, 2007:151)

Nigel Cross also confirms design's tight connection to crafts: in traditional crafts design thinking is engaged in the process of making; initial model is made by hand in design as well. Nowadays 3D models are created with software instead; however, nobody has stated yet that they will replace the real handmade models for good. (Cross, 2011)

Lucy Kimbell sees the duality of design thinking and tight connection with activities: "Firstly that accounts of design thinking often rest on a dualism that makes a distinction between "thinking" and "doing" and between designers and the worlds they do design in, rather than acknowledging the situated, embodied work of design thinking in practice". (Kimbell, 2012)

How designers think

Every designer knows how good ideas and thoughts come about; you have to prepare yourself, think, observe, and contemplate. Only when your mind is already intensively engaged with a problem, ideas and images seem to come out of nowhere and in unexpected places. Philip Starck describes how he designed the *Dr Glob*, one of his most commercially successful chairs: "I designed it on a flight to Tokyo between sitting down and fastening my seat belt… Fortunately, I have a faithful tribe who help me in spite of everything, and transform my ideas into reality. I can't do that. The more the object develops towards its final form, the less I like it." (Rees, 2002:128)

Apparently that is quite often the case that some people generate ideas and others realise them. When a designer has a problem to solve his mind is actively engaged with it, whatever the time or place. In the process of looking for a solution he visualises various possibilities, gives his idea a form in his imagination and then starts to analyse and adapt it. Emerging mental image or conceptual model (Norman 2002: 12) must take into account existing possibilities. Donald Norman brings out the key moments: a) creation of a conceptual model; b) connection to consumers; c) constraints; d) affordances.

Designer abandons his mental image only when it becomes clear that it doesn't align with reality and starts working on a next visualised option. Conceptual model is often based on an outside impulse, be

it a picture or an image at an exhibition or in a book, etc., that gives a boost to finding the design solution. This holistic way of thinking is attributed to designers by every theorist. However, when you ask a designer whether that is the way he thinks, he'd most likely say that it depends on the situation. With too many constraints and narrowing conditions the designer reaches the solution through finding solutions for details. (Norman, 2002: 13)

Tim Brown acknowledges the notion that designer thinks in images. He says that design thinking is by nature a prototyping process. Once you spot a promising idea, you build it; thus we can say that we build to think. *"*Prototyping is simultaneously an evaluative process – it generates feedback and enables you to make midflight corrections – and a storytelling process. It's a way of visually and viscerally describing your strategy.*"* (Brown, 2005)

Figure 1. *Dr Glob*, a chair designed by Ph. Starck, www.stardust.com/drglob.html (22.02.2012)

Design thinking

Cross in his book "Design Thinking: Understanding How Designers Think and Work" (2011) looks at the methods the researchers have used in order to find out how designers think. These include interviews with designers, observations and case studies, experimental studies where designers talk about their activities and record them, and simulations where researches try to elicit design thinking by using different thinking models. By analysing the results gained with different methods theorists get support to their ideas. Yet it is still impossible to fully explain design thinking process. Cross emphasises that certain complexity of thinking manifests itself in design thinking and that it is one of the highest forms of expression of human intelligence. „Expert designers exercise very developed forms of certain tacit, deep-seated cognitive skills. But /--/ it is possible to unravel even Philippe Starck´s visionary Juice Salif moment into a much less mysterious explanation in terms of the content of the task he was undertaking, and of the iconography upon which Starck drew for inspiration." (Cross, 2011:10)

Thinking 'differently'

Most of the theorists who have studied design thinking are of the opinion that design thinking has its own distinct features; that design thinking is the ability to think 'differently'. Design thinking as an ability to think differently has been analyzed by several researchers (de Bono, 2009, Foerster & Kreuz, 2007, Mootee, 2011, Sloane, 2010).

As early as in the 1970s de Bono claimed that design thinking and thinking 'differently' are based on lateral thinking. He makes the same statement in his book "Lateral Thinking: A Textbook of Creativity", published in 2009: "Lateral thinking is concerned with the generation of new ideas. /--/ Lateral thinking is also concerned with breaking out of the concept prison of old ideas. This leads to changes in attitude and approach; to looking in a different way at things." (de Bono, 2009). De Bono sees lateral thinking as freely moving disperse way of thinking that doesn't go into details. He explains: "Lateral thinking is closely related to creativity. But whereas creativity is too often only the description of a result lateral thinking is the description of a process. /--/ In order to be able to use creativity one must rid it of this aura of mystique and regard it as a way of using the mind—a way of handling information." (de Bono, 2009)

De Bono says that the ability of design thinking to think 'differently' means breaking out of established habits in order to see from different perspective. (de Bono, 2003) While traditional mode of thinking is based on pattern-recognition (e.g. logic, analysis, and judgment); the basis for design thinking is the skill of pattern-creation. Design thinking is the core of generative creativity. The most important elements of design thinking are perception, possibility, and practicality (three P's). (ibid, 2003)

Several researchers (Brown, 2009, Sloane, 2010) believe that the basis for 'different' thinking is the dual application of divergent and convergent thinking.

Paul Sloane considers divergent and convergent thinking as important tools in designer's mental toolbox for thinking 'differently'. Divergent thinking helps us generate all kinds of ideas that may not even be connected with the original challenge or concept. We go beyond the boundaries and imagine multiple different possibilities, including unconventional, ridiculous, outlandish and obviously unrealistic ideas. It is the opposite of convergent thinking that focuses on one target and moves towards a chosen solution by narrowing down the options. Divergent thinking enables us to use our imagination for discovering all sorts of new possibilities. Unfortunately we have an innate tendency to reject those ideas that conflict with our existing knowledge and beliefs systems.

Conventional thinker is normally struck in convergent thinking while self-leading thinker is able to take advantage of both of these modes. Sloane points out: "There are times when we need to be analytical, calculating, critical and judgmental but if we use this approach too often then we become limited, constrained and even destructive in our thinking". (Sloane, 2010)

Brown says that artists use divergent mode of thinking in their creative process, while designers apply alternately divergent and convergent mode of thinking. Brown claims that people are more used to analytical, rational, formal and convergent thinking modes since these were taught and expected at school. Design thinking feels different as it really is different consisting of series of divergent and convergent steps. During divergence choices are created and during convergence choices are made. Design thinking relies on the interaction of analyses and synthesis, the first breaking problems apart and the second putting ideas together. (Figure 2). (Brown, 2008b)

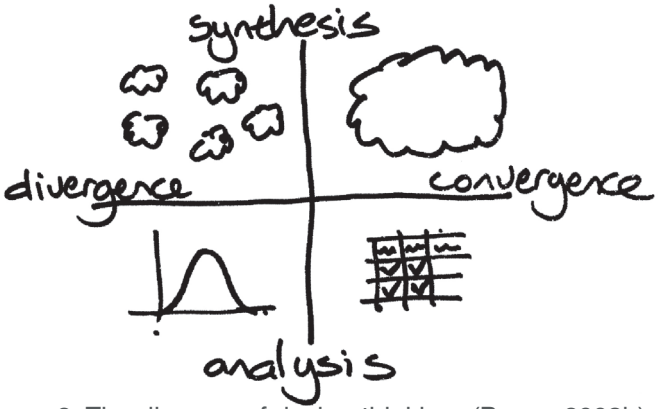

Figure 2. The diagram of design thinking (Brown 2008b).

For developing the model of design thinking the theorists have found inspiration also from other disciplines. Ken Brown claims that in design thinking, similarly to linguistics, there exist its own grammar and rules, and design thinking wouldn't be productive without them. For Brown "A grammar, or a formal generative system, has three parts: a vocabulary of elements; a set of transformation rules that transform structured arrangements of the elements into new structures; and an initial structure." (Bruton, 2010, *cit* Brown, K., 1997). In practice this reference to grammar means the need to be familiar with fundamental rules of design since they prove to be great support tools for designers. By looking more closely at the main rules of design it becomes clear that some parallels can be drawn to composition rules in art, and it is the most direct connection between art and design. Therefore design and design education cannot be separated from art.

By being familiar with design grammar and using it as a necessary tool for productive thinking one can learn to lead his thinking process himself. Several researches find it possible and also suggest various strategies for it (Foerster & Kreuz, 2007, Lockwood, 2009, de Bono, 2009).

Researchers Anja Foerster and Peter Kreuz (2007) look at 'different' thinking in design from a practical perspective. They describe a real life situation: managers of the companies are so accustomed to every day processes and products that they have become complacent to the point of being truly blind to new ideas. They are contented with improving the known products instead of keeping themselves open to radical and innovative ideas. The latter, however, is the approach to take even if it's the biggest challenge for every industry. One must keep in mind the principle: in order to succeed in business you have to be different. (Foerster & Kreuz, 2007: 6)

Any kind of updating demands the engagement of creativity. Once the novel solution to a problem has been applied to a valuable practical application it becomes an innovation (Bruton, 2010, *cit* Adair, 2009).

Innovation is the powerhouse of business success. "Innovation is more than invention—it involves change, and it ultimately results in a useful product or process that is commercialized and widely disseminated" (Bruton, 2010, *cit* Lumsdaine & Binks, 2007). Creative solutions are essential for maintaining and improving economic competitiveness.

The different nature of design problems

Designer's thought process is always actuated by a problem. However, design problems vary a lot and require different contribution of thinking.

German design theorists Pahl and Beitz find out that design problems or challenges can be divided into three classes:

- **Original design** offers an original solution principle for a system or a product with same, a similar or a new task.
- **Adaptive design** redesigns a known solution principle to suit a new or changed task, or adapts for new (environmental, technological) requirements.
- **Variant design** varies certain aspects of the system without changing the function or solution principle.

The design of conceptually new products (the kinds that didn't exist before) usually falls into 'original' category, although creative contribution is necessary in other categories as well. (Pahl et al., 2007:4)

Differently meant practical things

Nowadays, increasingly louder is talked about the need to take a more sustainable course both in manufacturing and consuming, yet expansive economic model still dominates. If a designer is asked about his mission, he would probably answer that he could make the existing things better. Lots of products could be left unmade, lots of things could be improved and the functions of several objects could be combined. That is to say that a designer would plan the material world differently. Designer has an opportunity to design the same thing in different variants and developmental stages. Every new product or a line of products is a synthesis of technology, functionality and aesthetic form. Technical quality can be measured with scientific methods. It may not be possible to measure the functionality of a product with ergonomic methods in the absolute sense but the result is still relatively accurate. The assessment of a form is based on aesthetic observation and the physical cognition and perception of objects. (Käo, 2006: 17)

It seems, however, that the best form for lots of practical objects has already been found (e.g. scissors, knife, axe, coat hanger). These forms have developed through many generations, in slow and continuous process. Figure 3 below presents a set of knives made over the course of two centuries in Wüsthof factory in Germany.

Although the general appearance of the knives has stayed almost the same there have been some changes, since understanding of ergonomics have developed, and new materials and new technologies have been implemented. These factors have made it possible to change the shape of the product (narrower, thinner, broader, lighter, etc.), while maintaining the overall solution.

Original design. New environment and changed conditions bring about new designs, the kinds that have no analogues in the past. Estonian designer Raimo Sau has described how he got a design idea to solve the problem of eating in an uncomfortable constraining situation. He conceived a witty and economic solution for eating in a car (that may be sometimes necessary on a longer trip). He drew a sketch and has been returning to it now and then to add something and polish the conception. (Sau, 2012) So far, unfortunately, the worthy idea has stayed on the paper only.

For creating fundamentally new solution one has to know what already exist, and by abandoning them all take a new path. New design concepts must be supported and favoured in every possible way. Design professor Tõnis Käo shares his experience with young and developing designers:

- Have the courage to produce crazy ideas. Don not let cowardly market-researchers and timid professors turn you away from them. Seek brave companies who will realize your ideas.
- Criticize what we have. That is a European tradition and drives innovation.
- Be aware of your cultural responsibility, since industrial designers are the most important cultural leaders of the technical-scientific civilisation. (Käo, 2006:17).

Adaptive design. In another situation of working out a design solution the goal is to give the existing object a new form and update technological solution. When a designer encounters a poorly designed commodity he starts in his mind to redesign and improve it or to develop a new and better solution. In this case he changes the outdated form so it could meet the contemporary requirements, adapts the object with the new environment in terms of both visual and functional solution.

Figure 3. 200 years of Wüsthof knives. (Käo, 2006:162)

Nowadays more and more people in the cities are living alone; their changed lifestyle calls for new objects and services to match it. Finding the balance between one's job and time-off is a serious and important challenge. One of the trends is spending more time in the safety of one's home and this includes also more cooking at home. Lots of related activities could be performed with greater comfort. One of the offered solutions is shown on figure 4.

In his mind the designer goes back to the very beginning, to the source of the problem and asks: for whom, what, when and how? The starting point (e.g. in the case of a cutting board) of the design process has changed and the same product will be given a different appearance and there'll be most likely some differences in functions as well.

An old traditional object or a commodity in a new shape or form—that is a wide working ground for a designer without conflicting with the principles of sustainable world: people will always need furniture and commodities. Small practical forms by Italian company Alessi, every one of them special, witty, elegant and with high quality, demonstrate that even ordinary things can be extraordinary. There's no need to hide these practical objects in cupboards; they are visually enjoyable, a pleasure for the eye (Figure 5).

Figure 4. Cutting board. Student's work. (Käo 2006: 112)

From manufacturing point of view design is a tool for product development and marketing. At Alessi, however, design is regarded as an artistic and poetic activity. Alberto Alessi himself controls the process of selecting the projects to be prototyped, relying on his

intuitive knowledge of what will appeal to the people. He sees himself as a mediator between the most interesting expressions of creativity of our times and the dreams of the consumer. (Mootee, 2010)

Variant design. Chair offers a good example of how endless solutions can be found for the purpose of sitting. Over the times chairs have been made of wood, ply-wood, cast iron, steel pipes, sheet steel, plastic, textile, cardboard, etc. Each material offers different possibilities for form. So the working ground for designers is forever present. Designer Rams formulated the principles of a good design, and if a designer follows them, his design will be timeless and not a one-time emerged oddity. (Rams, 1984:235). Chair is obviously an object that has been created in the biggest amount of different variants and forms, including the kinds that need their purpose to be guessed. (Figure 6)

Figure 5. Alessi Chip Magnetic Paperclip Holder. (http://www.bethstevens.co.uk/blog/tag/alessi, 16.02.2012)

Of course, nobody forbids playing with form, clowning around, joking. New ideas grow out of play, just like from a jumble of lines in a scribble an interesting image may emerge or in childhood the eye always finds new figures in splotches on a plastered wall. We know of several postmodernist chairs with peculiar form but as figure 6 shows the function of seating is still possible in their case.

Figure 6. Head Shape for Seating. Designer: Onur Mustak Cobanli. (http://www.yellowpelow.com/head-shape-for-seating, 16.02.2012)

Creativity in design education

Lawson (2005) considers it necessary to make changes in traditional design education in order to increase the role of creativity in it. He points out the limited use of creativity in design learning process. Lots of design schooling is carried out in studios, yet one of its weaknesses is that students pay too much attention to the end product and fail to reflect sufficiently on their process. They tend to think that learning is a practical activity instead of understanding that learning results more from thinking and discussing the nature of their practical activities. Activities that are

interesting and fun may not lead anywhere intellectually. It is often assumed that studios replicate the offices of professional designers. Lawson disagrees, by saying that in learning process there are usually no clients with real life problems, doubts, budgets and time constraints. (Lawson, 2005:7) Learning process should be more about generating ideas and these can often be left at the stage of sketches and discussions.

Regarding the question whether creativity can be learned and taught Davis says: “Despite genetic limits however, it is also absolutely true that virtually everyone’s personal creativeness can be increased beyond its present level” (Davis, 1986: 202). He believes that it is possible to learn creativity for innovation sake by raising awareness, valuing creative thinking strategies and developing new rituals for productive thinking.

The more recent work of Howard-Jones (2002), Brown (2005), De Bono (2009), and Michalko (2011) give some recommendations how alternative thinking strategies could be practiced in design education.

Howard-Jones considers it important that students get chances to practice the interchange of analytical and generative thinking models and exercise the use of the mode that they are not familiar with (Wong & Siu, *cit* Howard-Jones, 2000). Wong & Siu claim that novice designers are usually not capable of switching between convergent and divergent thinking modes with the frequency and ease of a practicing designer. Therefore it may be helpful for them if the frequency of repeating the creative thinking process is reduced or the burden of it is shared with others for practicing alternating the thinking mode. It will simplify the necessary creative design process they have to go through. Brainstorming, developed by Osborne (1979) offers one way for sharing the burden of creative thinking process. (Wong & Siu, 2012)

Both methods can be engaged harmoniously in two main phases of a brainstorm session. Once the challenge has been defined, the participants start generating ideas in abundance by utilising divergent thinking mode. All the ideas are accepted, however silly or unworkable they might seem, as they stimulate further ideas. Only after a plethora of ideas have been gathered, the group starts to evaluate them in order to sort out the best. Now convergent thinking is the suitable and necessary tool. It’s of utmost importance to use these two modes of thinking separately. Otherwise the ideas are evaluated and criticised even before they have time to develop, thus discouraging and blocking any creative approach to a problem. (Sloane, 2010)

One way for ensuring that brainstorming is not frightening or a burden for students is to use it frequently in small dosages. Experience shows that the students like small and seemingly easy tasks that are more like games and they find them invigorating. The assignment may involve common everyday objects that must be designed ‘differently’. It is also possible to plan short time activities that focus only on one stage of design process and later combine everything that had been learned through separate steps in a bigger design project.

The most successful way of finding small novel solution is through prototyping. “Prototyping is problem solving. It’s culture and language. You can prototype just about anything—a new product or service, or a special promotion. What counts is moving the ball forward, achieving some part of your goal” (Kelly & Litmann, 2001).

Thinking and sketching go hand in hand—the hand visualizing the thought process. When a group of students were given a challenge to devise an untraditional design for a coat-hanger their sketched coat-

hangers remained quite similar to conventional ones. Yet even these drawings included some different solutions for this simple object. The author of the sketch below took the word literally (coat-hanger in Estonian is 'riidepuu' = clothes' tree) and based the design on the branches of a tree.

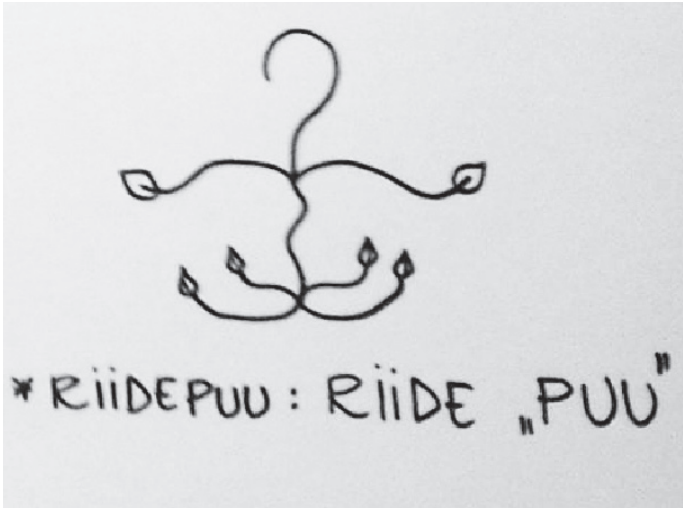

Figure 7. A coat-hanger. A sketch by a student, EUAS.

In design education it may be advantageous to follow the guidelines by Tim Brown on how to develop design thinking and drill innovation: *Begin at the beginning. Take a human-centered approach. Try early and often. Seek outside help. Blend big and small projects. Budget to the pace of innovation. Find talent any way you can. Design for the cycle*. (Brown, 2008a)

Conclusion

In their attempts of bringing out the differences of design thinking from conventional thinking, theorist have mostly emphasised the ability to think 'differently'. In design, just as in art, inherent duality emerges: at one point the artist or designer has to function as a maker, who is engaged in the creation of a visual image, and next he has to take the role of a critic. Design requires visual intelligence, aesthetical sensibility as well as aesthetic intuition. (Cross, 2002)

Designer remains a designer even during his off-time; at the moments he experiences the deficiency or poor quality of a design his mind starts working on a better solution, although most of these mental exercises are not going anywhere further, i.e. a lot of designers' creative potential is left unused. If a designer records all his occasional ideas he's going to have a valuable idea bank. There's no doubt that every active designer has a huge innovation potential. We should remember the words by L. Moholy-Nagy, a teacher at Bauhaus: "Design is not a profession but attitude." (Grohn, 1991:40)

The biggest goal of design education is to develop the attitude of a designer. In the world of objects where people have got accustomed to certain established forms of objects the students can be presented with challenges of finding novel solutions for everyday items in order to encourage them think 'differently'. Exercises in design thinking and application of thinking strategies developed by theorists help make design students' creative thinking process more productive and their engagement in design process more active.

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Entrepreneurial Pedagogy in A Service Management Degree Program: the Co-Operative Hamara Model

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Abstrac: This paper introduces one of the best practices on the Lutakko Campus of JAMK University of Applied Science. It is based on enhancing entrepreneurship and entrepreneurial attitudes. The paper presents some theoretical background of entrepreneurial pedagogy. Secondly, a basic description of the first year studies is objectively given by an outsider. Thirdly, some preliminary experiences of students as team entrepreneurs running a restaurant on the campus are presented. The results of the participative observations and teachers' interviews of their experiences and plans make up the basis for further development. In the end, some future plans in terms of pedagogy will be discussed. The staff members have experienced a participative innovation process. Has it been purposeful to recreate a study path based on students' needs with an enterprise as a learning environment? It would be a fruitful question to be pondered in the near future. Teachers' course driven work and the schedules followed by courses in hand is difficult to match with new pedagogy of Hamara's co-operative model of entrepreneurship. In the future, the challenges in the resource driven history of the teachers' work should be strongly present. Does it work in this model? If there is a demand for changing the learning culture, this discussion will be continued in the future.

Keywords: *entrepreneurial pedagogy, Hamara's model, Finland*

1. Introduction

Finnish universities of applied sciences are in the middle of a significant reformation period (2011–2014). The aim of the reformation is to establish universities of applied sciences that are internationally respected, independent and responsible as educators of experts, developers of regional competitiveness, reformers of the industry, and developers of innovations. JAMK University of Applied Sciences has chosen entrepreneurship as one of its main profiles in the future complementing the vision of "being the best university of applied sciences in Finland". This calls for new views of pedagogy.

There are true stories about school communities based on learning by doing. There are also enterprises on the school premises run by students as part of their entrepreneurial studies. Still, it is typical of these business operations to cease when the students graduate. In some cases, students continue their businesses after graduation. There is a need for open discussions about the kind of pedagogy

that promotes innovative elements and student autonomy in learning. The term Hamara denotes team entrepreneurship with a co-operative model, in which students participate from the very beginning of their degree studies. Some of them are already practicing on management level while some start from a get-to-know-the-field-level. All the students simultaneously pursue their professional studies and business studies in order to pass a Bachelor's Degree at JAMK University of Applied Sciences. However, the restaurant Idea has been enterprising environment for them. For this, entrepreneurial pedagogy is pursued. This paper describes the implementation.

We have lot of information about what substance competencies are needed in the industry. The main outcomes of the Oivallus project[1] include an identification of two future competencies that are important to consider: the desire and ability to work in a new way. In addition to the competencies such as networking skills, global skills, business competence, technology competence, environmental competence, service competence and design thinking, the Oivallus project suggests that creativity should also be acknowledged as such: In order to meet the future needs, creativity will become a crucial theme in all education. (Oivallus, 2011) Practically and pedagogically speaking, creativity is also one element in entrepreneurship.

In order to promote creativity, the main focus in education should be on skills in addition to knowledge and on group work instead of individual tasks. This implies that the pedagogical approaches used should be more closely related to the industry, such as experimenting issues with others without the fear of making a mistake. Providing diverse learning methods will train the students to use variable methods in working life as well. The trend is already to move away from a fragmented curriculum towards learning based on phenomena and problems. This kind of approach will make it possible to act in a complex operational environment. The structures of education have to support collaborative learning and teaching, and teachers are in a key role as facilitators of this change towards education that promotes creativity. (Oivallus 2011)

Origin of the Best Practice: Entrepreneurial pedagogy in theory

Entrepreneurial pedagogy is regarded as one optional approach to meet future educational requirements in order to produce employees with sufficient abilities and competencies for the working life of 2020. According to Paula Kyrö (1997), entrepreneurial education comprises three distinct types of entrepreneurship:

1) An individual way to operate, the oldest form of entrepreneurship

2) External entrepreneurship, to own and run small businesses

3) Internal entrepreneurship, a collective way to operate in an organization

All the types of entrepreneurship are in interaction with each other and can also shape each other. Internal entrepreneurship deals with entrepreneurial and enterprising behavior. External entrepreneurship is about doing business (Ristimäki 2003). According to Ruskovaara et al. (2010), Gibb (2005) has stated, entrepreneurship education is about learning for entrepreneurship, learning about entrepreneurship and

[1] The project Oivallus was founded by a Confederation of Finnish Industries. After 3 years the project ended in August 2011. It got financing from the European Social Fund, the Finnish National Board of Education and the Confederation of Finnish Industries EK. A key question of the Oivallus-project was: Which kinds of competencies are needed in the network economy? What will working life be like in the 2020s? What are the characteristics of the future professionals? (Oivallus 2011.)

learning through entrepreneurship. Therefore, entrepreneurship education should be considered both as a method of learning as well as a content of learning (Remes 2003). Liisa Remes (2004) called for open communication between several different stakeholders in order to enhance entrepreneurial education at primary schools. In 1994, Garavan and O'Cinneide stated "if entrepreneurship education and training is to be effective, the contention is that it must be so not only through factual knowledge and the limited skills acquirable in the classroom, but also through the stimulation of new ventures, the success of those ventures and the increasing capacity of the entrepreneur to pursue even greater success". In that decade, which was called the Decade of Entrepreneurship, the practices and research of entrepreneurial education started to come up in Finland. At JAMK University of Applied Sciences (formerly Jyväskylä Polytechnic), a new way of studying and teaching (coaching), the Team Academy was born. There was room for innovations as such.

Alan Gibb (1987) suggests that the education system is emphasizing a set of values and abilities which is inimical to an entrepreneurial spirit. Later on he goes further and suggests that traditional education methods to develop entrepreneurs in use could be interpreted as teaching "to drive using the rear mirror". Some contrasts between a university/business school learning focus and that required in an entrepreneurial situation are presented in Table 1. On the left side is listed *University/business school learning focus*, and on the right side is listed *Entrepreneurial education/training learning focus.*

Table 1. University versus Entrepreneurial Education/Training Focus (Gibb 1993)

Critical judgement after analysis of large amounts of information	Gut feel" decision making with limited information
Understanding and recalling the information itself	Understanding the values of those who transmit and filter information
Assuming goals away	Recognize the widely varied goals of others
Seeking (impersonally) to verify absolute truth by study of information	Making decisions on the basis of judgement ent of trust and competence of people
Understanding basic principles of society in the metaphysical sense	Seeking to apply and adjust in practice to basic principles of society
Seeking the correct answer with time to do it	Developing the most appropriate solution under pressure
Learning in the classroom	Learning while and through doing
Gleaning information from experts and authoritative sources	Gleaning information personally from any and everywhere, and weighing it
Evaluation through written assessment	Evaluation by judgment of people and events through direct feedback
Success in learning measured by knowledge-based examination pass	Success in learning by solving problems and learning from failures

Kansikas and Lambrecht (2008) refers to Gibb's (1993) statement, according to which the real challenges for educational institutions is acquiring staff with an orientation towards an enterprising mode of learning, and a capability teaching it. This is additional for the need of creating an enterprising environment. According to Hytti and Heinonen (2008), the creation of an entrepreneurial university may necessitate a complete restructuring of the whole university – the organizational structures, processes, assessment methods, direction and the resource allocation mechanisms. Would that be a case at JAMK University of Applied Sciences as well?

Entrepreneurial pedagogy rests on the essence of entrepreneurship including its characteristics and forms. Human activity is the basis for everything. An entrepreneur is seen as a free, holistic, unique and human actor in science. It is seen that observing possibilities and combining resources in a new way, applying new information, taking responsibility for one's own life and livelihood and risks create something new, which is relevant to and desired by the surrounding society. (Toiviainen 2010)

The concept of autonomy is related to entrepreneurial pedagogy. It refers to how teachers can incorporate support for autonomy into their teaching and the overall learning environment. Three ways to support this kind of autonomy are: 1) support for organizational autonomy (e.g. students are allowed to make decisions related to classroom management issues), 2) support for procedural autonomy (e.g. students can select what kind of media their want to use for presenting an idea), 3) support for cognitive autonomy e.g. the students' opportunity to evaluate their work from on with reference to standards they have created) (Stefanou et al. 2004). In practice, autonomy- supportive teachers focus on supporting intrinsic motivation in trying to create a student-centred atmosphere, on encouraging a student`s initiative, on nurturing competence, on using non-controlling communication and, above all, on attempts to promote internalization by providing rationales and appreciating the tasks given (Stefanou et al. 2004). This is, for example, how Team Academy's learning by doing pedagogy works in practice. It is concretely implicated in the training sessions to be concretized later in this paper.

The learning theory of Team Academy was developed from experimenting with and applying more than one learning theory. It includes features mainly from the constructive and humanistic learning concepts. At the Team Academy, the students are responsible for developing their own professional skills and utilizing their earlier knowledge and skills, as well as learning new skills and competences. The idea is that the students construct their learning by participating in various projects. The projects are closely related to real life, and the learners will get feedback from other team members, the organization and the customers. Both written and oral feedback will be given. (Leinonen *et al*. 2004.) This paper shows that some features have been taken from the Team Academy model for the co-operative model case in hospitality management degree studies.

An interesting aspect is the teacher`s role in this kind of new approach compared to the traditional one. Innovative and interactive learning methods leave more room for the learners' own thinking, doing, creating and sharing. Thus, the teacher should, increasingly, adopt the roles of a coach, trainer or mentor. The teacher clearly has a key role to as a facilitator of learning and he/she should be responsible for offering the students learning possibilities for structuring knowledge. Burnard (1987) sees knowledge being split into propositional knowledge (e.g. facts, theories related to professional content), practical knowledge (e.g. approaches and procedures at work places) and experimental knowledge generated through learning and doing in one's own professional field with personal knowledge-basis in a way

that they are able to meaningfully combine these types of knowledge and that they are able to create something new close to graduation.

“In the school context, external entrepreneurship education is about developing innovation (see also Gibb 2005, p. 48) and business ideas, as well as strengthening co-operation between schools and the world of work, including such activities as work experience and study tours.” (Ruskovaara *et al*. 2010). Pekka Hytinkoski (2012) gives some examples in his blog of how student enterprises as a pedagogical method differ from the traditional class room pedagogy: Literature is utilized to meet current needs in terms of facing daily issues, planning operations and implementing plans. Literature is not only listed as a resource on a printed plan. Instead of lectures and class room work, learning is focused on the operations and processes of one’s own enterprise. In most cases, student enterprises are established in accordance with the co-operative model only after the first or second years of study. The model is flexible and does not require as much capital as the traditional models. He also suggests that entrepreneurial pedagogy should be integrated with the curricula.

The hospitality services sector calls for competent people for both operational and managerial tasks in service businesses. The importance of the hospitality field in the future was specifically shown in the conclusion of Vose-project[2]: Hospitality services are an internationally competitive, networked and respected employer of the service field. Know-how is on a high level and the service and production processes represent the latest development phase. Services and products meet the needs and expectations of customers in a versatile way. The operations are profitable and responsible. (Vose 2008–2012.) Here, the degree program in hospitality faces the need of creating more versatile real-life learning environments in order to produce competent students that can meet the challenges of the industry. However, current learning methods provide all kinds of versions of orientation to working life and close relations to organizations, which is not necessarily enough nowadays.

At JAMK University of Applied Sciences, it was decided, in 2011, to provide degree-awarding studies in hospitality and catering services following the co-operative model of entrepreneurship. A similar pedagogical model has been used since 1993 in a degree program in business administration called Team Academy. How to create such a model for the catering and hospitality students in order to promote the students’ working life competences and desire to work? Working life is a concrete element in the school environment since the students run a restaurant. Furthermore, their studies are related to that hospitality environment. A concrete difference from the practices of the Team Academy is the presence of a restaurant legally owned by University. Still, a co-operative model of the team entrepreneurs is possible. How does the model provide space for the students’ creativity – and desire for entrepreneurship? Evaluation will lead to further discussion but the model itself is presented in this paper. This particular learning-at-work or action learning model is less than one year old. Some data was collected in terms of reconstructing the model.

2 Vose-project was generated by Education board of directors. The sub project of Vose, Services 2020 project was financed by the Confederation of Finnish Industries EK and The European Social Fund (ESR). The target for the project was to predict what kind of changes are coming 1) in the private service sector, 2) in the operational environment in the field and 3) how these changes influence on needed competencies.

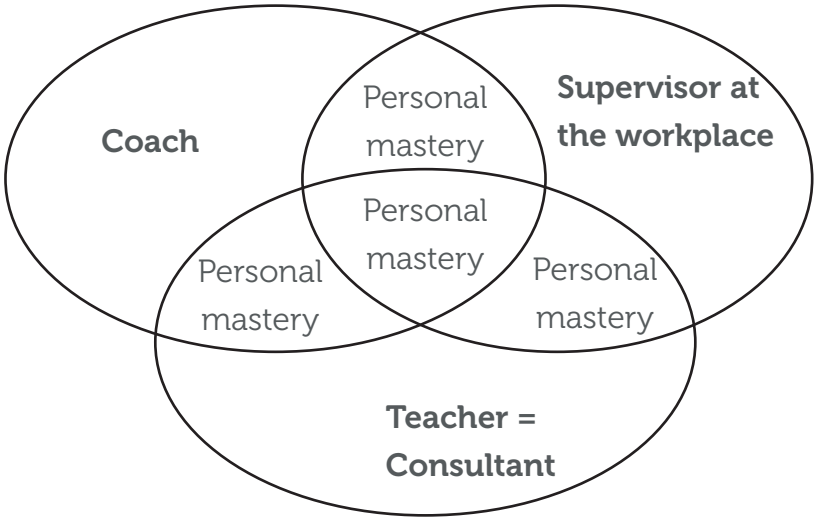
2. A co-operative model of team entrepreneurship in hospitality management – Case of Hamara

The study path of first year students begins in August with shared lectures for all degree students. The first group of students majoring in catering and restaurant services management were tutored by a named vocational teacher (later to be called a coach). He was educated to be a coach of the new pedagogy. The first months of studying were completed as traditional classroom courses. This mainly concerned the courses with a general content and the daily routines of the school. The Basics of business course was started encouraging the students to establish an enterprise according to the co-operative model. The new approach encouraged the students to start an enterprise without preliminary knowledge. Some of the students were more experienced and/or had basic education of the field. They learnt to recognize the need for technical or professional skills. The year 2012 started with the students providing services in the Restaurant Idea. Half a year later, they were running a restaurant called Matilan Ankkuri in the countryside 70 kilometers from Jyväskylä. Some events with catering services were also included in the Hamara program.

Fifteen (15) students established a team enterprise on a co-operative basis at the end of 2011. The enterprise was decided to be called *Hamara*. Its business idea is to sell workforce for a restaurant called *Idea* owned by JAMK University of Applied Sciences, and also provide daily services for restaurant customers from lunch time until midnight. Team Hamara did not need any financial capital since they made a contract with the school authorities. The contract is based on monthly payments, without royalties, though. Result based rewards or sanctions are not yet integrated in the contract. Hamara became responsible for providing restaurant services for the year 2012. The team's business logic of profitability is as follows: the team members productize themselves as workforce, and they sell their skills and know-how of operating restaurant as well as catering services. The business-to-business client is either a restaurant holding company called 'Restonomipalvelut' (in Finnish) or possibly some of the other enterprises outside JAMK. The service company 'Restonomipalvelut' of the JAMK Hospitality Management Degree Program owns the business as such, and it also pays the house rent. The staff of this service company also has other duties on the campus, but two of them are trained by the Team Academy to be the students' supervisor teachers in the kitchen and restaurant of Restaurant Idea. They are like supervisors at a workplace and work eight hours a day supporting the students as professionals of restaurant services.

Hamara uses the services of some other professionals in their study networks. For example, teachers of JAMK provide practical guidance but they do not work on a daily basis in the learning environment. They could be regarded as consultants facilitating the training sessions with Hamara students. This is the forum where teachers are also learners at the same time. The occupational context is a driving force in the students' learning effort, and it is an opportunity for the teachers committed to the Hamara pedagogy. The three-circle model below shows the actors promoting the learning outcomes of the Hamara students: the teachers as consultants, the coach as a co-ordinating instructor and the supervisors at the workplaces. The actors share seven interfaces in all. The hub is a meeting point for all the actors and a consistent guidance platform for a theme shared by all the participants in the Hamara project. In a certain situation, guidance is predominantly given by one actor only.

Three-circle model of Hamara's formal support network:



2.1 Potential Results of the Best Practice: Entrepreneurial Pedagogy in Practice

There were 16 professionals (12 teachers, 1 coach, 2 supervisors, 1 manager) involved in the Hamara pedagogy last semester. Seven of them were asked face-to-face or by email interviews about how they were working, and how was it different than before? Finally, what was the teacher's approach used in this entrepreneurial context? They were also asked to give some development ideas. Some data has been integrated in the text. Development process continues still, and everybody is invited to contribute in this matter.

The new pedagogy was being tested for a year in the form of weekly group tutoring called *training sessions*. They were physically held on Team Academy premises. The term is based on the Team Academy's pedagogic vocabulary (Leinonen *et al*. 2004). A training session has a similar time frame as a lecture usually has. All the students get together in one room with comfortable chairs placed in a circular arrangement without tables. The room is located elsewhere than traditional classrooms or lecture theaters. The teacher is present as a facilitator for the dialogue between students, and she/he tries to act as a coach instead of being a teacher. A coach's main task is empowering the students to recognize mistakes or problems by themselves. Furthermore, it is the students' task to find out solutions and make decisions in most issues. The teacher as a coach will control the appropriateness of the actions of the students as a whole. It is typical of entrepreneurial pedagogy, for example, to face uncertainty without stress or take risks in decision-making.

One example of the kind of pedagogy that allows failures and learning from mistakes is the very first event meant to be managed by students: a Christmas dinner for the JAMK staff. They served over 300 people without any help from the coach or the teachers in charge. The event could have been managed better. The practices were reflected afterwards with the coaches and supervisors. The students learnt from their mistakes. The setting where they failed was safe (while serving their university's own staff). Neither was there too much risk was involved. Still, the students were confused, even shocked. This raised a question when too much responsibility is put on the shoulders of the students? This is mainly

the kind of pedagogy to be used in the Hamara case in the future as well. Therefore, it is obvious that, in addition to the traditional approach, the autonomous approach was already used at the beginning of their study path.

The training sessions have been an important part of learning promotion due to the dialogue between students with the teacher only acting as a coach. These weekly sessions consist of issues and problems on a daily basis. In the future, it will be possible to ask other staff members and teachers (as consultants) to participate in the training sessions. A training session may also consist of summarizing textbooks. It is recommended that the students read books related to current concerns thus earning credits.

2.2. An enterprise as a Context

The enterprise 'Restonomipalvelut' and the manager of Restaurant Services including the staff of the Tourism and Hospitality Degree Program co-operate in order to achieve the educational goals set. Restonomipalvelut and JAMK have the responsibility for the operations in Restaurant Idea. According to Finnish law, the license to serve alcohol has been granted to JAMK. Therefore, the team entrepreneurs cannot e.g. use the profits as is usual in the business.

Simultaneously with running their co-operative enterprise, the students pursue their studies following the curriculum. Thus, they can be awarded a hospitality degree in three to four years. The image of this specific degree is more entrepreneurial than those of the other degrees in The School of Business and Services Management. Both methods and content-driven activities accentuating business culture contribute to students becoming entrepreneurs. Entrepreneurial pedagogy is challenging due to the traditional structures of the other degree programs of the university. For example, traditional classroom studying requires student participation in certain time periods. At the same time, the restaurant is open with the Hamara students working – with none of them available for classroom attendance. Therefore, only one or two training sessions per week is possible for every student to attend.

The student team is going to work in shifts. Every student works approximately 15-20 hours per week. All the managers' duties (human resources, financial, marketing, restaurant and catering) are being rotated with one manager responsible for a certain duty for three months at a time. Rotation enables everybody to have time to practice one manager's role during 2012 until they are half-way through their degree studies.

2.3 A curriculum tested in practice

A curriculum is typically based on the knowledge and skills in general needed in the industry, outside the school context. This kind of curriculum has been tested in the Hamara project. The students will recognize gaps in competences while working in the kitchen and restaurant. Especially students without any experience or basics of professional skills may face challenges in all new situations. Unfortunately, the quality of services may come out as daily problem. Especially rotation brings out the issue. Supervisors at a workplace are not available in every situation. Newcomers are not familiar with the new tasks and processes at hand. Customers do not always understand the context as a learning environment. Or

should they be able to do so? Service as a quality issue is risky business, and it might need structures for quality assurance.

For example, courses in service processes as well as in basics of business (MZMB0100) go hand in hand during the first half of the semester. The plain business studies, operational management of a service company (MZMB0200) in theory starts in second year, and practical training as such either after the second or third year depending on an individual student's background. It is obvious that all the students should have operational management know-how already when trying out any managerial role. Surely not all the students adopt a managerial role at the same time. Moreover, the previous working history and know-how of a student will be taken into consideration. But how do we combine the positioning and timing of the resources of the teaching staff with the individual competencies of the students in a meaningful way? This is going to be developed for the study path of next year's students.

The teachers re-created their lesson plans to be synonymous with training in terms of minimum or no slide shows nor lecturing. It does not mean that no facts are presented but they are integrated with practical training in the Hamara project. The teachers relate all possible assignments or tasks to current problem solving in the Hamara project. For example, budgeting for the next year is concretely described as it is in the restaurant environment. The contents of the courses still indicate a knowledge related curriculum instead of a fieldwork related curriculum. Some first year courses are listed in Appendix 1.

Some courses could not be taken differently than usual. For example, the Basics of Wine and Other Alcoholic Beverages course is based on WSET's procedures. In that sense it is not possible to change any content of teaching, and the teacher's approach was similar to a traditional classroom version. However, personal assignments were given to the students for the promotion of Hamara's shared success either in restaurant Idea or restaurant Matilan Ankkuri.

3. The Process: Students' Viewpoints

One third of the students were theme interviewed by their classmates. Here some preliminary experiences of the students are presented. The results were classified into four categories: student identity, group as a family, supportive actors, and entrepreneurial culture.

Student identity

The most respondents had previous experience of the field or of a restaurant as a work place. The rotation of the managerial roles was important in terms of introducing the students into the field and the learning environment. Interestingly, all the respondents considered the decision to start in Hamara an easy one. Still, they did not have a clear vision of their future job or career. Entrepreneurship was close to everyone's heart. The Hamara experience revealed the reality of it – however in a positive way. None of them rejected the idea of being an entrepreneur again one day.

Group as a family

The Hamara team had grouping activities only at the beginning their studies. It was not expected more. Group spirit was born naturally since they work together daily. There was an openness and honesty present which created trust among the team members. They even spent some of their free time together. In that sense, the Hamara team is like a family.

Supportive action

The supervisors at the work place give realistic feedback to the students every time it is necessary. The feedback, rather than the modest salary earned based on the working hours, is felt to be a reward. The open communication between the team members contributes to everyone's personal growth. A coach's presence meant safety, and a new coach was being waited for and wanted by the students. The "I'll be there for you" mentality of the teachers was experienced important.

Entrepreneurial culture

Freedom was definitely appreciated. For the students, freedom meant how the teachers trusted them by letting them independently implement their plans and create their own business ideas for the Matila case. Freedom was seen as teachers' flexibility in course timetables and deadlines. On the other hand, some students referred to lack of freedom in choosing the courses during the first semester. All the students had the same courses with the same competencies. Are the students capable to choose their study paths? Freedom is a typical motivational force among entrepreneurs, and it requires boundaries or restrictions in order to become recognized (see e.g. Tunkkari-Eskelinen 2005). The Hamara students are safe as long as they have a student's status under the supervision of professionals.

As for freedom, there should also be a responsibility. It is one important indicator of entrepreneurial pedagogy. How it is seen in practice? Students did not refer to it as such. Is it too obvious? Or is it too difficult to talk about it? Responsibility would be an interesting phenomenon to be described more precisely.

However, there was much inconvenience amongst the students being forced to take courses taught in a traditional way. It is almost impossible for the students to complete the compulsory general studies and language studies under the guidance of teachers familiar with the Hamara pedagogy. Should there be an optional way to complete general and language studies following the team enterprise pedagogy? The co-operative Hamara model requires a different pedagogical approach, and according to Weaver (1999) "the best way to teach this is through experiential learning and not didactically as most subjects are thought" (Kansikas and Lambrecht, 2008, p. 43). This should be under consideration in the near future.

4. The Process: Teachers' views and future development

A new Hamara coach was interviewed in order to hear his ideas for the next semester. He only had experience of one course conducted according to the Hamara principles. He listens to the students telling about their needs, and uses an approach typical of an educated coach. It consists of the responsibility to see the team's performance as a holistic picture, and of the requirement of controlling that the studies are made available during a semester. As a coach, he only makes observations and asks questions instead of giving the students advice or facts. Mistakes and failures are allowed, but only within reason. Moreover, it is a coach's task to challenge the students and let them see what they are about to learn.

The next challenge will be integrating the second half of the studies either with the current learning environment (restaurants Idea and Matila) or sell the know-how of the students somewhere else. This is possible because new team entrepreneurs of hospitality students will start in a few months. Who knows best the logical order for the content of the studies? So far, development is based on observation and students' experiences. Open communication between the authors and students is needed. Teachers as consultants should systematically share their experiences and keep others updated whenever it concerns new challenges. This development had already started when new teachers got involved in the Hamara pedagogy.

The new curriculum is now being processed and will be published in the next semester, 2013-2014. It is very important to collect all the experiences so that they represent different viewpoints. This is done daily. It is also fruitful to discuss with teachers who are either veterans or just beginners. The latest tool for spreading plans, ideas and experiences was created in the virtual learning environment (Optima). Teachers working as consultants do share their views, plans, ideas, and furthermore, sum up the weekly state of the Hamara case.

A new group of students will start their studies in August 2012. At the time of writing this presentation, the teams are have not yet been created or named. However, the tutor teacher –a coach- was interviewed. Her principles or plans for the next semester are summarized in Appendix 2. New teachers will be aware of these plans, and the methods will be discussed if necessary. All the teachers are allowed joining this shared development of entrepreneurial pedagogy.

A Hamara student, who plays the role of a human resource manager, controls the credits of the others. There has been a discussion on taking the responsibility for one's own studies and how to foster them. For this, one needs clear goals and a vision of the study path. Furthermore, it will be easier to picture the choice of the available courses if one creates a porfolio or passport of the competences already gained. Such a portfolio or passport could be a helpful tool in other recruitment purposes after graduation.

Some of the students hold a college degree in the hospitality field. This is considered important to be identified as a competence especially in the beginning since more responsibility can be given to those who already have the basic knowledge and skills. It is evident that all the tasks are not clearly identified or reflected in the names of courses. It would be important to create a new curriculum with restaurant operations as the learning environment.

In the future, the restaurant will not be the only learning environment. Services will also be sold to customers outside the school context. Class room pedagogy oriented tourism students and students

focusing on facility services are still an unused resource. It is still an open question what the pedagogical model will be like in the future. What if the curriculum and the schedule of the courses were changed taking into account the customers' needs? There will more young entrepreneurial teams next year, and they may also sell other than Restaurant Idea's products and services. *What could the other services be? How should they be integrated* with study plans and daily customer contexts? *How to do it* so that the professional growth of the students is promoted in a challenging way with reasonable stress.

5. Conclusion: What was accomplished?

The model presented in this paper has features from the Team Academy Model. Students are doing more and more real life projects a part of their studies, running restaurants and catering businesses. As a starting point, they will establish co-operative teams, which are treated as legal entities. This kind of approach to learning offers an appropriate and challenging learning environment for the students of the future. In real life cases, the students really have to be able to use and strengthen their cooperative skills, problem-solving abilities, team working skills and customer needs identification and anticipation among other things. They are entrepreneurial workers whenever they decide not to start businesses of their own graduation. They also have the suitable preconditions for team entrepreneurship.

All the people involved see the potential of a co-operative model of entrepreneurship in the hospitality service business context. They still recommend it as advancing the entrepreneurial attitude and business orientation of the students. In the future, more attention should be paid to the contracts between the university, a service company and a co-operative enterprise. It is important that the students get the feel of entrepreneurship –risk taking, causes of failures, and so on. Is money enough to motivate team to be entrepreneurs? Would it be more rewarding to see how one has grown as a professional? It may not be motivating for the actors if they are not allowed to make use of a profit they have made. It is also the question of image of the profession or field as a whole.

Amount of questions are still unanswered. There are already some signals of the structures of classroom-oriented studies and team entrepreneur oriented studies being controversial. Following the current structure of the university studies, the students need to complete all the courses compulsory for them. As long as the learning environment remains stable, it is possible to predict in what order one needs to take the courses, i.e. foster one's competence. In order to follow Gibb's (2005) argument, the pedagogy of entrepreneurship education focuses on students' activity in learning, and this approach could be considered as a non-traditional teaching method. Furthermore, the learning situations need to be flexible, interactive and based on multidimensional knowledge development. As we know, times are changing, and in Hamara's case, new services may appear. In other words, what to do when the students face new competence requirements and no particular courses are available. How to solve the problem? Should we take a new approach to teachers' working culture? One solution would be teacher resources not tied to any specific course. For example, team entrepreneurs or their coaches ask for instant help for a training or educational need. Then a teacher could be asked to react in a spontaneous way, without forethought. All the tutor teachers are educated in the Team Academy's Coach Program, but the other teachers are not. It is not known yet if all the teachers should have expertise of coaching,

which is required in Team Academy's pedagogy. Or are they capable facilitating students with any entrepreneurial pedagogy approach?

JAMK University of Applied Sciences has decided to support entrepreneurship in many ways. The overall goal is to empower young students through recognizing their entrepreneurial potential. Some students immediately start businesses of their own while some others do that later. In any case, they will be organizational entrepreneurs in the future. This pedagogy matches the university's strategy. There are all kinds of different learning environments already in use or under construction. Restaurant Idea and other hospitality companies or services may not be available for all the hospitality students at JAMK. Therefore, the students are recommended to integrate a major part of their studies with their own businesses if possible. Since it is our privilege and the students' right, we advance entrepreneurship by providing environments, content, and networks for every student. In order to become an entrepreneurial university, JAMK will, accordingly, have to change its organizational structure and pedagogy in the future. Who will be committed to a total change like this?

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Appendix 1

Courses offered in the first year for Hamara students.

- Man in the Service Environment 10 ECTS
- Learning and Professional Growth 5 ECTS
- The Business Environment of a Service Company 5 ECTS
- Basics of Service Business (e.g. a concrete business plan) 10 ECTS
- Practical Training I 15 ECTS
- Food Service in Practice 10 ECTS
- Basics of Research and Development work (e.g. students made a customer survey for the development of their own business skills) 5 ECTS
- Basics of Wine and other Alcoholic Beverages 5 ECTS
- Service and Production Processes 5 ECTS
- Languages (Swedish, English) 2*3 ECTS
- Communication (Finnish) 3 ECTS

Appendix 2

A list by a new coach: Principles for a new co-operative model of the team entrepreneurs' study path

- The first year of the study path is mostly for basics in general.
- Planning is a key word for both teachers and students.
- The team will choose a human resource manager who is aware of the team members' credits and lack of credits. He/she encourages the others in the case of a delay. HR practices are his/her responsibility.
- Language studies should be considered a shared experience in which the less talented are supported by the more talented team mates. The students are encouraged to take language studies in the first year.
- Every team member will complete their personal learning agreement, which is based on competences and know-how instead of course completion.
- All the assignments are linked to restaurant operations. The courses include competencies and mechanisms that support learning as effectively as possible.

Faculty training feedback as an enhancement of teaching quality

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Abstract: Recent reforms in Estonia in accordance with the Bologna process have brought the quality of higher education into focus, and especially teaching quality and how teachers can support student learning in the context of outcome-based education and student-centred learning. One important tool for improving both learning and teaching quality is the feedback from course evaluations, but none of the existing instruments have so far been appropriate for measuring student-centred learning according to learning outcomes. The first attempt at creating a course evaluation questionnaire that includes the aspects of learning outcomes and principles of student-centred learning has been made in the area of faculty training by the Primus programme. The goal of this study is to analyse the Primus programme course evaluation feedback questionnaire of faculty training in order to ascertain whether this instrument is appropriate for measuring the aspects that help to improve trainers' teaching in outcome-based education. In this mixed method research, the authors analysed the course evaluation questionnaire according to the literature of teaching quality and according to the results of 143 completed course evaluation feedback questionnaires from 11 faculty training sessions in Estonia. The analysis showed that the instrument is not fully suited to enhancing teaching quality, because it does not provide complete information on what needs to be improved. The authors suggest that to obtain more information on how to improve the quality of teaching, the feedback questionnaire content and the design of the questions should be developed.

Keywords: *course evaluation feedback, faculty training, learning outcomes, learning quality, teaching quality.*

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Introduction

Recent reforms in Estonian higher education in accordance with the Bologna process have mainly focused on enhancing student-centred learning through outcome-based education to further improve the sustainable quality of higher education. The outcome-based approach in education is influencing the way learning is viewed and feedback gathered. While most earlier course evaluation feedback questionnaires focused on teachers and teaching (Marsh 2007, McKeachie 2007), the outcome-based approach challenges this view and enables evaluation of teaching from the point of view of learning (Oliver et al. 2008).

To measure how much the students actually learn and their depth of understanding, teachers might need to contribute to the learning of their students and focus on the actual process of learning by supporting its consistency, rather than primarily the transfer of information (Blackie, Case, Jawitz 2010). It is suggested that changes in higher education need to be consistent to guarantee its quality. That leads to the conclusion that the feedback requested should also refer to the content of education and, in the Estonian case, to the outcome-based paradigm. Outcome-based education has been mandatory for all higher education institutions in Estonia since autumn 2009, but there is still no instrument suitable for measuring that phenomenon and ascertaining whether it fulfils its purpose of improving the quality of higher education.

Learning is a complex process; there are different factors that help or hinder students to achieve learning outcomes, such as learning environment, learning resources, support services and teaching (Ramsden & Entwistle 1981). Ascertaining the factors that help or hinder students' learning might help trainers to improve their teaching quality and to concentrate on the important aspects of students' learning.

Gathering feedback after a further education course is common practice in most Estonian adult learning settings, faculty training included. Feedback from student ratings has several aims and has proved helpful in many ways in university and adult education (Marsh 1987). In the context of the twin emphases on learning and good teaching to support it (Feldman, 2007), the most important aim of feedback, both in formal and further education, is to help trainers to improve the quality of their teaching.

Since 2008, the European Union has supported faculty training in Estonian higher education institutions through the Primus programme.[1] When using the term "faculty training", the authors of this research mean training for lecturers and university staff. During the academic year 2008/2009, the Primus programme financed more than 130 different courses with 1421 different participants. During 2009/2010 the numbers doubled (Õppejõudude koolitusprogramm Primus, 2009). The programme coordinators have created a course evaluation feedback questionnaire for these training activities, and participants are asked to complete it at the end of the training. This course evaluation feedback questionnaire is unique since it includes the first known attempts in Estonia to evaluate student-centred outcome-based learning. Being widely spread through faculty training in 19 higher education institutions in Estonia, this course evaluation feedback questionnaire is an illustrative model for schools on how they might also ask feedback from students. These are the reasons why the authors choose to analyse the faculty training course evaluation questionnaire of the Primus programme.

[1] The programme implementation is supported by the European Union European Social Fund. The Primus programme is designed to support and enhance the competitiveness of higher education graduates. The programme operates in 19 higher education institutions in Estonia.

The aim of this study is to acquire a deeper understanding of whether the course evaluation instrument for faculty training is suitable for assessing the nature of student-centred learning phenomena in relation to learning outcomes in the context of assuring teaching quality. The authors look at the problem from the viewpoint of how useful information collated from the completed course evaluation questionnaires is for improving teaching quality. This research seeks answers to the following questions:

Are the questions asked relevant for improving teaching quality according to the work of Biggs and Tang (2007), Perkins (2009), McKeachie (2007) and Fink (2008)?

According to the evaluations by faculty members, what were the correlations between the achievement levels of learning outcomes, trainer teaching aptitude and courses in general?

What are the aspects that help and that hinder the faculty in achieving learning outcomes?

The current article analyses the course evaluation feedback questionnaire of faculty training sponsored by the Primus programme in two parts. First, the authors studied the faculty training course evaluation questionnaire according to the literature of teaching quality (research question 1). Secondly, the authors analysed the results of 143 completed course evaluation feedback questionnaires and assessed whether the questions in the questionnaire and the answers given to them are informative and usable in research (research questions 2 and 3).

Teaching quality – theoretical framework

Teaching quality cannot be defined without understanding learning quality. Sotto (2007) even states that “it makes little sense to decide how to teach before one has spent time studying how people learn”. Developments in the understanding of the learning and teaching process has shed light on the main characteristics of successful teaching. Even though different and contradictory learning theories exist side by side, it is commonly agreed that learning is not simply a matter of stimulus-response-feedback, but rather that learners construct knowledge, actively seeking to understand, interpret and encode information in relation to their prior knowledge. McKeachie (2007) asserts that teaching quality can be assessed through three dimensions: teacher enthusiasm, which enhances student attention; teacher clarity, which aids encoding; and interaction between students and teachers. This is one of the theoretical aspects of teaching quality addressed by this article in analysing Primus faculty training course evaluation questionnaire.

In order to get a better understanding whether the Primus programme course evaluation questionnaire is valid, we analysed it from the perspectives according to the theories of different authors. Biggs and Tang (2007) describe quality learning through the concept of the deep approach to learning. They connect several strategies of teaching to this approach of learning: building on what students already know, creating a positive working atmosphere, bringing out the structure of the subject, encouraging active participation, assessing for structure rather than for independent facts, and emphasising depth of learning rather than breadth of coverage. They summarise this approach as “using teaching and assessment methods that support the explicit aims and intended outcomes of the course”. Biggs and Tang also help to analyse the learning-teaching process through the concept of constructive alignment.

Training is aligned if intended learning outcomes, teaching-learning activities and assessment tasks support each other (Biggs & Tang 2007). Their understanding of learning emphasises the teacher's ability to build on what learners already know, select the most important part of the material, and enable the active and reflective interaction with the material.

Fink (2008) describes teaching quality through six different aspects of high quality learning experiences, which are as follows: foundational knowledge (understanding and remembering information and ideas), application (skills, thinking and managing projects), integration (connecting ideas, people and realms of life), human dimensions (learning about oneself and others), caring (developing new feelings, interests and values), and learning how to learn (becoming a better student, enquiring about a subject, and becoming a self-directed learner). She names four fundamental tasks of teaching: designing learning experiences, managing course events, knowledge of subject matter and interacting with students.

Perkins (2009) offers the concept of "academic learning time", which can be used to measure the quality of learning and teaching. Academic learning time consists of four attributes: pace – is the learner actively involved most of the time? focus – do the activities deal with the central competencies? stretch – are learners optimally engaged? and stick – are the parts of activity designed to help people to learn?

These four approaches to learning and teaching quality, presented above, illustrate the variety of understandings of quality learning. The following framework is based on the four theoretical approaches presented above and is used to analyse the feedback questionnaire of faculty trainings afterwards. The guiding principles of successful teaching are:

1. the trainer builds on what learners already know and focuses on the most important aims (intended learning outcomes) of the learning activity
2. the trainer supports the development of deeper understanding of the material studied and presents material with clarity3. The trainer uses time wisely and chooses activities that support the most meaningful learning;
4. the trainer motivates students with his/her enthusiasm through meaningful interaction
5. the trainer gives feedback, corrects misunderstandings and helps to reflect

Even though these principles give only a broad picture of teaching quality, it helps to evaluate the Primus course evaluation feedback questionnaire on faculty training.

Methods

According to Marsh (2007), the validity of feedback questionnaires cannot rely only on one theory or a single aspect of teaching. Therefore, we used different methods for gathering data about the current Primus course evaluation feedback questionnaire to understand whether this instrument is suited to supporting and enhancing faculty training, and which aspects require improvement.

Firstly, we analysed the Primus course evaluation feedback questionnaire according to the several theories of teaching quality (Biggs & Tang 2007, Fink 2008, McKeachie 2007, Perkins 2009). The literature review of the aspects of teaching quality helped to elaborate a theoretical framework for

this research, which is based on the five principles of successful learning and teaching. This helps to determine whether the Primus course evaluation feedback questionnaire consists of questions that measure all the significant aspects of effective teaching.

Secondly, we analysed the results from 11 faculty training sessions to see if these gave additional information about what helps to improve teaching quality. This was done through an analysis of how the evaluations of achievement of learning outcomes, trainers' teaching aptitude and the course in general correlated with each other in terms of whether the learning process was complete. The analysis also covered factors that helped or hindered learning in faculty training. The faculty training questionnaire includes two types of questions, that gather and analyse quantitative and qualitative data.

In seeking congruence between the ratings given to the different aspects of faculty training, correlation analysis was used for evaluating the achievement level of learning outcomes, satisfaction with the aspects of organisation and assessment of the trainer. The data from open- ended self-assessment questions were analysed through content analysis.

Participants

In total, 143 completed course evaluation feedback questionnaires were collected from 11 faculty training sessions held in three higher education institutions. We gathered information from faculty members because they were familiar with the new outcome-based paradigm and could potentially give appropriate and competent feedback by filling in the questionnaires.

Instruments

The faculty training course evaluation questionnaire included two types of questions. Open-ended self-assessment questions were:

- What kind of methods and activities help participants to attain the learning outcomes?
- What hinders that process?
- How can faculty training be improved?
- Where did the participants get information about the course?
- What kind of courses are you interested in attending in the future?
- The data from the open-ended self-assessment questions were analysed with qualitative methods.

The faculty training feedback questionnaire comprised three categories of questions where participants used a five-point scale to assess their level of achievement of learning outcomes, satisfaction with the aspects of organisation (questions about learning materials, room and training technique and time schedule) and assessment of the trainer (questions on subject expertise, choice of methodology, presentation skills, and interaction with the group). The data were analysed with quantitative methods. Moreover to see whether there was congruence between the ratings given to obtain learning outcomes, training organisation and trainer teaching, the correlations between those factors were analysed.

Procedure

Current research was conducted in two phases. Firstly, in 2010 we analysed the Primus programme course evaluation feedback questionnaire according to the five principles of successful learning and teaching, which were the result of the analysis of several theories (Biggs & Tang 2007, Fink 2008, McKeachie 2007, Perkins 2009).

Secondly, we gathered information from the faculty training sessions supported by the Primus programme from 2009 until the beginning of 2011. Faculty members' completed course evaluation questionnaires at the end of the training.

Results and discussion

The current paper analysed the Primus programme method of feedback according to the principles of successful learning and teaching quality. The data from the feedback questionnaire was analysed with help of Microsoft Office Excel 2007.

Results according to the literature on teaching quality

The analysis of whether the aspects of quality learning and teaching are represented in the course evaluation questionnaire showed that there are questions both supporting organisational purposes and to help organisers to decide whether trainers were good enough to invite back again. There are fewer questions that might help trainers to improve the courses. The two questions about what hinders and supports attaining the learning outcomes are the most informative. Some information is also inaccessible owing to the questionnaire only permitting responses in the form of numerical scores; because there is no opportunity to comment, the information available to improve the process is minimal.

The analysis of the questionnaire according to the five principles of teaching quality showed that the first principle, "the trainer builds on what learners already know and focuses on the most important aims (intended learning outcomes) of the learning activity", is covered by asking participants to assess how they obtained the learning outcomes, and what hindered and supported this process. Additional information can be found in the marks given for the trainers' use of methodology. However, the trainer does not get information about single learning outcomes, especially if the participant assesses his/her learning outcome as low in one of these. Also, a question regarding building on the previous knowledge of learners is missing. This is important since learners often claimed in open answers that the lack of previous knowledge hindered their learning.

The second principle "trainer supports the development of deeper understanding of the material studied and presents the material with clarity" is not explicitly present in the faculty training course evaluation questionnaires. Nevertheless, this principle could be covered with questions like "How would you use the things learned in the training in your work?", "What connections did you find between your previous experience and the things you were learning in the training event?" or "How did the clarity of teaching support your learning?" Questions about the second principle are worth considering in more detail.

The third principle “the trainer uses time wisely and chooses activities that support the most meaningful learning” is also not asked directly. However, questions about the use of methodology and learning materials could be very helpful if people would reply with comments, rather than number ratings alone. The need to ask about the use of learning time is clear also from open comments on the question about what hindered learners achieving the learning outcomes. One of the most common answers was lack of time. Perkins’s (2009) concept of academic learning time is very helpful for creating the questions to measure the third principle.

The fourth principle “the trainer motivates students with his/her enthusiasm through meaningful interaction” is hidden in the part where learners are asked to grade the presentation and communication skills of the trainer. Unfortunately, the numbers are not very informative someone who wants to improve their teaching. Therefore, open-ended questions would be much more helpful, whether supplemented with scores or not. It may be worth adding the aspect of ability to motivate learners to evaluation of the characteristics of the trainer, or asking the question learner’s self-assessment question differently, for example “Please assess yourself as a learner and explain how the trainer motivated you to learn.”

The last, fifth principle of learning, “the trainer gives feedback, corrects misunderstandings and helps to reflect”, is missing from the course evaluation questionnaire. Several authors have emphasised the importance of formative and summative aspects in learning (Biggs & Tang, 2007), therefore it is difficult to evaluate degree of success in learning without knowing whether participants received sufficient feedback.

To conclude this assessment of the course evaluation feedback questionnaire it is possible to say that many aspects of meaningful learning are represented fully or partially. The only exception is the issue of giving feedback, which is missing. From the formal point of view, the course evaluation questionnaire for faculty training is more informative for the organisers than for the trainers. Trainers could improve their teaching more if they get informative feedback through open questions or if scores were supplemented by informative comments.

Results of the completed course evaluation feedback questionnaires from 11 faculty training sessions

A content analysis was used for open-ended questions about learning outcomes according to the completed course evaluation feedback questionnaires and categorised similar answers into groups. Firstly, faculty members had to evaluate what helped them to achieve the learning outcomes set by the trainer for the training. The response rate to that question was 84%. Analysis of the answers showed that active learning methods and practical assignments based on real life situations were mentioned most often (65%). Lecturer competence and good performance was also rated by 20% of the respondents as an important factor. A supportive and encouraging atmosphere helped 14%, and course materials helped 8%, of the faculty to achieve their learning outcomes. These results are supported by the literature (Biggs & Tang 2007, Fink 2008, McKeachie 2007).

Next, participants were asked to evaluate what kind of obstacles hindered their achieving learning outcomes. Only 30% of the 143 people answered that question. The analysis of the answers showed that

the biggest obstacle (32%) was the lack of planned time to attain the goals. In addition, uncomfortable physical conditions in the learning environment (21%) and the lack of foreknowledge (16%) needed to achieve the courses' learning outcomes were considered obstacles. Just 18% of the faculty admitted that the course was too theoretical and there weren't enough practical assignments that would have helped them. One of the reasons for the low response rate to the question on the obstacles of achieved learning outcomes might be the fact that all the faculty trainers are carefully chosen. In order to confirm that assumption, further research is needed.

The preliminary answers to open-ended questions confirm most of the teaching principles that support quality learning. Yet some of the key factors in quality learning and teaching merit more attention from trainers. For example, faculty respondents acknowledged that the use of planned time, feedback and reflection should be improved in order to support teaching quality.

In the analysis of the results, the quantitative part of the course evaluation questionnaire had three categories of questions where participants were asked to use a five-point scale to assess their level of achievement of learning outcomes, the course in general and the trainers' teaching aptitude. When considering the course in general, faculty members evaluated learning materials, schedule, classroom, class structure and the organisation of the course. Under trainers' teaching aptitude, faculty members assessed the trainer's knowledge of the subject, the teaching methods used, the performance and the interaction with the group. The congruence between these factors was identified through correlation analysis.

The correlation analysis revealed that there was a strong congruity ($r = 0.51$) between the methods used and learning materials. The congruity ($r = 0.53$) was also found between methods used and course management and between the contact with the students and general organisation ($r = 0.5$). These results are supported by the literature (Biggs & Tang 2007).

It is remarkable that no congruity was found between the trainers' knowledge and learning outcomes achieved, although in open-ended questions the importance of trainers' competence in supporting achievement of learning outcomes was rated by 20% of the respondents. The trainers' presentation skills were also not congruent with learning outcomes, but that can be compensated for by efficient learning methods.

Table 1 provides an overview of the faculties' evaluations and the congruity between the evaluations. In contrast to the research with students (Kumpas & Õunapuu 2011) the analysis of the course evaluations questionnaire completed by faculty members showed that the evaluations of the trainer and course learning outcomes are not congruent factors. On one hand, this is surprising because trainers' teaching should support learning and achieving learning outcomes. The results might reflect a phenomenon of a small set of providers of faculty training for Estonian higher education institutions. The trainers might get high scores, because they are well known to the participants in the training. Thus, instead of evaluating the quality of the training and teaching, the faculty evaluations might be affected by the relationship with the trainer. In addition, the high scores for trainers' teaching aptitude might be caused by only the best trainers being selected for the Primus programme.

Table 1. Overview of the faculty evaluations and the congruity between the evaluations

Attribute	M	±SD	A1	A2	A2-A1	F-test	t–test
Learning materials	4.36	0.76	3.61	4.26	0.65	0.15	0.00
Room for training	4.36	0.80	3.62	4.27	0.64	0.07	0.00
Time schedule	4.46	0.73	3.77	4.21	0.43	0.91	0.03
Structure of the training	4.51	0.73	3.73	4.21	0.48	0.74	0.01
Overall organisation of the training	4.50	0.71	3.62	4.22	0.60	0.77	0.00
Expertise of the training content	4.69	0.57	3.64	4.19	0.55	0.01	0.33
Choice of methodology	4.38	0.78	3.96	4.19	0.23	0.87	0.21
Presentation skills	4.55	0.80	4.07	4.17	0.10	0.30	0.60
Interaction with the group	4.57	0.75	3.91	4.19	0.27	0.59	0.20

M – mean of attribute values; **SD** – variance of attribute values; **A1** – achievement of learning outcomes for attribute values 1 to 3; **A2** – achievement of learning outcomes for attribute values 4 to 5

The preliminary results show that in order to obtain more differentiated results it is important to investigate faculty members' self-ratings and trainers' evaluations of students' learning through asking open-ended questions or asking them to comment on the reasons for the marks given.

Conclusions

The aim of this research was to analyse the Primus programme course evaluation feedback questionnaire from 11 faculty training sessions in order to understand whether this instrument is appropriate for measuring the aspects that help to improve trainers' teaching in outcome-based education. The authors of this research found that, currently, the Primus programme faculty training course evaluation questionnaire is more suited to organisational purposes. Marsh writes that students' evaluations of teaching are more used to support human resources management decisions than for improving teaching or learning effectiveness. The aim of asking for feedback is influencing how the course evaluation questionnaire is completed and how the questions are asked (Marsh 2007).

If the aim is to improve learning and teaching quality at Primus programme faculty training courses, the questions in the course evaluation questionnaires could be asked differently, so as to support feedback to the trainer and his/her ability to learn from it in order to improve the teaching skills required to support student learning. To obtain a complete picture of student learning it is important to ask about all the main aspects that influence that learning and what can be done to support it through improving teaching quality. Furthermore, when evaluating the connections between different aspects of learning and teaching quality it is crucial to analyse how the questions might be asked. This provides a means of focusing on student-centred learning and teaching quality. However, connecting learner self-assessment and assessment of the trainer is an important link, which might help the trainer to decide

where the problem lays, if there is one. Perhaps even greater focus on the results of learning would be helpful.

Although the preliminary results show that the present course evaluation feedback questionnaire measures most of the principles of quality learning, it still needs to be developed to be more learner-centred in order to generate informative feedback that helps trainers to improve the quality of their teaching through supporting student learning. To obtain more differentiated results, it is important to investigate participants' self-ratings and trainers' evaluations of participants' learning through asking open questions or requesting commentary on the reasons for marks given.

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Work-related values in developing Estonia

Krista Tuulik, Mare Kurvits

Abstract: Values have been defined as principles or standards that people use, individually or collectively, to make judgements about what is important or valuable in their lives (McEwan 2001). Values are broad feelings, often unconscious and not discussible, about what is good or what is evil, beautiful or ugly, rational or irrational, normal or abnormal, natural or paradoxical, decent or indecent. These feelings are present in most members of a culture, or at least in those people who occupy pivotal positions (Pucik et al 1993: 141).

In 2003, a research was carried out on the work-related values of Estonian leaders and their subordinates. At the time, the society of Estonia was on the doorstep to the European Union as one of the post-communist countries going through a transformation period. Estonia got the first economic lesion in the second half of the 90-s, when the country suffered from the first bank crises. The first lesion was followed by rapid economic development. Rapid growth was followed by economic recession in Europe and the entire World that started with the fall of Goldman Sacks in September 2008.

A new period of development required new angles of approach. The tasks of the generation of leaders leading the transformational period of building up the republic and the tasks of their employees differed from the tasks in the beginning of the era of independency.

In 2012, a new study was conducted among 30 Estonian enterprises that implemented the same tool as was used ten years ago. The purpose of this study was to take another look at the work-related values of Estonian leaders and their subordinates to determine whether they are still valid or have changed during the ten years of development.

Key words: *values, ethics, change of values*

Introduction

When people talk about philosophy, they usually mean the general system of values by which they live. Moral philosophy refers in particular to specific principles or rules that people use to decide what is right or wrong. The success of an economic system depends on its philosophical framework and on the individuals within the system who maintain moral philosophies that bring people together in a cooperative, efficient and productive marketplace (Ferrell *et al*. 2008). Values are the ideas and beliefs that influence and direct our choices and actions (Gini 2004).

A business firm is not like a machine, nor like a biological organism driven by physical or biological laws. A business firm is, first of all, a human reality (Mele 2012).

Theoretical and cultural background

The prevailing opinion from the time of the Industrial Revolution was that business responsibility was exclusively economic in nature, and without any social dimension. According to Milton Friedman (1963, 1970) "There is one, and only one, social responsibility in business – to use its resources and engage in activities designed to increase its profits as long as it stays within the rules of the game". Nevertheless, there have been entrepreneurs and managers that have shown a laudable sense of responsibility especially toward their employees (Melé 2012: 102).

In the late 20th century, a new view of corporate responsibility emerged from the concept of stakeholder management. According to this type of management, the manager bears responsibility toward all stakeholders or constituencies of the firm, including shareholders, employees, suppliers, customers and depending on the specific situation, possibly others, including the local community (Melé 2012: 103).

At the turn of the 21st century, there was a new impulse of corporate social responsibility. It included topics such as corporate governance, environmental stewardship, health and safety, social affairs and diversity, supplier relations, sustainable innovation, consumer responsibility, climate change and corporate philanthropy (Melé 2012: 104).

Watson *et al.* (2004) point out that the values congruency model is the predominant research approach to the idea of person–organizational fit. This is because values are the core of who people are. They influence the choices they make, the individuals they trust, the appeals they respond to, and the way their time and energy are invested. Some of the most critical decisions a manager makes involve personal values; for example, how much emphasis to place on the immediate interests of the customer or the long-term interests of the company, how to apportion time between family and organizational responsibilities, which behaviour to reward or discourage. In turn, these decisions have critical organizational impact (Posner 2010).

The concept of organisational values has no single and widely-accepted definition (Ofori *et al.* 2010). Values can be observed at different levels (individual, organisational and group values), they can be differentiated by the degree and place of exposure (Schein 2004, Gini 2004, Lencioni 2012), scope (Rokeach 1973) and other characteristics.

Values are so deep-seated that one never actually ''sees'' values themselves. What is seen are the ways through which values manifest themselves (e.g., in opinions, attitudes, preferences, desires, fears, etc.). Values can be personal, professional, organizational, or societal. Although they are interrelated, the influence among them varies. Values provide the foundation for the purpose and goals of an enterprise. They silently give direction to the hundreds of decisions made at all levels of the organization every day. They are at the heart of the culture of an organization (Posner 2010).

The Republic of Estonia was re-established in 1991. Transformation from the previous Soviet republic to a modern market-oriented country began. The development of the Estonian society after the restoration of their independence could be divided into various stages and periods. Based on Lauristin & Vihalemm 2009, the periodization of the Estonian transition could be as follows:

- 1988–1991: breaking with the old system, 'Singing Revolution'
- 1991–1994: radical reforms, constituting a new political, economic and social order; a time of 'extraordinary politics'
- 1995–1998: economic stabilization, start of the period of integration with the EU and NATO
- 1999–2004: preparations for EU accession, growing inner tensions
- 2005–2008: new challenges of the post EU accession period, identity crisis, the turn from economic growth to slowdown
- 2009-2011: economic recession and recovery.

In the beginning of the 1990s, Estonia had to start its independent life with the leaders and managers who were active already during the previous political system. Many of them were unsatisfied with it, but still they got their education and preparation during the Soviet system. There was a specific group of people called the "generation of winners" (võitjate põlvkond) who were young people, mainly men, who at that time were at the age of 25 to 30 and who were on their first leading positions of their career. Many of them got the possibility to privatize or reorganize the previous state-owned businesses or had the initiative to find new enterprises/businesses where they also became the leaders of the companies. These people could even be called "business pioneers" as they had the mission of establishing business culture.

Today, in 2012, a lot of these people are still active in business, but a new generation of managers who has already been educated in the independent Estonia or even abroad has come to fulfil the managerial positions in business. Due to the different development periods, people have not only changed but their aims and purposes have changed.

Methodology and sample

Current research was carried out by implementing the Global Leadership and Organizational Behaviour (GLOBE) methodology and research tools. The GLOBE research program is a worldwide, multi-phase and multi-method project. The concept of the research program focuses on leadership and organization practices and was conceived in the summer of 1991. In 1993, the recruiting of GLOBE country co-investigators (CCIs) to collect data in 62 regions began (House et al, 2004). Estonia joined the project in 2001, and started by carrying out phase 3 (GLOBE 3); phase 2 (GLOBE 2) was carried out later in 2003 (Tuulik 2007). One of the authors is the CCI for the region of Estonia.

In spring 2012, a new data collection round was carried out with the help of the students of the Estonian Entrepreneurship University of Applied Sciences and the research tool that was used was the same questionnaire as in the GLOBE 3 project in 2001.

The random sample in 2012 consisted of 33 enterprises. The sample for CEOs/managers was 33 and for subordinates 145. From the 145 subordinates, 43% were men and 57% were women. In comparison, the sample of 2001 showed that the percentage of men was 60% and women 40%.

Majority of subordinates, i.e. 41%, belonged to the age group of 31-40 years, 39% belonged to the age group of 20-30 years, 14% to the age group of 41-50 years and 4% to the age group of 51-60 years. Age groups of 61-70 years and 70-80 years were both represented by 1% of respondents.

The age distribution of managers based on subordinate evaluations was as follows: majority of managers, i.e. 43%, belonged to the age group of 31–40 years, 40% to the age group of 41–50 years, 10% to the age group of 20–30 years and 7% to the age group of 51–60 years. Compared to the previous sample in 2001, an increase in the respondents age has occurred in the age groups of 31–40 years and 41–50 years as in 2001, 38% belonged to the age group of 31–40 years and only 29% belonged to the age group of 41–45 years. The number of respondents belonging to the age group of 51–60 has decreased in comparison with the year 2001 as then, 14% belonged to that age group.

The GLOBE Leader Attributes and Behaviour Questionnaire (LBQ) includes 112 leader attributes and behaviour items that are rated on a scale from 1 to 7 with 1 indicating the lowest score (values of no importance) and 7 indicates the highest score (especially important work related values).

In addition to leadership issues, the research investigates work-related values. *The respondents were asked to indicate how much importance* ***should be*** *assigned to each of the factors listed below when making critical management decisions* using a 7-point scale. The respective questions and response options are listed in Appendix 1.

The mean values for the statements/questions were calculated during both research waves and the difference between the various mean results was tested with the t-test.

Work-related values are included in the GLOBE 3 questionnaire and the differences in work-related values in 2001 and 2012 are the basis for interpretations in the present article.

Results and discussion

Management is the process of getting things done through (other) people. In order to manage, one has to know “the things” that must be done and “the people” who have to do them. Understanding people means understanding their backgrounds — from this, present and future behaviour can be predicted. Top managers understand, interpret and mobilize a firm’s resources and capabilities in a competitive environment consistent with their own background and experience (Weick 1993).

Based on theoretical assumptions and statements by the gurus of organizational culture, management and leadership are the cornerstones for co-operation in whatever kind of action (Tuulik 2007). Fernandez and Hogan (2002) stated that one of the core issues in leadership and leader activities is the value system.

National cultures differ primarily in fundamental, invisible values held by the majority of their members, acquired in early childhood, whereas organizational cultures are much more superficial phenomena residing mainly in the visible practices of the organization, acquired by the socialization of new members

who join the organization as young adults. National cultures change very slowly, if at all; organizational cultures may be consciously changed, although it isn't necessarily easy. The secret of multinational companies – what keeps them together – is corporate culture-based common practices (Hofstede 1997).

The present research was based on these above-mentioned theoretical assumptions that cultures change very slowly, but they can still be changed.

In 2001, when the first wave of the research was carried out, Estonia had been independent for ten years. The first decade had been devoted to building up the economic system. Estonia was transforming. (Tuulik 2007: 39) A market-oriented economy that was well-established in the beginning of 20th century had to be re-established. The transition from the former centrally-planned economies in Central and Eastern European countries to market-oriented economies has been cited as one of the most important issues in contemporary economics and in the development of the world economy (Vensel 1996).

Work-related values of 2001 and 2012 were measured in managerial/leader and subordinate subgroups, the average mean values for both subgroups were calculated on the basis of received data. The results for both years are presented in Table 1.

Table 1. Work-related values of managers and subordinates in 2001 and 2012

Statement/question, work-related values	Managers		Subordinates	
	Mean in 2001	Mean in 2012	Mean in 2001	Mean in 2012
Cost control	5,4318	5,4839	5,4713	5,1408
Customer satisfaction	6,1591	6,4194	6,1552	6,0211
Employee relations issues such as employee well-being, safety, working conditions	5,2955	5,6452	5,5115	5,7447
Contribution to the economic welfare of the nation	4,1818	4,2258	4,0116	4,2394
The welfare of the local community	4,3409	4,3871	4,1792	4,2958
Employee professional growth and development	5,8409	5,7097	5,5318	5,6761
Pleasing, respecting, not offending a divine being – a god or an idol	2,5116	2,4800	2,4624	2,8929
Effect on the environment	4,4545	4,5484	4,3276	4,6170
Ethical considerations	5,2500	5,3871	5,2701	5,0915
Effect on the long term competitive ability of the organization	5,6047	5,6774	5,6512	5,5390
Effect on relationships with other organizations	5,2955	5,2903	5,1445	5,1972
Effect on firm profitability	5,7500	5,6774	5,6994	5,5704
Effect on minority employees	3,0000	3,9355	3,2500	3,8705
Effect on female employees	3,5909	4,2581	3,8555	4,2000
Effect of supernatural forces	1,3636	1,6452	1,5780	1,9203
Effect on product quality	5,8409	6,1290	5,8895	5,7305
Effect on sales volume	5,4318	5,7241	5,6069	5,5986
Valid N (listwise)	44	31	174	142
Authors' calculations				

The results were divided into five groups, as it was done in 2001, as follows:

I values of no importance (mean value 1)

II slightly important values i.e. values of very little or limited importance (mean value 2 and 3)

III generally important values – i.e. values that should be assigned a moderate amount of importance, should frequently be considered important (mean value 4)

IV very important values - i.e. values that should be assigned a high amount of importance, should *almost always* be considered important (mean value 5)

V especially important work related values – i.e. values that should be assigned a very high amount of importance, should always be considered important or should be considered more important than all other considerations (mean value 6 or higher).

The first group – values of no importance – contained one statement/question – *effect of supernatural forces*, which had the lowest mean value in both subgroups under investigation during both research years. In 2001, the managerial group mean value was 1,36 and the subordinate subgroup mean value was 1,58. In 2012, the mean values were respectively 1,65 and 1,92. The increase in the mean values of the value statements was tested by the use of T-test and in the subordinate subgroup, the increase can be considered significant. Despite the increase in the evaluation, the statement *effect of supernatural forces* remains a value of limited importance.

The second group – values of very little importance – contained two statements/questions *pleasing, respecting, not offending a divine being or god* and *effect on minority employees,* during both research years.

The mean value for the statement *pleasing, respecting i*n 2001 was 2,51 in the Managerial subgroup and 2,46 in the subordinate subgroup. In 2012, the mean values were respectively 2,48 and 2,89. In order to realize whether the change (drop in the managerial subgroup and increase in the subordinate subgroup) in the mean values is significant. T-test was used for determining that. The increase in the subordinate subgroup can be considered significant, but the change in the evaluation in the managerial subgroup is statistically unimportant. Still, unless there is an increase in the evaluation the statement *pleasing, respecting, not offending a divine being or god* also remains as a value of limited importance.

The mean value for the statement *effect on minority employees* in 2001 was 3,00 in the managerial subgroup and 3,25 in the subordinate group. In 2012, the values were respectively 3,93 and 3,97. The importance of the increase was again tested with the help of T-test and can be considered significant in both subgroups. Both mean values in 2012 are very close to the evaluation 4, which are already generally important values that should be assigned a moderate amount of importance and could belong to the next group. This could be the result of political and economic development in Estonia.

The third group contained generally important values that should be assigned a moderate amount of importance with the mean value around 4. In 2001, the group was formulated of four statements: effect on female employees, contribution to the economic welfare of the nation, welfare of the local community, effect on the environment.

The mean value of the statement *effect on female employees* in 2001 was 3,59 in the managerial subgroup and 3,86 in the subordinate subgroup. In 2012, the mean values were respectively 4,26 and 4,20. The increase of the mean values was tested by the t-test and the increase in the subordinate subgroup can be considered significant.

The mean value of the statement *contribution to the economic welfare of the nation* in 2001 was 4,18 in the managerial subgroup and 4,01 in the subordinate subgroup. In 2012, the mean values were respectively 4,23 and 4,24. The increase in the mean evaluations in both groups is statistically insignificant.

The mean value of the statement *welfare of the local community* in 2001 was 4,34 in the managerial subgroup and 4,18 in the subordinate subgroup. In 2012, the mean values were respectively 4,39 and 4,30. Once again, the increase of the evaluation is statistically insignificant.

The mean value of the statement *effect on the environment* in 2001 was 4,45 in the managerial subgroup and 4,33 in the subordinate subgroup. In 2012, the mean values were respectively 4,55 and 4,62. The increase of the mean values was tested by the use of T-test and the increase in the subordinate subgroup can be considered significant. The increase in the evaluation transfers the evaluation to the next group of values, which is the group of very important values that should be assigned a high amount of importance, that should almost always be considered important.

The fourth group - very important values that should be assigned a high amount of importance and should almost always be considered important with the mean value around 5 contains five statements: *ethical considerations, employee relations issues (employee well-being, safety, working conditions), effect on relationships with other organizations, cost control, effect on sales volume.*

The mean value of the statement *ethical considerations* in 2001 was 5,25 in the managerial subgroup and 5,27 in the subordinate subgroup. In 2012, the mean values were respectively 5,39 and 5,09. There is an increase in the importance of *ethical consideration* in the managerial subgroup and a slight drop in the importance of *ethical considerations* in the subordinate subgroup, but these changes are statistically unimportant.

The mean value of *Employee relations issues* in 2001 was 5,30 in the managerial subgroup mean and 5,51 in the subordinate subgroup. In 2012, the mean values were respectively 5,65 and 5,74. The *employee relations issues* have gained more importance in both subgroups, but the change in the subordinate subgroup is statistically important.

In 2001, the statement *effect on relationships with other organizations* was evaluated with the mean of 5,30 in the managerial subgroup and with 5,14 in the subordinate subgroup. In 2012, the mean values were respectively 5,29 and 5,20. The change in these evaluations is statistically unimportant.

The statement *cost control* was evaluated with the mean of 5,43 in the managerial subgroup and with 5,47 in the subordinate subgroup. In 2012, the mean values were respectively 5,48 and 5,14. The slight increase in the managerial subgroup and the drop in the subordinate subgroup are both statistically unimportant.

In 2001, the statement *effect on sales volume* was evaluated with the mean of 5,43 in the managerial subgroup and with 5,61 in the subordinate subgroup. In 2012, the mean values were respectively 5,72

and 5,60. The increase in the managerial subgroup is statistically unimportant and the subordinate evaluation is practically the same.

The fifth group comprised especially important work-related values that should be assigned a very high amount of importance and considered more important than all other considerations: *effect on the long-term competitive ability of the organization, effect on firm profitability, effect on product quality, employee professional growth and development and customer satisfaction*.

In 2001, the statement *effect on the long term competitive ability of the organization* was evaluated with the mean of 5,60 in the managerial subgroup and with 5,65 in the subordinate subgroup. In 2012, the mean values were respectively 5,60 and 5,54. The slight increase in the managerial subgroup and the drop in the subordinate subgroup are both statistically unimportant.

In 2001, the statement *effect on firm profitability* was evaluated with the mean of 5,75 in the managerial subgroup and with 5,70 in the subordinate subgroup. In 2012, the mean values were respectively 5,67 and 5,57. There is a slight drop in the evaluation of profitability, but this drop is statistically unimportant.

In 2001, the statement *effect on product quality* was evaluated with the mean of 5,84 in the managerial subgroup and with 5,89 in the subordinate subgroup. In 2012, the mean values were respectively 6,13 and 5,73. The increase in the managerial subgroup and the drop in the subordinate subgroup are both statistically unimportant.

In 2001, the statement *employee professional growth and development* was evaluated with the mean of 5,84 in the managerial subgroup and with 5,53 in the subordinate subgroup. In 2012, the mean values were respectively 5,71 and 5,68. There is a slight drop in the managerial subgroup evaluation and an increase in the subordinate subgroup, but both are statistically unimportant.

The last and the most highly rated statement was *customer satisfaction,* which in 2001 was evaluated with the mean of 6,16 in the managerial subgroup and also with 6,16 in the subordinate subgroup. In 2012, the mean value in the managerial subgroup evaluation was 6,42 and in the subordinate subgroup, the mean was 6,02. The increase in importance in the managerial subgroup and the drop in importance in the subordinate subgroup are statistically unimportant.

The main structure and evaluation of work-related values is the same as ten years ago. Values that should be assigned a very high amount of importance and considered more important than all other considerations have remained unchanged. There are slight changes, but these are insignificant. The main changes are among the values that in 2001 were rated as values of very little or limited importance or values that should be assigned a moderate amount of importance.

Based on current research results, we can say that the majority of work-related values in Estonian business firms in 2012 have remained the same as in 2001. Values that were of high importance are still important issues in everyday business life.

Still, the development during the ten years has resulted in changes in some of the values that in 2001 were considered to be of very little or limited importance. The importance of minority and female employees has increased and in 2012, these could already be considered as generally important issues.

The importance of minorities and their integration has been an important topic for years. People have become more tolerant. Enterprises and managers in charge of them have realized the importance

of competent work force that can also be found among the minority subgroups. The other issue is continuous attention on integration politics, where the stress is on integration of local minority groups into local economic life. The attitude towards minority groups, especially towards local Russians among younger generations, has become more tolerant. The younger generation does not have "the hate of Russians" and this could be a reason for better understanding and acceptance. According to Lauristin (2009), after the shocking experience of the 'Russian riot' in April 2007, ignited by the removal of the Soviet military monument from the centre of Tallinn, the internal priority given to minority issues has increased remarkably.

The effect on female employees is also a statement or work-related value that has become more important. It was in 2001 and is in 2012 a value that should be assigned a moderate amount of value, but the tendency of gaining more importance is substantial. It is sad that the work done by men is always more important, more recognized and also better compensated than the same work done by women. The issues of different recognition and compensation have been issues recognized by the media and also by different initiative groups. According to the Estonian Board of Statistics (www.statistikaamet.ee), in 2011, the average difference in salaries between two genders - men and women - was 22,9% and according to Eurostat statistics, in 2007, Estonia had the leading position in Europe in the difference of male and female salaries – the respective percentage was 30,9%.

The statement *effect on the environment* is also one of the values that has gained more importance in comparison to 2001. According to the Environmental awareness research done by the Minister of the Environment in 2012, 98% of the respondents agree that nature preservation is beneficial and 77% tend to agree that if there is a choice between two options – preservation of the environment or development of economically profitable business –the preservation of nature cannot be sacrificed. (http://www.envir.ee/1187007). This also supports the findings of the present research.

Conclusion

Lauristin (2009) stated that in the context of a dominating transition culture that favoured individualistic values, economic success and competitiveness and Offe (1991) predicted that the formation of new identities and values when the previous 'socialist nations' become free European societies will be a most profound and complicated process, and according to Inglehart (1997), it is taking place very slowly. Slowly, but still, it is taking place and that can also be concluded by this research.

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Appendix 1 - Scales of Work Related Values

Work related value scale

1. Cost control
2. Customer satisfaction
3. Employee relations issues such as employee well-being, safety, working conditions
4. Contribution to the economic welfare of the nation
5. The welfare of the local community
6. Employee professional growth and development
7. Pleasing, respecting, not offending a divine being – a god or an idol for example
8. Effect on the environment
9. Ethical considerations
10. Effect on the long term competitive ability of the organization
11. Effect on relationships with other organizations with which you do serious business, for example suppliers, government agencies, strategic alliances,
12. Effect on firm profitability
13. Effect on minority employees
14. Effect on female employees
15. Effect of supernatural forces such as auspicious days, forecasts by truth tellers, and the like.
16. Effect on product quality
17. Effect on sales volume

Response Alternatives

1. Not important
2. Of little importance
3. Of some importance, but little
4. Important / Frequently considered important
5. Very important / almost always
6. Especially important / always
7. The most important

Only the ‘Zeitgeist’ knows… The case of the chair Thonet No 14.

Thomas Pöpper

Abstract: In entrepreneurial education emphasize justifiably is given to product innovations. Mainly for one reason: innovations are the propulsive power of any economy. However, it is also true: creativity is its propellant.

New products normally are introduced to the market after a scientific examination of the status quo of the (broad-spectrum) needs of a potential target audience. For this reason the key function lays in a competent and experienced analysis of the ‚Zeitgeist‘ (spirit of the time).

The short paper elucidates the point by examining the genesis of one of the most sold design products of the world, the so called Thonet No. 14 (nowadays: No. 214), a bentwood chair, invented and designed by Michael Thonet (died in 1871 in Vienna). This chair – the first industrial product and the ‘incunabulum’ of European design history – was produced since the middle of the 19th century; 50 millions of pieces were sold only until 1930; and it is still in production nowadays without any changes. The chair is easy to assemble and to carry. For its ‚cumminication skills‘ the chair is the perfect coffeehouse chair.

The paradigmatic signature (‘Zeitgeist’) of the Thonet No. 14 is ‘mobility’. For this reason its construction plan is, not entirely coincidental of course, shared by paperclips, which are also an invention of the ‘bureaucratic’ 19th century. On their part, these – up to the present day – essential and indispensible office helpers respectively the above mentioned seating furniture keep papers/people only temporarily bound together but basically mobile.

‘Feeling’ or ‘knowing’ this ‘Zeitgeist’ essentials, both, the paperclip and the chair, were given a prosperous future.

Of course, the sensational subject of my little contribution – determining and clarifying the ‘zeitgeist’ – is overconfident if not foolhardy. No doubt, I will fail: I do not know how to design only one successful ‘zeitgeist’-product. To be honest, I am not a designer at all.

Being an art and design historian, it is my job to explain what happened in retrospect, from the sheltered distance. My most modest hope is, that – if the saying is correct that one may learn from the history of experience – my endeavour is not completely desperate and will help to encourage future designers to be visionary by being contemporary. The key role in my statement will play, as already mentioned, the untranslatable word and phenomenon of ‘zeitgeist’.

So let us – metaphorical speaking – take a back seat and a look at the chair, Michael Thonet's famous model No. 14 (today sold under the No. 214). It looks light and less massive that any previous product of interior design. The starting point was an ingenious new technique, the bending of solid wood, which Michael Thonet perfected during the late 1850s, enabling mass production and allowing low prices. The distribution idea was revolutionary as well. 36 disassembled chairs were packed in a transport box with a volume of 1 cubic meter, shipped throughout the world and assembled on site. Therefore, Thonet (the man and his company) is considered a pioneer of industrial design – and the model No. 14 is considered the most successful industrial product of the world. The No. 14 simply initiated the history of modern furniture (for the entire paragraph see: Thonet GmbH Frankenberg/Eder: Thonet Essence 01, Frankenberg 2011, p. 17, p. 41). Moreover, it changed radically the (social) seating arrangements.

Coffeehouses, bars (for day-trippers), and restaurants (for example on 'mobile' trains and ships) became the lieu for temporary, not-binding get-togethers, in one word for 'elected affinities' (Goethe's 'Wahlverwandtschaften'). So far, so good. Let us now look at one of the most overseen, yes, ignored products of industrial design, I imply the bent-wire paper clip.

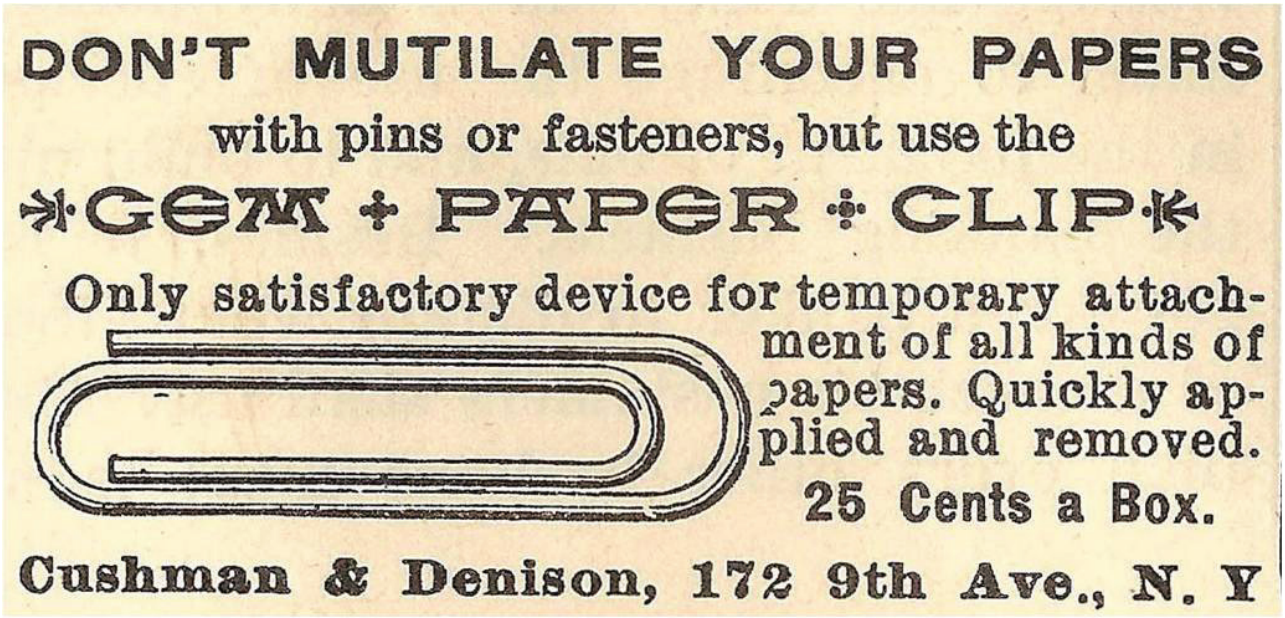
The first paper clip was patented in 1867 in the U.S. Nobody knows when it as invented first. In any case this date may well be quite contemporarily to Thonet's chair in Germany resp. Austria. Since the second half of the 19th century, it was widely recognized that paper clips were to be used to attach papers together. A 1900 trade publication already stated that "The wire clip for holding office papers together has entirely superseded the use of the pin in all up-to-date offices." (*Business*, March 1900, p. 173). No doubt, the clip was doomed to success. The two earliest patents indicate that bent-wire paper clips could be used not only in lieu of pins, but also of more durable (if not permanent) sewing, and pointed bent-over paper fasteners. Photographs (see for example the fantastic Early Office Museum's website) illustrate the 'bureaucratic' filing of papers in closed boxes and leather-bound books, which was the typical method in the 19th and parts of the 20th centuries (remember: still nowadays we talk about 'book keeping'). Around 1910 advertisements point out the – nota bene – temporary attachment of papers by paperclips – that was revolutionary (for the entire paragraph see the informative website at http://officemuseum.com/paper_clips.htm).

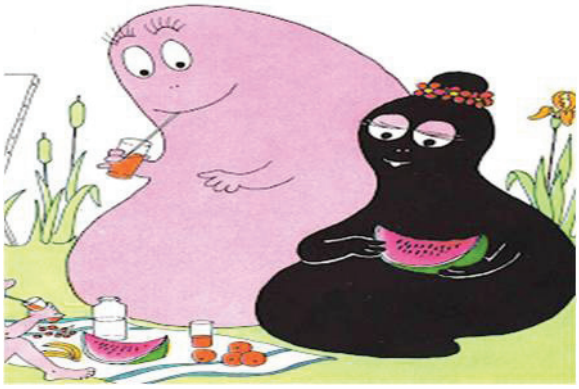
To come to the point rapidly: In my eyes, the case is clear. The two products – the chair and the paperclip – are not only close in technique (bending wood or wire) and aesthetic appearance (look at the chair back!). From a paper clip a talented hobby wiredrawer could even form a No. 14 in miniature in only a couple of seconds.

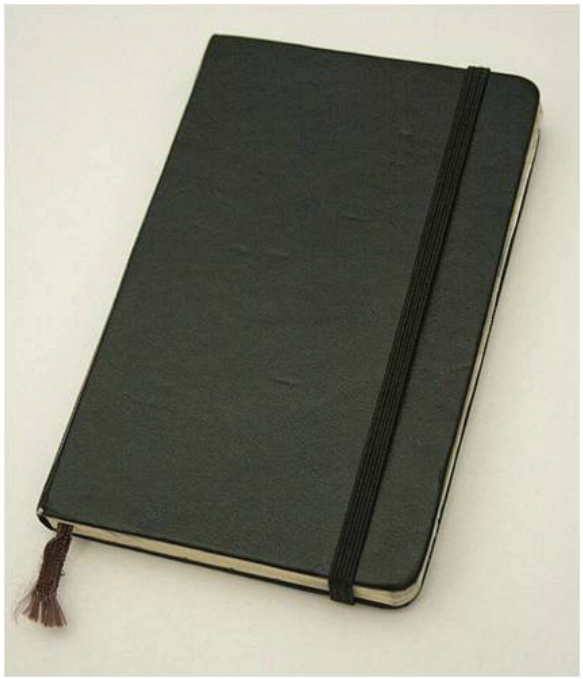
Both products give answers to the highly virulent desires of their time: lightness, cheapness, and – more significant and elementary – mobility and temporality. The chair's as well as the paper clip's secret codes are named with these words.

To conclude, I will put it this way: A designer should be creative (and creatively trained) in being a kind of a seismograph, by being visionary by tracing the zeitgeist's guiding themes (here abstract nouns and leitmotifs like mobility and temporality). The designer always must be aware of latest industrial techniques (here the forceful domination and deformation of solid materials like iron and wood – and let me add that that may well be a general characteristic of the colonial era). Other more contemporary examples could be given (see figures).

A designer must be trained to sensitization of contemporary needs and desires. From this, an indigenous creativity will arise – given that the candidate is talented.








TREKSTOR

Evaluation of the Level of Competition in Central and Eastern European (CEE) Loan Markets

Kalle Ahi*

Abstract: In the current study we attempt to evaluate the competition level in the banking industries of nineteen Central and Eastern European (CEE) countries. Specifically, we use a novel non-structural approach for identification of banking competition, the method first introduced by Boone (2008) and apply it to loan markets of CEE countries over the period 1993-2010. The preliminary results indicate that, although countries exhibit a large variation in competitive conditions, in general the level of competition in CEE countries has decreased. Major changes in the level of competition can be associated with the onset of financial crisis.

Keywords: *Banking industry, competition, Boone indicator, CEE countries*

Introduction

Banks mobilize, allocate, and invest much of society's savings; hence, bank performance has a substantive impact on capital allocation, industrial expansion, financial stability, and economic development. Thus, the factors that affect how efficiently a banking system carries out these tasks are of major concern to the research. Recent research assigns an increasingly important role to the level of competition among banks as a substantial determinant of the overall efficiency of financial intermediation and the evolution of financially sound capital markets (see for example Yanelle, 1997; Berger et al., 2004 and more recently Carbo et al., 2009 for a review of the literature).

The CEE banking markets have undergone great changes due to major structural reforms in these countries and immense changes in their banking systems. Besides the shifts in political regime, the transition in these countries has occurred as a result of deepened monetary and financial integration, as well as deregulation of the domestic financial system and liberalization of capital flows. Banks play a dominant role in CEE countries as major provider of credit, participant in the payment systems and as agents of monetary policy transmission. Thus any market failure, anticompetitive conduct or inefficiencies could have serious repercussions throughout the whole economies. Moreover, CEE banking markets have experienced a trend of consolidation as a series of mergers and acquisitions were undertaken mainly by foreign banks, leading to more concentrated markets and substantially reshaping not only the structure of banking but financial sectors as a whole.

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Theoretically it's not clear if high level of competition in the banking sector is necessarily welfare enhancing as suggested by traditional industrial organisation literature. Specific to the banking sector is the potential negative trade-off between competition and stability. Less competition may, according to the partial equilibrium analysis, reduce the fragility of banks by providing higher capital buffers (Boyd et al. 2004), may enhance the lending to otherwise credit constrained firms if information asymmetries are present (Petersen and Rajan, 1995) or deter excessive risk taking (Schaffer, 1998). In contrast, the opposite arguments posited by different papers (e.g. consolidation and fragility view) is that larger banks are more likely to receive public guarantees and subsides, which can be considered as a "too-big-to fail" doctrine (Mishkin, 1999), higher interest rates charged by banks may induce borrowers to engage in more risky investments to compensate the higher financing costs (Boyd and De Nicoló, 2006) and therefore higher likelihood of borrowers default may also trigger higher probability of bank failures (Cetorelli et al., 2007; see also Uhde and Heimeshoff 2009). A brief review of theoretical arguments concerning competition in banking suggests that the presence of frictions such as information asymmetry (e.g. adverse selection, moral hazard) in banking may favour a lower level of competition in the market. However as these frictions are expected to decline over time as a consequence of reforms in the financial sectors of CEE countries, we also expect an increase and convergence of competition levels to more developed countries.

Current paper concentrates on the evaluation of the level of competition and possible dynamics on a sample of CEE countries. We employ a novel approach proposed by recent literature, namely the Boone indicator (Boone 2008). There are no other papers that have employed the method of Boone indicator on a panel of CEE countries. Moreover, the samples of the articles that investigate the level of competition in CEE countries by alternative methods do not include the recent years of financial crisis and it's impact on the level of competition. The results presented in this paper should be regarded as preliminary and descriptive, because additional analysis regarding the robustness of the results and the sources of competition is still needed.

The rest of the paper is organised as follows. The next section provides a brief literature review about the methodological aspects of estimating the level of competition. Section III outlines the model of Boone (2008) and empirical procedures applied in the current paper. Section IV provides an overview of the dataset and section V presents main estimation results and discussion. The final section offers concluding remarks.

Literature review

Many authors have attempted to evaluate the level of competition in an academic literature at different levels of aggregation. The literature can be divided into two major streams that either employs structural or non-structural models.

The first method relies on the structural measures of the market such as market shares or concentration indexes. This approach is sometimes referred to as traditional industrial organization theory and is based on the structure, conduct, and performance (SCP) paradigm first posited by Bain (1951). The SCP paradigm simply asserts that a firm's market power increases with industrial concentration, as

a direct link from industry structure to competitive conduct is perceived. Moreover, the profitability is assumed to be increasing with industry concentration. Many of the studies, in line with SCP paradigm, employ some structural measure of competition (such as concentration ratios) as an explanatory variable and attempt to establish the link with profits. However, this estimation approach is generally considered as theoretically flawed; moreover, such studies generally suffer from severe endogeneity problems (see for example Demzets, 1973; Berger, 1995; Berger et al., 2004). In fact, according to the efficient structure hypothesis (ESH), the observed positive link between profitability and concentration could be the result of more efficient banks gaining larger market share.

Numerous papers exist which have investigated the trade-off between competition and concentration in line with SCP and ESH and have generally found that there is no evidence that banking sector concentration is negatively related with the level of competition (e.g., Yildrim and Philippatos 2007; Claessens and Laeven, 2004).

Due to several deficiencies arising from the application of the structural approach, the ongoing developments in the industrial organization literature and the recognition of the need to endogenise the market structure, many empirical studies have followed a new course. The onset of the motivation for the NEIO (new empirical industrial organization) approach has stemmed from the theoretical and empirical problems with the SCP. The NEIO approach follows the competitive conduct of firms analyzed directly, without the use of structural measures that have been found to indicate the use of market power poorly. Panzar and Rosse (1987) and Bresnahan (1982) introduced the first direct measures of monopoly power, thus avoiding the pitfalls of imperfect structural measures. The Panzar and Rosse method relies on comparative statics of a firm's reduced form revenue equations while Bresnahan's test can be applied to single product-industries where the industry demand cannot be separated from the industries supply (this is referred as an identification problem in the general literature).

The method of Bresnahan utilises a simultaneous-equation model to solve the econometric identification problem. The key parameter in this test is interpreted as the extent to which the average firm's perceived marginal revenue schedule deviates from the demand schedule, and thus represents the degree of market power actually exercised by the firms in the sample.

Other technique, besides the previous one proposed by Bresnahan and Lau, is the approach of Panzar and Rosse (1987), hereafter referred to as the "H-statistic". The *H*-statistic is calculated from reduced form revenue equations and measures the sum of elasticities of total revenue with respect to input prices. Panzar and Rosse (1987) show that this statistic reveals information about the market or industry in which firms operate. In particular, the *H*-statistic is non-positive if a firm is a profit maximizing monopolist or a conjectural variations short-run oligopoly (Panzar and Rosse, 1987, p. 453). In such a case, an increase in input prices increases marginal cost and there may be no response or even a negative response in the equilibrium output and total revenue. In contrast, the *H*-statistic is unity for a natural monopoly in a perfectly contestable market and also for a sales-maximizing firm subject to break-even constraints as shown by Shaffer (1982). More importantly, the *H*-statistic is also unity when the market exhibits perfect competition. This basically means that the proportional change in costs induces an equivalent change in the revenues when the bank acts as if in the perfectly competitive market. With a perfectly elastic demand, output does not change while the output price rises to the same extent that costs have changed. Under the monopolistic competition however, revenues will increase less than

proportionally to changes in input costs and the value of the statistic is between the abovementioned limiting cases.

A critical feature of h-statistic approach is that, the positive relationship between *H*-statistic and the level of competition may not hold in some specific oligopoly equilibrium. This constrains the use of the H-statistic as the relative measure of the extent of competition in different banking markets. Moreover, the underlying assumptions for this methodology are the profit maximizing equilibrium in the industry and normally shaped revenue and cost functions. This implies that we must jointly test for the H-statistic and the industry equilibrium. The latter can be tested with the same regression, only with the revenue variable replaced with the return of assets (ROA) (the exact details can be obtained for example from Bikker *et al.* (2009). Although the method of Panzar and Rosse has been widely used especially in the empirical banking literature, the estimation strategies employed have generally overlooked the problem with misspecification. Bikker et al. (2009) show that neither a price equation (the ratio of revenue over assets) nor a scaled revenue function yields a valid measure for competitive conduct and additional information is needed about the costs and market equilibrium which makes the empirical implementation of the method a difficult exercise. A comprehensive review of the recent papers that have employed either the simultaneous equations approach or H-statistic is presented for instance in Tabak et al. (2012).

This paper presents estimates of competition in loan markets of CEE countries by using a new non-structural approach, a Boone indicator, that despite it's merits, has so far been rarely applied to banking markets and no comprehensive studies exists that focus on CEE countries. The main idea behind the Boone's model is that, first, more efficient firms (e.g. firms with lower marginal costs) gain higher market shares or profits and, second, that this effect of efficiency on market shares or profitability will be stronger in the environment where the competition is more intense. A more detailed overview of the methodology is presented in the next section.

Methodology

The basic idea behind the model proposed by Boone (2008) is that more efficient firms should gain market share and increase their profits at the expense of less efficient firms. Moreover, this effect is stronger the heavier the competition in the market. By following Boone and van Leuvensteijn et al. (2011) we consider a banking industry where each bank i produces one product qi which faces a demand curve of the form

$$p\left(q_i, q_{j\neq i}\right) = a - bq_i - d\sum_{j\neq i} q_j \qquad (1)$$

with a constant marginal cost mci, a is an intercept which can be interpreted as a price a customer is willing to pay to any bank that offers the first unit of product q. b measures the sensitivity to price of a customer with respect to the product offered by bank i while d is the price sensitivity of a customer to the same product offered by a rival bank $q_{i\neq j}$. Note that d can also be interpreted as the measurement of

the degree of substitutes of this product between banks. If d = 0, then bank i will be the only bank which offers product qi and other banks' products qj have no commonality to the product qi.

Given the remarks above, two key assumptions are imposed: 1) $a > mc_i$ which means that the price of the first unit chargeable to the customer has to exceed the marginal cost (otherwise the profit is negative from the beginning); and 2) $0 < d \leq b$, which means that the products cannot be perfect substitutes. Next, assume that banks have an (fixed) entry cost of ε, the objective function of banks is to maximize the profit $\pi = (p_i - mc_i)q_i - \varepsilon$ by choosing the right level of q_i from the profit function.

The first order condition for the Cournot-Nash equilibrium is

$$a - 2bq_i - d\sum_{j \neq i} q_j - mc_i = 0. \qquad (2)$$

When there are N banks producing positive outputs, we can solve the N first-order conditions that yield a general closed form solution which relates the output q_i and marginal costs mc_i:

$$q_i(mc_i) = \frac{\left(2\frac{b}{d} - 1\right)a - \left(2\frac{b}{d} + N - 1\right)mc_i + \sum_j mc_j}{\left(2b + d(N-1)\right)\left(2\frac{b}{d} - 1\right)} \qquad (3)$$

The idea of Boone (2008) is that competition can be enhanced through two channels–through an increase in d (products become closer substitutes) and through a decrease in an entry cost ε. The authors showed that competition indeed reallocates output (in monetary terms) from inefficient firms to more efficient. Using the profit function $\pi_i = (p_i - mc_i)q_i - \varepsilon$ and equation (3), it can be shown that profit is a quadratic function of output

$$\pi_i = b[q(mc_i)]^2. \qquad (4)$$

and therefore it can be inferred from the analysis above that higher level of competition increases the relative profits of a firm relative to a less efficient firm. Finally, the shift of output toward the more efficient firms means that, in a more competitive environment, the more efficient firms will also gain a market share. Therefore, competition will also lead to more efficient firms obtaining higher market shares.

The equation (4) can be either estimated empirically by using the market share or profitability as an endogenous covariate.

$$\ln \pi_i = \alpha + \beta \ln mc_i + u_i \qquad (5)$$

One can see that the effect (in fact an elasticity) of change in marginal cost mc_i *to* profits could be captured by β which we refer as the *Boone indicator*. The expected value of β should be negative, since more efficient firms (which have lower marginal costs) should perform better in terms of profitability with the absolute value of β higher in more competitive environment.

The Boone indicator has several advantages compared to, for instance, a very popular Panzar and Rosse statistic. It allows measuring the level of competition for specific product markets and also for different categories of banks. There are nevertheless some shortcomings to the above approach. For instance, because of an efficiency improvement (i.e. a decrease in marginal costs), banks may either choose to decrease the price they charge in order to gain market share or to increase their profits and maintain the same share as before. We, therefore, have to suppose that banks pass at least part of their efficiency gains to consumers. Moreover, even a positive value of Boone indicator could be supported if there is a competition in quality (Tabak, 2012). Despite it's superior theoretical properties, the empirical applicability and robustness of Boone indicator is still debated and further research is needed indeed (for one of the first attempts see for instance Schiersch and Schmidt-Ehmcke, 2010).

In general, the marginal costs cannot be inferred directly from data. Recent study by Schaeck and Čihák (2010) approximates the firm's marginal cost by the ratio of average variable cost to income, while Leuvensteijn *et al.* (2011) identify the marginal costs by estimating the translog cost function for each country considered in their data. Our approach is similar to the latter, which can be considered as an improvement to the former. The translog cost function is flexible and has previously been applied by many papers to banking research. We assume a translog cost function for bank *i*, and year *t* and estimate it for each country and for subgroups of countries in the sample separately. The translog cost function has the following specification (Leuvensteijn *et al.*, 2011; Berger and Mester, 1997):

$$\ln C_{it} = \alpha_0 + \sum_{t=1}^{T-1} \delta_t d_t + \sum_{j=1}^{K} \beta_j \ln x_{ijt} + \sum_{j=1}^{K} \sum_{k=1}^{K} \gamma_{jk} \ln x_{ijt} \ln x_{ikt} + \varepsilon_{it} \quad (6)$$

where C_{it} stands for the total cost of bank *i* (*i=1...N*) in year *t* (*t=1...T*). The explanatory variables x_{ijt} comprise of two categories (output and input components). Following the intermediation approach (Sealey and Lindley, 1977) we model banks as financial intermediaries that collect deposits and other liabilities and transfer them, by using labour and capital, into earning assets but provide also other financial services. More specifically, we use three outputs: loans (*loans*), other earning assets (*othassets*) and other services (*othserv*) and three input prices include: wage rates (*wages*), funding rates (*funding*) and other expenses (*othexp*). For empirical estimation we also add a set of control variables such as country or time dummies and equity ratio to control for leverage. Moreover, we impose certain restrictions on the coefficients of cost function.

$$\beta_1 + \beta_2 + \beta_3 = 1, \gamma_{1,k} + \gamma_{2,k} + \gamma_{3,k} = 0 \text{ for } k = 1,2,3,$$

and $$\gamma_{k,1} + \gamma_{k,2} + \gamma_{k,3} = 0 \text{ for } k = 4, \ldots,K \quad \gamma_{j,k}=\gamma_{k,j} \quad \forall j,k=1,\ldots,K. \quad (7)$$

First restriction is imposed in order to ensure the linear homogeneity in input prices, which implies that input price elasticities add up to one. We also require all the squared and cross terms add up to zero and the second order parameters to be symmetric (see also for example Kumbhakar and Lovell, 2000; Berger and Mester, 1997 or Roengpitya 2010 for details). We apply these restrictions explicitly on (6) and reformulate the equation with lower number of parameters.

In order to arrive at estimates of marginal cost which are our primary interest, we define marginal costs of bank i of output category *j=l* (of loans) in year t as $mc_{ilt} = \partial C_{it}/\partial x_{ilt} = (C_{it}/x_{ilt})\partial C_{it}/\partial x_{ilt}$. We use the marginal cost with respect to loans only and estimate a separate cost function for four groups of countries (in order to preserve degrees of freedom). This leads to the following equation of the marginal costs of loans (*l*) for bank (i) during year (t):

$$mc_{ilt} = \frac{costs}{loans}[\beta_4 + 2\gamma_{44}\ln loans + 2\gamma_{14}\ln wages + 2\gamma_{24}\ln funding + \\ +2\gamma_{43}\ln othexp + 2\gamma_{45}\ln securities + 2\gamma_{46}\ln othserv]. \quad (7)$$

Finally, we derive bank specific estimates from the above equation and use them as independent regressors in the profitability equations (5) in order to identify the level and dynamics of banking competition.

The method of Boone indicator has been rarely applied to some countries in our sample. For instance Delis (2012) finds that the level of competition has increased substantially, for ten of the countries included also in our sample, during the sample period up till 2005. The only exception being Belarus. He argues that financial liberalization policies reduce the market power of banks in developed countries with more advanced institutions.

Kasman (2010) uses the alternative Panzar-Rosset method and finds a wide range of country specific values for H-statistic over the period 1995-2007. According to Kasman for countries like Estonia, and Lithuania the hypothesis of monopoly conduct could not be rejected. Moreover, countries like Bulgaria, Croatia, Poland, and Slovakia exhibit relatively low level of competition compared to other countries in their sample. The results of Kasman (2010) are generally in line with Delis (2010) who for the similar sample period reports comparative results.

Hence, different methods which have been applied recently in order to evaluate the level and dynamics of competition in CEE countries have provided conflicting results. Naturally more empirical work is needed in this particular area.

Data

Bank level financial data were obtained from the BankScope database. While banks covered by the database represent in general a large proportion of the banks in each country, there is a relatively substantial increase in the coverage since 2003 for CEE countries. Hence the paper covers the time span of 2003-2010. The countries included are Albania, Bosnia and Herzegovina, Bulgaria Belorussia, Czech Republic, Estonia, Croatia, Hungary, Lithuania, Latvia, Moldova, Monte Negro, FYR Macedonia, Poland, Romania, Serbia, Slovenia, the Slovak Republic and Ukraine. Hence we have included also three former Soviet Union Countries for comparison. We have used the unconsolidated data for a given bank when available but also consolidated data for some banks if unconsolidated data is not available.

The sample includes only commercial banks as they comprise by far the largest part of depository institutions in CEE countries. The data was reviewed for missing values, reporting errors and extreme values. In particular, we required that total assets, loans, equity, fixed assets and non-interest income should be positive. We also removed observations with extreme values of personnel expenses-to-assets and total equity-to-assets ratios. Attempts were made to recover missing data by reviewing banks annual reports from the websites for larger banks in the sample. For some cases also interpolation or regression analysis was used to proxy for missing data.

The final sample includes annual information for an unbalanced panel of 482 banks with 2 272 observations. The appendix which reports the number of observations and (un-weighted) mean values of variables used in the study on a country level are available on request. Generally countries in the sample exhibit a considerable heterogeneity in absolute terms, potentially reflecting the scale differences. Somewhat less evident are the differences in input prices and capitalisation. Yet, the proxy for other expenditures (*othexp*) measured as other operating expenses over non-earning assets ranges from 12.81% (in Albania) to 57.11% (in Slovak Republic). Moreover, banks in some countries (with presumably less mature banking markets such as Belorussia, Moldova, FYR Macedonia and Serbia) are on average much higher capitalised than in more developed banking markets. We make attempts to account for the heterogeneity by estimating a flexible translog cost function on individual bank data and by incorporating fixed country and time effects.

Estimation results

As discussed in the methodology section, our empirical estimation strategy consists of two steps. First, we estimate the translog cost functions (6) and extract the necessary coefficients in order to generate the estimates of marginal costs (7) for each bank and year. Second, we proceed with calculations of Boone indicator.

The translog cost function was estimated by grouping the data of 19 countries into four subgroups. The main reason behind the grouping is the lack of data for some countries, which doesn't allow a proper estimation of cost functions with many parameters and controls. No formal methods were used (e.g. clustering or similar techniques) for grouping the countries. However we have relied on the similarities in economic and political developments. We have, for instance, included Baltic countries and other current EU member states into two separate groups and distinguish between former SU countries and the rest. We have also allowed for country and time effects in the group-wise regression analysis of total costs to account for at least some country specific heterogeneity.

Translog cost function estimation results are presented in the following table. In order to conserve space we only report relevant coefficients (from fixed effects regressions) for calculation of marginal costs Overall, three types of estimators were estimated - ordinary least squares (OLS), fixed effect (FE) and random effects (RE). According to the Hausman test, the null hypothesis of absence of correlation between individual bank effects and explanatory variables is rejected for all groups. Hence fixed effects estimator is strongly preferred over random effects. The following table presents group-wise estimation results for cost functions. Only parameter estimates needed for marginal cost

calculations are presented.

Table 1 Estimation results of the translog cost function

Dependent variable: ln(costs)-ln(expenses)		1st group: EE, LV, LT	2nd group: HR, AL, BA, ME, MK, RS	3rd group: CZ, BG, HU, PL, RO, SI, SK	4th group: UA, BY, MD
explanatory variables	coef	FE	FE	FE	FE
ln loans	β_4	0.377**	0.268*	0.0384	-0.111
ln loans^2	γ_{44}	0.0820***	0.0740***	0.0871***	0.0718***
(ln loans) · (ln securities)	$2\gamma_{45}$	-0.130***	-0.0905***	-0.0992***	-0.0606***
(ln loans) · (ln services)	$2\gamma_{46}$	-0.0391*	-0.0519***	-0.0322***	-0.0310
(ln loans) · (ln wage - ln expenses)	$2\gamma_{41}$	-0.0149	-0.00999	0.0396***	-0.0103
ln loans) · (ln funding - ln expenses)	$2\gamma_{42}$	0.0122	0.0486***	0.00246	0.0330
Observations		233	718	904	400
R-squared		0.984	0.937	0.963	0.978

Notes: this table presents the estimation results of translog cost function as in equation (6) with restrictions discussed in the text. These parameter estimates are used to calculate the bank specific marginal costs according to equation (7). The time and country effects are included in the regressions but are not shown here. Also note that the parameter γ43 is estimated by the following relationship γ43=-γ14-γ24.

* p < 0.1

** p < 0.05

*** p < 0.01

The estimated marginal costs calculated based on table 1 for the banking industries (but not reported in the paper) refer considerable differences in costs. We were able to observe observe that the average marginal costs are lower for countries generally perceived having more advanced banking sectors. The lowest marginal costs are estimated for four countries in the group 3 (Slovenia, Czech Republic, Slovak Republic and Bulgaria), followed by Estonian and Latvian banks. The highest marginal costs are estimated for Ukraine, Belorussia and Serbia. The difference is more than threefold between the lowest and highest estimates of marginal costs. The robustness of the estimated marginal costs is supported by the fact that only four observed estimates of marginal costs were found to have negative value (and therefore excluded from the sample).

The results of the average Boone indicator by country for the whole sample period (2003-2010) are presented in the following table. Note that we have used log return on average assets has profitability measure (e.g. ln(1+ROAA)).

Table 2. Boone indicator of the loans market by banking sectors

Country	Boone indicator	st dev	Method
Albania (AL)	-2.17*	(-1.19)	FE
Bosnia (BA)	-1.80*	(0.969)	FE
Bulgaria (BG)	-1.41*	(0.811)	FE
Belorussia (BY)	-0.382	(0.695)	FE
Czech Rep (CZ)	-0.800**	(0.303)	FE
Estonia (EE)	-1.11	(1.83)	FE
Croatia (HR)	-3.14***	(0.782)	GMM
Hungary (HU)	-2.14***	(0.705)	GMM
Lithuania (LT)	-1.16	(0.752)	GMM
Latvia (LV)	-4.18**	(1.90)	FE
Moldova (MD)	-4.90***	(1.35)	GMM
Monte Negro (ME)	5.41	(3.64)	GMM
Macedonia (MK)	-5.04***	(0.807)	GMM
Poland (PL)	0.309	(0.753)	FE
Romania (RO)	-5.34***	(2.07)	GMM
Serbia (SR)	0.0652	(1.48)	FE
Slovenia (SI)	0.97	(0.593)	FE
Slovakia (SK)	-2.33***	(0.751)	FE
Ukraine (UA)	-6.55**	(3.11)	FE

Notes: The table presents Boone indicators (β) for the countries in the sample. More negative coefficients indicate more competitive banking market. The Boone indicators are for most cases estimated without time dummies as in most of the regressions time fixed effects were insignificant. Time effects were included only for Bosnia and Slovakia. The estimation method is either fixed effects (within) estimator or IV-GMM estimator with lag value of marginal costs used as an instrument. The test of endogeneity of marginal costs was based on the difference between two Hansen J-statistics for equations, where marginal cost is treated either as endogenous or exogenous variable.
The actual coefficients and standard errors are multiplied by 102 for better exposition
Robust (HAC) standard errors are reported
* $p < 0.1$
** $p < 0.05$
*** $p < 0.01$

We can see from the table that the countries in the sample differ quite significantly in terms of competitive conditions. We may also observe that the most competitive banking markets according to Boone indicator, and exhibiting levels of competition quite similar, are Ukraine, Romania, Macedonia, Moldova and Latvia. Countries exposed to less banking competition are Montenegro, Slovenia and Poland. For these countries we observe a positive value of the metric, though not significantly different from zero. Interestingly, the higher level of competition is experienced by (at least some) countries with

presumably lower level of economic and institutional development. This finding may indicate that further transformation of banking sectors of these countries may still be under way.

Schaeck and Čihák (2010) have also employed similar approach to Boone indicator estimation. They also use return on assets as the dependent variable (the marginal costs are however proxied by average costs which is an important simplification). Their estimates of Boone indicator on the sample of advanced economies such as US and selected European countries range between 0 and -15. Another paper which has used similar approach is based on the example of Sweden (Habte 2012). They however report rather low levels of competition compared to our estimates. The Boone indicator varies between -3.5 (in 2005) and 0.4 (in 2009), also exhibiting a diminishing level of competition in 2006.

We have also re-estimated the Boone model in order to capture the dynamics of the level of competition. The estimation strategy was to re-estimate the indicator on a yearly basis. For that purpose we have employed the following specification.

$$\ln(1 + ROAA_{it}) = \alpha + \sum_{t=2003,\dots,2010} \beta_t d_t ln(MC_{it}) + \sum_{t=2004,\dots,2010} \gamma_t d_t + \mu_{it}, \quad (8)$$

Where d_t is dummy variable for each year, β_t is the Boone indicator for each year and μ_{it} is the error term. The results for the country groups and more importantly, for the whole sample are presented in appendix (table A1).

We can observe that there is an evidence of statistically significant decrease in the level of competition for the whole sample over 2003-2010. The overall decrease in the level of competition could be potentially attributed to global financial crisis. Indeed a further research is needed in order to explain such interesting shift in the competition in lending markets. We were not able to capture the dynamics for two groups in the sample. The second group is potentially most heterogeneous in terms of overall institutional and lending market development. Moreover, the estimations for the 4th group did not yield also any significant results. it should be noted that the coverage of for instance Ukrainian banking is rather modest in Bankscope database as some of the biggest and systematically important banks are missing from the database. Also, several state-owned banks from Belarus are not included in Bankscope. We don't observe particular differences for the rest of two groups. However, the Baltic countries seem to have somewhat lower level of banking competition in lending markets.

Next we made attempts to evaluate the dynamics of Boone indicator for every country in the sample. However, the estimation of the dynamics by (8) generally didn't give statistically significant results.

We proceeded with slightly modified version of (8) which is formulated as follows:

$$\ln(1 + ROAA_{it}) = \alpha + \beta ln(MC_{it}) + \sum_{t=2004,\dots,2010} \rho_t d_t ln(MC_{it}) + \mu_{it}, \quad (9)$$

This formulation allows estimating a country specific average Boone indicator but the coefficients for interaction terms indicate if there are significant yearly changes (either increasing or decreasing) in the value of Boone indicator. This time we estimated (9) for each country (fixed effects estimator is used) in the sample but report only those with significant results (see table A2 in appendix). The table A2 should be read such that the parameter values of D_year (marginal costs of bank interacted with year dummy) indicate the dynamics of competition compared to the average estimate of Boone indicator. Hence the significantly positive coefficient of the parameter implies decrease of the Boone indicator and therefore points to lower level of competition.

According results presented in table A2, we may observe that by letting a dynamic specification, the average estimate of Boone indicator changes across countries doesn't change significantly across countries (the signs of Boone indicator appear not to change signs in a statistically significant way), which gives some support to robustness of the results. We may also conclude that for vast majority of countries the level of competition has decreased since 2008 (only exceptions are Romania and Lithuania that seem to lose some of the competitiveness in the loan markets in the following year). A few other studies have also pointed out that the level of competition might have decreased in the CEE countries for last few years. For instance Andrieş and Căpraru (2012) report similar evidence using Lerner indexes and H-statistics. They attribute this to the change of exposure of old EU member states banks in CEE countries. Therefore one may argue that the level and the dynamics of competition are related to the parent banks undertakings and strategies pursued in CEE banking markets. Interestingly we don't observe a significant change in competition for the whole sample before 2008 contrary to some other papers. This may call for better/alternative specification of Boone indicator estimation as it is not yet clear how good is this relatively new method in capturing the level and dynamics of competition in a robust way.

Concluding remarks

This article employs a relatively new method to measure competition. This is the first study that applies this approach to the panel of banking markets of CEE countries. This approach has the advantage of being able to measure competition in different market segments and is not constrained to one state or geographical area. Moreover, estimation of the Boone indicator requires relatively low level of data, which is especially important in our sample.

We have followed an empirical estimation strategy similar to Leuvensteijn *et. al* (2011) but our model specification and the time span we cover don't allow us to directly evaluate the similarities and differences with their approach. However, we showed that there is no significant improvement in the level of competition over the period of 2003-2007 and there is a significant decrease in competition following 2008 in the whole sample and for selected countries.

We also showed that there is a relatively high variability in terms of competition level. We observed that the most competitive banking markets according to Boone indicator were Ukraine, Romania, Macedonia, Moldova and Latvia. Countries exposed to less banking competition are Monte Negro, Slovenia and Poland.

All in all, our results should be regarded as preliminary and descriptive, but yet intriguing. Hence, there is indeed a need for further analysis of competition that includes richer data on the characteristics of national banking sectors and bank strategies.

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APPENDIXES

Table A1. Boone indicator of the loans market by groups of banking sectors

Dependent variable: return on assets ln(1+ROAA)					
Year	Full sample	1st group: EE, LV, LT	2nd group: HR, AL, BA, ME, MK, RS	3rd group: CZ, BG, HU, PL, RO, SI, SK	4th group: UA, BY, MD
Boone_2003	-2.11***	-2.19*	-0.566	-2.33***	-3.55
	(0.785)	(1.17)	(1.06)	(0.675)	(2.47)
Boone_2004	-2.26***	-2.13*	-0.621	-2.50***	-3.83
	(0.787)	(1.10)	(1.01)	(0.677)	(2.71)
Boone_2005	-2.25***	-2.16*	-0.810	-2.34***	-3.94
	(0.760)	(1.09)	(0.961)	(0.662)	(2.70)
Boone_2006	-2.22***	-2.18**	-0.777	-2.32***	-3.80
	(0.743)	(1.07)	(0.910)	(0.653)	(2.64)
Boone_2007	-2.17***	-2.26**	-0.676	-2.28***	-3.84
	(0.736)	(1.10)	(0.898)	(0.623)	(2.68)
Boone_2008	-2.06***	-1.94*	-0.393	-2.30***	-3.75
	(0.775)	(1.08)	(0.959)	(0.661)	(2.92)
Boone_2009	-1.51**	-0.501	-0.258	-1.96***	-2.15
	(0.750)	(1.12)	(0.976)	(0.614)	(3.08)
Boone_2010	-1.60**	-0.923	-0.220	-1.90***	-2.90
	(0.716)	(1.02)	(0.954)	(0.605)	(2.66)
Constant	-4.23**	-4.18	-0.449	-5.54***	-6.27
	(1.84)	(2.79)	(2.10)	(1.78)	(5.67)
Observations	2 250	233	717	901	399
Number of banks	480	39	142	212	87

Notes: this table presents the estimation of time dependent Boone indicator according to the equation (8) in the main text. More negative coefficients indicate more competitive banking market. Boone indicators are estimated based on fixed effects. Respective time and country dummies were included in estimation but are not presented here. Robust (HAC) standard errors are in parentheses.
The actual coefficients and standard errors are multiplied by 10^2 for better exposition.
* $p < 0.1$
** $p < 0.05$
*** $p < 0.01$

Table A2. Yearly estimates of Boone indicator for selected CEE countries

Dependent variable: return on assets ln(1+ROAA)

VARIABLES	Bulgaria	Czech Rep	Croatia	Hungary	Lithuania	Latvia	Monte Negro	FYR Macedonia	Romania	Slovakia
Boone	-2.05**	-1.72**	-1.15	-2.26	1.47*	-3.63**	-7.25*	-2.27*	-4.95**	-3.05***
	(0.948)	(0.661)	(0.781)	(1.560)	(0.750)	(1.440)	(3.850)	(1.180)	(1.820)	(0.988)
D_2004	0.248	0.296**	0.00512	-0.0473	-0.638***	0.14	-0.592	0.641	-0.571	0.386*
	(0.232)	(0.122)	(0.086)	(0.212)	(0.144)	(0.270)	(0.433)	(0.591)	(0.344)	(0.213)
D_2005	0.239	0.290*	-0.0443	0.169	-0.680***	0.0139	0.699	0.495	-0.207	0.700**
	(0.159)	(0.162)	(0.099)	(0.179)	(0.195)	(0.283)	(0.720)	(0.429)	(0.345)	(0.258)
D_2006	0.0773	0.340**	-0.00865	0.297	-0.731***	0.16	1.29*	0.775*	-0.13	0.624***
	(0.142)	(0.152)	(0.125)	(0.246)	(0.184)	(0.280)	(0.637)	(0.424)	(0.377)	(0.210)
D_2007	0.185*	0.302*	0.0273	0.893	-0.783***	-0.0183	1.91*	0.559	0.0153	0.553**
	(0.107)	(0.171)	(0.129)	(0.623)	(0.176)	(0.301)	(0.837)	(0.448)	(0.482)	(0.235)
D_2008	0.398**	0.345	0.259*	0.342	-0.533***	0.369	1.67***	1.02**	-0.817*	0.718**
	(0.142)	(0.209)	(0.150)	(0.261)	(0.114)	(0.343)	(0.465)	(0.480)	(0.477)	(0.288)
D_2009	0.512***	0.473**	0.429***	0.676**	0.885**	1.78***	0.992	1.33**	0.319	1.18***
	(0.135)	(0.209)	(0.149)	(0.286)	(0.341)	(0.482)	(0.648)	(0.479)	(0.781)	(0.387)
D_2010	0.728***	0.460**	0.495***	1.20***	0.103	1.68***	2.11	1.00*	0.37	1.04**
	(0.252)	(0.203)	(0.151)	(0.356)	(0.193)	(0.440)	(1.260)	(0.503)	(0.524)	(0.392)
Constant	-3.46	-3.59*	-1.66	-4.02	3.13*	-7.48**	-13.5	-2.64	-12.1***	-6.36**
	(2.320)	(1.800)	(1.900)	(3.590)	(1.700)	(3.500)	(7.760)	(2.560)	(4.220)	(2.310)
Observations	113	110	202	122	65	125	47	97	141	88
R-squared	0.179	0.242	0.253	0.129	0.626	0.594	0.305	0.232	0.215	0.403
Number of banks	20	25	33	28	10	21	9	19	28	18

Notes: this table presents the estimation of time dependent Boone indicator according to the equation (9) in the main text. Positive coefficients for D_year imply decrease in the level of competition. The model is estimated using fixed effects (within) estimator. Respective time and country dummies were included in estimation but are not presented here. Robust (HAC) standard errors are in parentheses.
The actual coefficients and standard errors are multiplied by 102 for better exposition.
* p < 0.1
** p < 0.05
*** p < 0.01