Strategic Competencies as Bridging Means between Formal University and Non-formal Education

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ABSTRACT: *EU understanding of lifelong learning, as recorded in the recent EU documents, is that lifelong learning must be an inherent part of the European social model. The Barcelona Conclusions inform the world that the European social model is based on good economic performance, a high level of social protection and education and social dialogue. Within this context the status of tertiary education to provide complete set of professional competencies is challenged by the dynamic learning opportunities and learning needs. The review of Lithuanian systems of formal and non-formal professional education, university and non-university education opportunities allows to compare basal competencies and distinctive competencies that the universities as providers of education seek to achieve with the horizontal competencies – strategic competencies. Strategic competencies, such as self-learning, are the competencies that take university education into the practical world. Strategic competencies, in fact, become distinctive competencies for non-formal, non-university education. The attempt is made to suggest a bridge formal, non-formal and informal education through locating the strategic competencies in case samples.*

1 INTRODUCTION

European Union on the way towards fulfillment of its vision of economy of knowledge, which, among other attempts, could be defined as "social model (…) based on good economic performance, a high level of social protection and education and social dialogue". (1) has determined a horizontal objective for achieving the main goals of the above quoted social model. This objective is understood as a lifelong learning which will pledge improvement of "personal, civic, social and/or employment related perspective" (2). Lifelong learning, therefore, is primarily seen as a broad front of possibilities which in the EU Council Resolution on Lifelong Learning are stated as all EU member states responsibilities "to encourage cooperation and effective measures to validate learning outcomes, crucial for building bridges between formal, informal, non-formal learning and thus prerequisite for the creation of a European area of lifelong learning."(2). In response to the communication from the Commission, European University Association has determined and published a document called "The Role of the Universities in the Europe of Knowledge" (3). Universities see their involvement in creating lifelong learning opportunities as a possibility for the university and society dialogue (3). In this way there is formally stated an intention to search for the contact between university education with the other forms of post –secondary continuous education .

Aspects of university and other continuous education seen as an adult education area have been analysed by many authors Freire, 1972, 1995; Sticht, 1998; Knowles, 1981; Cross, 1984; Kolb 1984; Mezirow, 1990 and many other outstanding scholars. To name a few recent Lithuanian authors it is important to mention works by Šernas, 1995,1998; Dienys, 1996,1997; Taruškienė 1997; Trečiokienė 1998; Beresnevičienė, 2000; Laužackas 1996, 1997, 1998, 2001, 2002; Teresevičienė, 2001; et al. Anužienė, 2004, analyses continuous education for engineers as an educological phenomenon. The author sets out to analyse engineering profession as a very dynamic area of knowledge building and to create optimal models for continuous vocational training in the working place through acquisition of relevant competencies.

The novelty of present article is in the approach towards competencies in engineering specialization that sees them as a bridge between formal and non-formal continuous education in Lithuania.

The object of the analysis is the strategic competencies of engineers within formal and non-formal education systems of Lithuania.

The aim is to show the bridging potential of the engineering strategic competence between formal and non-formal education system sin Lithuania.

The method of research is study of statistical data, documents and research literature .

2 LITHUANIAN SYSTEM OF FORMAL AND NON-FORMAL CONTINUOUS EDUCATION FOR ENGINEERS

The last draft of Lithuanian Law on Education, 2003, has finally established of what is known in Lithuanian education as formal and non-formal education. Formal education is education subject to state approved programmes and on completion of these programmes granting a level of education (form elementary – to higher education) or a qualification. Formal education apart from the Law on Education is regulated by the Law on Vocational Education and Training, 1997; the Law on Science and Studies,1991; and the Law on Higher Education, 2000. Training is delivered on the basis of programmes listed in the Register of Study and Training Programmes. Non-formal education is primarily seen as „adult education covering learning, personal development, or studies undertaken in the interests of an individual and society that do not lead to a state-recognised document attesting to a full or partial education, completion of a regulated module, or to the acquisition of a qualification. (4). On completion of a non-formal education programme, learners may be issued a certificate that does not grant a vocational qualification. Afult non-formal education is regulated by an Adult Non-Formal Education Law,1998. For non-formal level there develop in Lithuania two directions: adult training for labor market needs which is intended to help people adapt to the changing labour market needs and the education of state-supported social groups such as persons with disabilities, obligatory military servicemen, immigrants, imprisoned persons etc. (5).The tendency in service provision here is rather oriented towards professional in-set training institutions or at work training .

There are 17 state run and 6 private universities in Lithuania. 16 non-university type higher educational institutions, colleges, state run and 11 private colleges. Engineers professional programes are offered only by state run 5 universities and 13 state run colleges. Private higher education institutions do not offer these programmes. In the field of engineering profile in Lithuania there are recorded over 150 programmes taught at the university level schools and 32 at the college type schools. At the higher vocational training schools, as the primary vocational training institutions, 24 programmes and 96 programmes are offered (6), Yet, these schools give no engineering qualification.

Levels of professional qualification are determined by the Law of Ministry of Education and Science and Ministry Labour and Social Security, 2001(7) See Table 1.

Table 1

Level of professional education institutions offering level of professional education	Definition of professional education level	Minimal education required
One	Ability to carry out simple, routine work operations	-
Two	Ability to perform specialised work not requiring important autonomous decisions, or Competency to carry out a specialised tasks non-requiring to take ividual decisions	Basic
Three	Ability to perform fairly complicated work in areas	Secondary

	requiring responsible and independent decisions. Leads to ability to coordinate group work.	
Four	Ability to perform a complex professional tasks demanding high degree of responsibility, independence, deep knowledge and specific skills. Leads to ability to coordinate and administer group work. Ability to perform complictaed work in professional areas of function. Lead sto ability to plan, organise, administer and control the work of otehrs.	Secondary Advanced Educational
Five	Ability to perform complicated creative work in broad, new areas of activity; ability to engage in autonomous vocational activity based on thorough knowledge. Leads to ability to plan and assess the work of others and assume managerial functions	Higher education

Non-formal education for engineers is not very distinct. Labour exchange cannot garnt any qualifications only certificates which allow to carry a very limited function range in enginering profession. In fact, in engineering non-formal education are mostly involved higher educational institutions that also work in formal education.

Howeveer, by the forecasts of the labour exchange engineers of differnt professional specialisation will be among professions most in demand in Lithuania in future, in the period 2003-2006. This clearly opens perspective for formal and non-formal continuous education to supply the labour market with what is in demand. See table 3 (7):

Table 3

<div align="center">

Forecast of teh most wanted **professionals,**
technicians and clerks

</div>

civil engineers
electrical engineers
mechanical engineers
computer programmers
computer systems designers and analysts
civil engineering technicians
client information clerks
accountants
business professionals
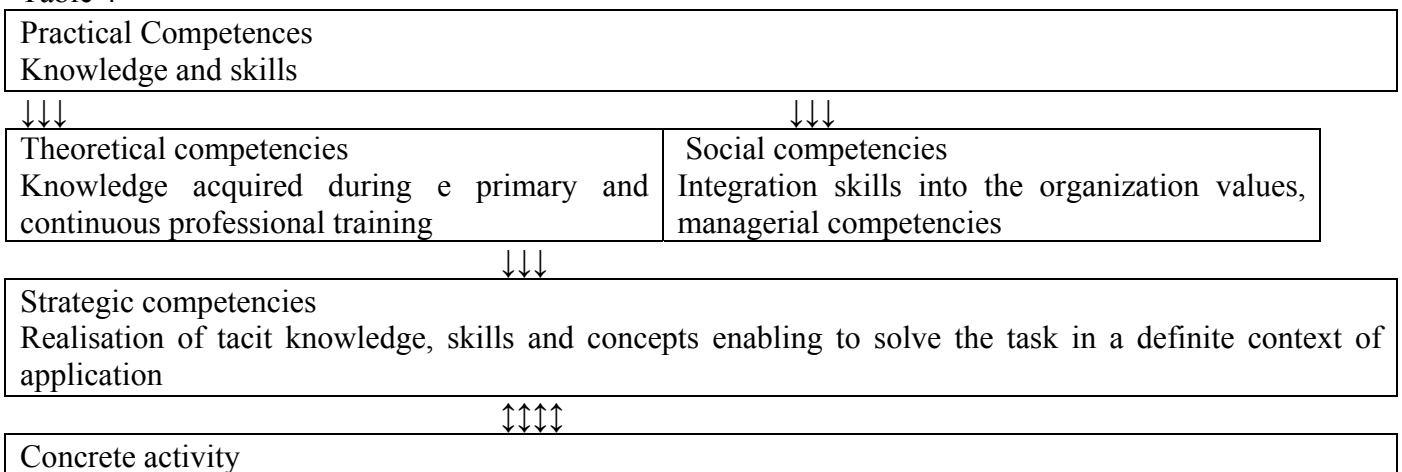technical and commercial sales representatives.

3 DEFINITION OF COMPETENCIES

EU Commission gave a working definition of a competency:"(…) a hybrid attribute as it involves a combination of knowledge, skills and attitudes. It may be acquired in all sorts of contexts, formally, informally and non-formally, intentionally or non-intentionally"(8). Another definition of a competency more related to the bearer of this trait was given by Boyatzis :" A job competency is an underlying characteristic of a person in that it may be a motive, a trait, a skill, an aspect of one's self-image or social role, or a body of knowledge which he or she uses'(9, p3) Yet, having in mind that any individual appears to act and will increasingly so be acting in future within an ever –changing environment, the dimension of competency life-cycle is added by Whiddett and Hollyforde: "If a competency is to stay relevant , it must take account of expected changes which are likely to affect the way in which the organisation operates. These changes are incorporated into organisation frameworks by including behaviours which describe the way individuals will need to go about their jobs in the short- to medium-term future. "(9, p.20) This last definition draws very much on the behavioural13330909 side of the competency quality, a manifestation of a competence. But what , in effect, constitutes a competency.

As early as 1998 in the International conference in Doville (Syntese des travaux. Objectifs Competences, 1998) were determined the main components of the competency: practical component (skills); theoretical knowledge (theoretical component); behaviour (social component), strategic or (cognitive component).It has also decide about the professional competence – it is not a sum of all competences but a framework of integrated skills. (10,p. 4)

Turner and Crawford suggest another approach at a competence structure : basal competence used "in the same sense as in physics any particle smaller than atom"; whereas professional competence may be seen as distinctive competence which in its turn appears to be distinctive competence," a combination of any basal competences".(11,p.254)

Within a framework or a combination competencies interact. Le Botref(12) stated two dimensions – horizontal and vertical, transversal. Horizontal dimension enables each component for the concrete application, while transversal dimension affects evolution of the competences (Table 4):

Table 4

Practical Competences
Knowledge and skills

↓↓↓   ↓↓↓

Theoretical competencies	Social competencies
Knowledge acquired during e primary and continuous professional training	Integration skills into the organization values, managerial competencies

↓↓↓

Strategic competencies
Realisation of tacit knowledge, skills and concepts enabling to solve the task in a definite context of application

↕↕↕↕

Concrete activity

Competencies that are transversal (practical, theoretical, social), i.e. the ones that tend to evolution along the educational levels to which an adult may be exposed in one's life happens very often in formal professional education. Yet, the horizontal bar of strategic competencies is the horizontal task of lifelong learning which can be activated only when the vertical qualities are put to continuous interaction with real life tasks. For building up this strategic competency professional non-formal education is best suited. Through strategic competencies the university or college graduates will sharpen such transversal competencies which will be in demand throughout their life and professional career. Strategic competencies help evolve such distinctive competencies which turn to serve the purposes of a given life period of an individual. Strategic competencies as is defined in the scheme – realisation of the tacit knowledge, skills and concepts are connecting, bridging formal, non-formal or informal continuous education. True, this proposition is best exemplified through sample cases .

1. An engineer works according to the certificate they have acquired in formal education. In such a case their professional competence, distinctive competence may well developed disregarding sustainable development needs of his workplace. To highlight the interests of a working environment the work may employ a specialist who would recommend formal, non-formal and informal education providers for the development of competencies (practical, theoretical, social and strategic) that suit the interest of the working environment and taking into account advantages the variety of the above forms of education can offer.

2. An engineer has a professional qualification which is a bit or quite short of the demand of current job. Then, as was the case in the first example, one's requalification has to be in line with the sustainable development of the organization, but for the engineers adaptation to the needs of reality best suit formal education granting "new knowledge, skills and concepts" and a certificate validated by the state. Here the strategic competence, in fact, reacts on the vertical axis to inform the need of a new set of distinctive competencies. Strategic competency is very high.

3. An engineer has a qualification but has no job. The individual is scheduling one's requalification with regard to the demands of Lithuanian labour or foreign labour markets. Informal and non- formal education here would come as best modes of learning, since they inform about the situation and individual inclinations best through helping find new interests and goals in life. Formally there are no such service suppliers.

In all the three cases the competencies develop in accordance with the reality context – sustainable development of an organisation or a labour market , yet strategic competencies acquire the paramount value they most often supply the motive for competencies augmentation, requalification and cardinal change. They serve as a bridge between formal, non-formal and informal continuous education by activating or putting to tacit awareness the practical, theoretical and social skills. .

4   CONCLUSIONS

Competencies can be classified according to different systems, but the most practical application proves to have the classification suggested by Le Boterf.

Engineers' strategic competencies develop through interaction with reality in job environment. They call for vertical transversality, i.e. modification similarly as practical, theoretical and social competencies. For these purposes all forms of continuous education : formal non-formal, informal may serve. Since strategic competencies present by themselves a combination of all other (practical, theoretical and social) competencies their development must be seen as a bridge between formal and non-formal education systems.

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