

Diagnosis of competences in project teams

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ABSTRACT

The goal of this paper is to present the process of Evolute (Cycloid) Polish version implementation and results of first students' evaluation in Poznan University College of Business and Foreign Languages. Authors based their research on Personal Competence Theories prepared by Prof. Waldemar Karwowski, Prof. Hannu Vanharanta and Dr Jussi Kantola. Implementation of Polish version of Evolute was organized in phases (knowing application, achieving administrator skills, translating application Cycloid into Polish language, testing, students evaluating). 26 students took part in the first evaluation.

Keywords

Competences, Cycloid application, project management, implementation, education, trainings

INTRODUCTION

Every business schools which want to be competitive on the present market should be focused on market demand. It seems to be obvious, but what does it mean in practice? In this article authors opinion it means that people who are responsible for school developing should analyze what kind of competences are necessary for modern businessman, for specialist, for entrepreneur, for manager. Basing on conclusions after above mentioned analysis, they should testing their students, and prepare suitable education and training program. As an example of application, which can be used as a perfect tool for Project Manager competences diagnosis authors presents Cycloid Evolute.

THEORETICAL FRAMEWORK

Competence can be described as doing something well. It is a skill that you need in a particular job or business situation for a particular task. According to Oxford business dictionary competence can also be described as a power that a court, an organization or a person has to deal with something. Competency based approach is a method based on discovering of the skills, knowledge and behaviour necessary for a particular task, job or career: that involves looking at the skills that an employee has or needs[1].

According to Rowanhill consultants the concept of competence has different meanings. It is not always immediately clear which of the many forms of competence is being used or discussed. Four influential (but confusing) definitions during the last decade can be summarized as:

1. predictive competency - i.e. testing the characteristics and aptitudes that are likely to differentiate superior performers,
2. organizational core competencies - i.e. aggregates of capabilities, where synergy is created that has sustainable value and broad applicability for an organization.
3. proven competence - i.e. a real and demonstrated ability to successfully carry out some activity which is totally identified.
4. adaptive competence - i.e. 'metacompetence' or the ability to read a new situation and adapt/apply appropriate competences.[2]

Cycloid Evolute is a specific application for project managers. Cycloid application for project team managers goes one step further by utilizing theoretical framework of Evolute methodology. The fundamental challenge for a manager and a project team manager is to fulfill the individuals and organizational objectives and requirements. Cycloid application is a tool for diagnosing managers and project managers competences.

According to Senge (1994) the realistic positioning of current reality is a starting point for any future visioning and has been named the "creative tension" the creative tension is a tension between visioning of the future and the idea of current reality. When an object is evaluated and developed using the Evolute methodology, something similar to the energy of creative tension is perceived[3] this energy, or the will to develop an object, is called the proactove vision[4].

Adaptive or meta-competence concepts adapted from Rowanhill have built on a fourth definition of competences. This idea has emerged in the last decade and has been applied widely to professional roles where practitioners create and define their own tasks.

In a 1991 article, Fleming described The concept of meta-competence as "that which allows someone to locate a particular competence within a larger framework of understanding." Others define it as the ability to read a new situation and adapt or apply appropriate competences. Rowanhill states" is not about answering questions posed by predictable tasks in known worlds. It is about dealing with uncertainty and incomplete evidence, asking the right questions, and developing the means to resolve problems. At its most basic, it may be seen as "learning to learn", "flexible transfer and application of knowledge and skills across contexts", or "thinking outside the box."

Evolute Cycloid is utilizing circles of mind metaphor, fuzzy logic and co-evolute methodology. Circles of mind is designed as a physical object. According to Vanharanta this physical object leads new concepts of co-evolute methodology.

All co-evolutionary applications of the Evolute system have been developed as Internet applications (Vanharanta, Kantola 2005). They work on the application architecture called Evolute (Kantola et al.2004). According to Kantola the Evolute methodology

utilizes fuzzy logic to capture the subjective, abstract and vague nature of individuals' current occupational competencies. Furthermore the use of fuzzy sets allows for using linguistic meanings directly without conversion to numerical scale. Fuzzy logic supports approximate reasoning for analyzing and modeling different levels of creative tensions according to the occupational competences and based on individuals' perception of their current reality and vision.

In the Evolute cycloid application, theoretical competencies of project team managers are linked to practice through a comprehensive sets of statements what makes it an excellent tool for competencies testing and evaluating of current reality and personal vision (ideal targeted state) realised based on plan, which because of its level of complication is prepared by using a special methods".

Competences evaluation as education process is also a very important issue. In present times it should be the core of developing students skills and knowledge. Only by comparing business expectations of competences to students profiles, it seems reasonable to prepare education programmes, professional development, personal trainings and work evaluation[5].

CYCLOID IMPLEMENTATION IN POZNAN UNIVERSITY COLLEGE OF BUSINESS AND FOREIGN LANGUAGES

Steps of implementation

During the conference "Innovations in management" (29-30.06.2006r. in Poznan University College of Business and Foreign Languages) researchers from Tampere University of Technology presented Evolute application. After the conference, researchers from both schools began cooperation. In July 2006, Global Institute of Management was established and translation of Cycloid application was send from Poznan to Pori (Finland). During August 2006 the whole testing documentation and rules were agreed. First tests took place in September 2006, next in October 2006.

Evaluation

Evaluations were made in:

- November 2006 on population of 16 students of first year of education in Poznan University College of Business and Foreign Languages (participants of Basics Management course),
- January 2007 on population of 10 students of third year of education in Poznan University College of Business and Foreign Languages (participants of Project Management course).

Analyzing results, researchers came to such conclusions:

1. both groups want to increase the level of stress tolerance; it means that they feel acting in business world as very stressful, so to face that problem students want to learn how to solve it (how to relax, what are sources of stress, how to be stronger, etc.),
2. group of first year student seems to be more focused on new market conditions, they are entrepreneurs; they underline such values like: production efficiency, organizational savvy, flexibility, communications and responsibility; they present a picture of successful pr0ject managers,

3. group of third year students seems to be team work oriented, but they need a leader; the most important for them is group capabilities and maintaining orders.

Table 1 Competences underlined by students

Competence	Year of study	
	I	III
Emotional awareness	2	2
Self-confidence	3	2
Trustworthiness	2	0
Maintaining order	3	4
Innovation	4	3
Responsibility	5	2
Seek information	1	1
Analytical thinking	1	2
Conceptual thinking	1	0
Language proficiency	4	3
Achievement orientation	1	0
Initiative	1	0
Optimism	1	1
Understanding others	2	2
Developing others	1	0
Communication	5	3
Conflict management	0	1
Management	1	1
Leadership	1	2
Relationship building	4	3
Collaboration	2	0
Self-assessment	1	1
Flexibility	5	2
Stress tolerance	7	6
Commitment	0	1
Production efficiency	6	2
Decision quality	1	0
Leveraging diversity	4	2
Organization savvy	5	1
Group capabilities	3	5

Above results also presents that training program should be suitable for each group of people. There are not incorrect scores in Evolute Cycloid evaluation, but there are individual marks and targets (profiles). So, the main conclusion is that in education system (i.e. in colleges) all applications of Evolute System can be very useful, especially for:

- students – which must choose specialization of the study and create their career paths,
- lecturers – in program / training preparation,
- advisors – i.e. profession advisors (psychologists) working in colleges / universities Career Offices.

Referring to theory of team building, Cycloid helps also in identifying each member type, based on main competences which each of them choose during the evaluation.

SUMMARY

Developing of Evolute applications should be continued, because it can be very useful in education process and in business trainings. It can become modern diagnostic tool, commonly used because of its availability (by web site) and practical implications.

REFERENCES

- [1] Oxford business dictionary 2006
- [2] <http://www.rowanhill.co.uk/aboutus/concepts.htm>
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- [4] Paajanen et al. 2004
- [5] Based on Wyrwicka M. "Kompetencje i kwalifikacje wymagane od pracowników przemysłu u progu XXI wieku", Zeszyty Naukowe Politechniki Poznańskiej, seria Humanistyka i Nauki Społeczne, 2001 Nr 50