



# LEAN

2012-1-CY1-LEO05-02321

LEarning from ANalogies

**WORK PACKAGE 3: STATE OF THE ART AND NEEDS ANALYSIS**

**THEORIES FOR INNOVATIVE TEACHING METHODOLOGIES**

**Literature review**

**OIC Poland Foundation**

Monika Wawrzeńczyk-Kulik



**Introduction** .....3

**1. Changes in management** .....4

    1.1. Reasons for change at the global level.....5

    1.2. Development directions in the overwhelming change. ....5

    1.3. Criticism of management education .....6

    1.4. Humanities in management .....8

**2. Innovative methodologies in management development**.....10

    2.1. Analogically situated experiences model .....11

    2.2. Four process of learning based on arts-based methods .....14

    2.3. Lessons from the art school.....15

**Summary of key findings** .....17

**References**.....20



## Introduction

Dynamic changes in the conditions for the economic and business activity which are currently taking place trigger the need for radical change in management, both in the area of aims and rules of managers' operations and methods that they are using. If the managers are to transform their role and competencies and make revolution in management to adjust it to those new economic conditions the challenge raise for the management education. Management educators need relevant innovative teaching methods to support this process.

Overall objectives of the presented research are twofold:

- to describe theoretical framework concerning existing theories for innovative teaching methodologies with the focus for the ideas of "multidisciplinary approach", "humanities for management" and "lateral thinking".
- to develop propositions for the practical applications and shaping effective training sessions as part of the Project delivery.

The research proceeded in the following stages:

- a. identification of the guidelines for the review
- b. identification of the database and other sources
- c. the beginning of the search
- d. recording of the items fund (title and summary)
- e. the review of the summaries and the inclusion/exclusion for the reading of the whole text
- f. reading of the whole texts
- g. inclusion/exclusion of the item after the whole text reading
- h. synthesis of data
- i. interpretation of results, the report writing.

The sources of data for the research material that were used were library resources of the University of Economics and Innovation in Lublin: catalogue of the library books/articles, electronic knowledge base (primarily EBSCO).

Main inclusion criteria for the items fund in the data sources referred to:

- substantive compliance with the aims of the research and project,



- date of publication – for the majority of items the year of publication after 2005,
- possibility to obtain access to the full text of the item.

To organize and present the research material of this review the following focal questions were formulated:

- what changes apply to management at the beginning of the 21<sup>st</sup> century,
- what are the new developments in the teaching theories regarding management development with the focus on the use of interdisciplinary approach.

Sections of the review are devoted to those questions and the findings are finally presented in the form of implications to practical applications in shaping training programs. Those key findings for implications concern:

- putting participants in a novel, simulated context,
- maximum possible realism of the analogy,
- the priority of more developed managers as participants,
- collaborative learning in groups,
- focus on process not results,
- classroom environment focused on the acceptance of uncertainty,
- interdisciplinary learning involving multiple professors in the process,
- consolidation with the workplace.

## 1. Changes in management

Reading of the literature on management provides various theories and concepts regarding management development issues at the beginning of the 21<sup>st</sup> century. Much of the literature refers to the phenomenon of radical change which is described as universal and widespread, prevailing all spheres of life on a global scale. Lucas argues that as species we have reached a turning point of development and change that is happening at a speedy rate affects rules of evolution as humans (Lucas 2009). Adler indicates the rise of “extremely competitive nature of the global economy” and points the occurrence of “dramatic changes taking place in society, the economy and technology” (Adler, 2006). This change results in the “collapse of Western values” and rouses the need to rely on other than linear thinking and specialist domains strategies (Rabasso, 2011).



### 1.1. Reasons for change at the global level

The general reason of this pervading change is associated with the development of technology and humans (Lucas 2009). There is the notion of New Information Age (Rabasso, 2011). The key factors in those fast changing, challenging and differentiated conditions are social and political forces, environmental issues and technological advances (Mazurek, 2010). Trends that will be probably affecting and changing the economy, business and humans live in general, in the coming decade, touch such issues as:

- the climate changes that will trigger the need to search for “green” products and services delivered in ethical and responsible way,
- the deepening social and economical differences that may cause local or worldwide conflicts and prompt efforts for the maintenance of safety,
- the continuous progression of internet based solutions that will affect various spheres of human live.

What the world and the economy needs are both masterly management and opportunity focused leadership. However parallel to the discussion on the global economic restructuring and most probable transition to the next economic era, there is also a discussion on the last economic crisis that assigns reasons of it much to the quality of management and ethical issues of management. Managers are criticized by “lack of conscience of downsizing transnational organisations (Rabasso, 2011)”. Realising the significant impact of business actions in the interconnected global economy, there is a call for greater responsibility and greater moral obligations from managers (Smith, 2007). There is an expectation of more sustainability between business success and societal well-being (Adler, 2006). The responsibility of current managers is to merge skills of efficiency of operations with deep understanding of processes that they are part of and create, and ethical judgments backed by moral courage (Smith, 2007).

### 1.2. Development directions in the overwhelming change.

So much of the research on management and leadership education improvement possibilities is driven by the forces of the constant need for improvement of efficiency of organizational operations, connected with the need of more commitment and responsibility for sustainable growth of the global economy and all of it under conditions of the complex nature of change.

One strategy suggested to adapt in the speedy change environment is the need to develop the new mindsets and adaptive intelligence grounded in the skills of experimenting, imitation, creative problem solving and reflecting on action (Lucas, 2009). Knowledge on human brain activity and how this new



knowledge can be used to improve people learning and performance in different areas is possible and promising option (OECD, 2007), although as reports suggest they are not well-known and used in organizations' development practice (CIPD, 2012). The analysis of two mind focuses of human brain: analytical and the intuitive and the suggestions how the intuitive mind can be developed to improve leadership and management actions are considered (Sadler-Smith 2009).

The major challenge that is seen for the current management and in the coming decade is to create innovation that is defined as "marked departure from traditional management principles, processes, and practices or a departure from customary organizational forms that significantly alters the way the work of management is performed (Hamel 2006)". Hamel states however that changes in management at the beginning of 21<sup>st</sup> century have not been significant and most organisations still operate based on the same old management principles. This view is shared by others. At the beginning of a new century organizations need "more innovative ways to managing" and the capability to design new strategies, not being replicas of the "approaches that have succeeded in the past" (Adler, 2006). And even if the importance of innovation for business success was being annotated "current management practice often perpetuates bureaucracies that discourage innovation (Baker & Baker, 2012)". What generates innovation is a creative work (Baker & Baker, 2012). Innovation necessary to respond to discontinuous change should take advantage of intuition and anticipatory creativity (Adler, 2006).

The challenge of innovation relates much wider than the mainstream management practice. It requires a merger and not a separation of economy from culture, ethics, environment, politics (Gagliardi & Czarniawska, 2006). One condition of the ability to face this challenge is education and the formal business education is what is again much criticized in the subject literature.

### 1.3. Criticism of management education

"Business education has recently come under fire in the popular press and among academics (Baker & Baker, 2012)". Criticism of the formal management education programs concerns four major qualities that are related to each other. Formal management and business education is criticized for:

- theoretical teaching
- lack of critical thinking development
- isolation in the domain and the specialization
- in consequence lack of social responsibility of managers



Much of critique of formal management education points its focus on functions and their theoretical and descriptive teaching (Tung, 2006). The practical aspect is missing. “We reward ... students based on their ability to memorize and recite theory as if it were absolute truth (Smith, 2007)”. Authors admit that in much cases of the formal education “classrooms are killing inspiration (Baker & Baker, 2012)”. Current challenges for business world require innovation and such important trigger of innovation as critical thinking is not valued at most of management educational programs (Rabasso, 2011; Baker & Baker, 2012). This happens partly because business environment causes it though realizing challenges. Programs are being developed in the response to specific expectations of employers that focus on “a fresh new troop of well trained young “white collar managers/officers” ready to work as many hours as necessary” (Rabasso, 2011). “Since the business school curriculum is quite uniform across countries, this means that graduates of most programs will have learned essentially the same principles and techniques (Tung, 2006)” which is not giving them enough “nourishment” for being inventors and innovators. Instead of foundation for innovation, programs are oriented “far too much for standard views (Rabasso, 2011)”. And “an emphasis on convergent thinking, that is learning to understand and control problems with a focus on one solution, appears to be more prevalent in the business curriculum than divergent thinking, which is open to multiple possibilities, unexpected connections between ideas and novel paths (Baker & Baker, 2012)”. The formal management education programs sites are criticized for being a place of meeting and networking with successful business people that become role models and often this leads again to the preservation of existing patterns of behavior or solutions (Baker & Baker, 2012). The challenge for management education is to prepare managers capable to handle increasingly complex and ever changing world. So apart from the “traditional” discipline oriented teaching more global perspective with the issues relevant not for a single company but the whole of society should be included. Those issues include global warming, world trade, poverty, sustainable development, human migration, and response based on justice and equality not charity (Rabasso, 2011). Meanwhile the definition of success in management area was limited to the interests of stakeholders with little attention to wider community (Baker & Baker, 2012). Alike motivations of business students and business schools shaped highly with the financial focus.

In majority, those institutions that deal with management education were created at the time of the development of bureaucratic corporations with highly specialized functions (Koźmiński, 2008). The critique of the management education institutions indicates also that the model of education that was suitable for the needs of such corporations and is still dominating, is not correspondent with the needs of organizations at the beginning of 21<sup>st</sup> century. Problems that those organizations are facing, are so complex that they can not be successfully solved with the function-disciplined approach (Koźmiński, 2008). Looking at the



curricula of management development programmes at different level “too little value is placed on it by management and business educators (Smith, 2007)”. “The breakdown of domains and specific areas of specialisation in the 21<sup>st</sup> century management studies (Rabasso, 2011)” is necessary. There is a requirement to educate on how to adopt interdisciplinary approach and develop competency to merge knowledge from different disciplines. As management of the new century has to look for innovative approaches it is a reason why it turns to the areas previously considered not so relevant to the business world. To be innovative one must search for new principles (Hamel 2006). One has to uncover management orthodoxy, subject every management belief and look for “equally unlikely analogies that suggest new ways of tackling thorny management problems” like for example Alcoholics Anonymous organisation as analogy for autonomy and self-direction of company. Hamel sees analogies as one of the major elements of management innovation (Hamel 2006).

The contribution of Social Sciences, Human Sciences and Fine Arts is seen as requirement for the education of future “transcultural” managers and global leaders that will engage in globally responsible actions (Rabasso, 2011). A broad definition of Humanities that may affect management include first of all: literature, art, music, religions, philosophy but also history, anthropology, sociology, political science and even astrophysics and biology which although being natural sciences rise the same issues referred to values and meaning of human life (Gagliardi & Czarniawska, 2006). They all can be source of analogies that are the essential component for management innovator (Hamel, 2006).

#### 1.4. Humanities in management

History for example is rich of knowledge that can be used as analogy. As Smith advises studying historical records “we can discover similarities to our time and learn to identify and understand where and why there is divergence (Smith 2007)”. Smith describes that using history as a source can contribute to the development of critical and reflective thinking skills. Analysing history, especially management history can contribute to the better understanding of the modern world.

The literature is rich in examples on how increasing number of organizations, in the last decade of XX century, turned on to social science and arts to improve their management and leadership (Tung, 2006; Adler 2006); although “the use of the humanities for the education of managers is not a new idea (Gagliardi & Czarniawska, 2006). The same applies to management education institutions. “Borrowing broad pedagogical strategies more typically used to nurture creativity among visual artists,... will go a long way toward liberating our business students to develop and express their creativity (Baker & Baker, 2012)”. „The time seems right for this cross-fertilization of the arts and leadership (Adler, 2006)”. Adler quotes



David Pearl (opera singer and management consultant) „business and the arts are not ... different fields, but ... different aspects of the creative process” (Adler, 2006). Tung notices that perception of management as a science is not typical for the whole business world. In “East Asian management practices... management is typically viewed as an art even though management education is valued (Tung, 2006)”.

Adler refers to the five specific reasons why management turned its interest to arts and artistic processes (Adler, 2006):

- Rapidly increasing global interconnectedness – the pace of this process does not allow for the success based on the replication of existing solutions; success depends on inventions and it requires a set of different skills than those (mostly analytical) developed through the formal management education programs. Invention relies on skills used by creative artists.
- Increasing domination of market forces – society’s welfare is getting dependant on private sector as the largest economies are nowadays multinational companies and not countries. While the well-being of more and more people lies in the hands of companies it pushes them to take more responsibility as co-creators of society’s success. The responsibility which extends much wider than prosperity of a single local company calls for new solutions, it also involves the emotional and spiritual aspects where artists have much more to say from their experience than managers so far.
- An increasingly turbulent, complex and chaotic environment – requires managers to abandon reliance on hierarchical models that were efficient in the more stable times; models that work better in the constantly changing environment can be found as metaphors of human or biological systems. Human and biological systems give very powerful metaphors to create innovative strategies for the modern management. If the constant innovation is what modern managers have to create, they will not be able to do it using analytical and administrative skills. They need creative skills of artists. What they can also learn from the artists are team-based collaborative skills and ability to improvise.
- As advances in technology decrease the cost of experimentation, organizations’ scarcest resource becomes their dreamers, not their testers – the most valuable employees will be those that are able to “dream up” novel ideas. Creating new ideas is an artistic act.
- Yearning for significance – success is no longer enough – humans need meaning and sense of importance of their activity, and their work can bring those apart from the success identified with material or prestige benefits coming from it.



## 2. Innovative methodologies in management development

Theories on innovative methodologies in management development, building on the advantages and benefits of Humanities refer most of all to the use of analogy for learning. They take notice to some key factors that are influential for creating effective learning environment.

When we use analogy, we compare something with something congenial (Hawkins, 2004). The basis of analogy is to ascertain the similarity of relations between elements of different domains (Biela, 1989). The use of analogy can be particularly fruitful in case of the search for solutions to the problems. The relations occurring in one domain are used to solve problems in the other domain. The experience that is already gained is used to cope in the new situation.

Phenomenon of analogy plays an important role in various cognitive areas of human activity. It is a basis of inventions, and new scientific theories. One area of organizational life where the notion of analogy is used is management information systems. Analogy is used to improve those systems with their capacity to support strategic decision making in the companies. Systems are build using “reasoning by analogy” where previous experience and similar situations faced in the past are used to solve current problems (Surma, 2009).

Analogies are considered to be a strong intervention that enriches cognitive functioning of humans. The literature items that take on the subject of creative activity of the human intellect refer to the principal Gordon’s concept of analogy (Nęcka, 1982, Góralski 1980). Four types of analogy can be described: a. personal: based on the identification with the problem, engagement of emotions and imagination, participation enabling personal insight to the problem, b. simple: based on the search of the object that can be transferred to the problem being solved, c. symbolic: based on the use of brief, symbolic rendition of a complex object or phenomenon, d. fantastic: taking into account wishes of each person participating in the analogy. Search for new ideas using Gordon’s analogy involves stages: a. to determine the object to be improved, b. to conduct the analogy and collect ideas, c. to analyse collected ideas, d. to elaborate solutions. There are two rules of conduct to be kept: a. work in groups, b. the ability to reject established rules in favor of seemingly impossible comparisons and solutions.

As the academic debate on the presence of Humanities in management and management development progressed and the signs of this return were observed in practice more developed models of the use of analogy in management development appeared in the literature.



## 2.1. Analogically situated experiences model

Houde presents the concept of analogically situated experiences (ASE) and puts it as innovative pedagogical method. (Houde, 2007). He presents this method as notable useful for executives, because of the specific traits they exhibit. The principle of analogically situated experience is that it involves participants in a novel, simulated context specifically chosen and designed to produce an insightful learning about the participants' work context. The ASE model derives from three theories of learning: situated learning, analogical learning and experiential learning.

According to the theory of situated learning, the learning comes as a meaning raised from the involvement in authentic activities and progression of access and information within the field. What makes the activity authentic are all the contextual features like e.g. physical locations which are absent in formal educational environment. As Houde states two factors are put as necessary for the situated learning to happen:

- participation of real experts from the communities of practice on the delivery side of an educational event,
- materials and locations are as close to the authentic context as possible.

Analogical learning is based on the principle of two sets of information which are compared by learners in order to understand one of them better (Houde, 2007). The set that is the foundation for understanding is called "the basic" and the second one that is the comparison set of information is called "the analog". The comparison of "the base" and "the analog" involves their surface and the deep structure. Houde suggests a few factors to consider in order to make the analogical learning process more efficient:

- the choice of "the base" and "the analog" that share overlapping/similar deep structure but have different surface in order to avoid quick solutions based on uncovered mental schemes,
- deep structure should closely reflect workplace problems and the working environment of the learners,
- "the analog" should have the surface that is dissimilar to the workplace and the basic domain that the learners come from. The surface of "the analog" coming from a new and different domain helps to find new insights.



Experiential learning as it is nowadays known and used by most business educators was proposed by David Kolb, based on his research of earlier experiential theorists. According to Kolb (Kolb & Fry, 1975) process of learning is a four stage cycle where immediate or concrete experiences lead to observations and reflections. These reflections are then assimilated (absorbed and transferred) into abstract concepts with implications for action, which the person can actively test and experiment with, which in turn enable to create new experiences.

There are research results that support argument that experiential learning exercises used as pedagogical tools enhance business education (Devasagayam, 2012). In some cultures (especially Asian) experience “is considered more important than theory because the former, like any art form, can only be developed over time through action and practice (Tung, 2006)”. Experiential exercises in general are perceived as valuable tool in education related to decision making in dynamic environment (Devasagayam, 2012). Experiential learning is considered as “established and effective alternative methodology for linking theory and practice (Kozlinska, 2011)”. The special virtue of experiential learning is that knowledge is created as a result of involvement in experiences. In the times of rapid media developments that influence humans capacity to sustain attention, experiential learning is considered as a good approach to keep interest in learning and a tool to bring stimulation to the learning process (Devasagayam, 2012).

The educational event based on Houde’s model of ASE follows the cycle of experiential learning and enables all learners to go through all stages: having an experience, reviewing the experience, concluding from the experience, planning the next steps. The activity that learners are involved in “the analog” is there to lead to new concepts in order to improve “the base” at the final stage of the cycle. The cycle consolidates doing/experiencing, feeling, thinking and observing/reflecting. The two factors that in the opinion of Haude make the experiential learning in the ASE model efficient are:

- High level of engagement and experimentation – and because it refers to “the analog” coming from an unfamiliar domain, the learner needs to adopt the role of a “player”. “Playing” requires no so much artistic skills possessed by actors but the readiness to create and adopt new identity with new behaviors appropriate to the “role” and new reality.
- Risk that is generated and inextricably linked with active experimentation – mistakes are a part of a learning process and a source of information. Learning environment should support the attitude that it is good to make mistakes that lead to the learning

Summing up Haude suggests three major considerations for the design of an educational event based on ASE model (Haude, 2007):



- A. Analysis of a deep structure – to design parallel structure the work situation and its context has to be analyzed beforehand to provide good understanding of systems, people, communication and processes that the learners experience; then the deliberate difference in the structure should be designed accordingly to the learning goals of an educational event.
- B. Progression of participation – being involved in a “play” learners progress from fundamental learning and simple exercises to more complex and skillful. The level of dependence from the expert of “the analog” situation should decrease in favor of peer learners support in collaborative learning and finally learning on individual level.
- C. Sequence of learning-performing-reflecting. The observation and reflection on “the analog” should through the debrief session lead to better understanding of a structure of compared situations and then lead to the learning objective.

In addition Houde presents arguments why ASE model works best with executive learners which may be another consideration for the preparation of an educational event. The major argument come from the research on differences between expert and novices in solving problems. “Experts’ knowledge is more across-referenced with rich connection while novices have fewer concepts with weak connections. In ambiguous situations, experts use these rich, connected and principle based categories to define problems more quickly (Houde, 2007)”. One reason explaining this phenomenon is the sophisticated understanding of business and practical considerations of their work. With years of experience in a field the professional intuition may appear. As Bingham and Eisenhardt indicate “cognitive science research finds that experts in diverse domains like bridge, physics, baseball, and electronics use heuristics based on strategic aspects of their situation (Bingham & Eisenhardt, 2011). The development of those heursics is a process of constructing them and then replacing with more advanced, strategic ones. This is described as a transition from novice to expert. Bingham and Eisenhardt provide empirical evidence that business success in positively related with the development of heuristics by managers. This skill of quick framing may prevent or stimulate learning. To stimulate it an executive needs to be put in a new situation in which he/she is not an expert. Feeling like a novice again helps to analyze “the analog” with curiosity in more detail without framing that would be to early in the learning process. When sufficient time is given to observation and reflection, and the situation is deeply analyzed, then the skill of quick framing is valuable at the closing stage of a learning cycle. Furthermore when all learners are involved in a situation where none of them is an expert the learning process is free from the fear of “loosing the face”.



## 2.2. Four process of learning based on arts-based methods

Taylor and Ladkin analyse the use of arts-based methods in managerial development. They identify four types of how they are used, each of them driven by specific processes. They point that those processes that characterize the use of arts-based methods are distinctive and not appear on conventional organizational development approaches. The four processes are (Taylor & Ladkin, 2009):

- A. Skills transfer – arts-based methods offer the whole range of skills that can be learned by the managers to improve their performance and can be applied to the management of the organization.
- B. Projective technique - making a piece of an art about managers’ own experience allows to reveal inner thoughts and feelings that may be not easily accessible on more conventional educational occasions.
- C. Illustration of essence – literature, films etc. can help to see and grasp the “essence”, key aspects and insights of a situation. Learner can get to his tacit knowledge that is not “opened” by conventional educational methods.
- D. Making – the very act of making brings satisfaction but also provokes reflection on the deeper level of mind than is usually possible in the environment characterized by time pressure and push for measurable results.

Those processes are usually combined but each of them serves different learning outcomes. Thus there are some guidelines for the design of educational events that use them:

- A. The arts- based method based on the skills transfer process can’t be stand alone event if it is to result in a competence development. The way arts-based experience works as an “opener” of the learning process and using Kurt Lewin’s model of behavioral change (refreezing-transef-freezing) can go as far as “transfer” stage showing new patterns. It should be followed by continued work, focused on application to the work environment.
- B. The managers that benefit the most from arts-based methods learning are those that developed “the metaskill of working with the multiplicity of meaning”. This is applicable to more developed managers.
- C. Illustration of essence process helps to develop those managers that experience a particular conceptual weakness that is universal for their managerial job; when there is lack of more complex and nuanced understanding of those aspects of their job.



- D. Making of an art will give benefits when the requirement of measurable outcomes and short-term goals is abandoned. It works the similar way as meditation or wellness initiative where time pressure and results orientation is no priority.
- E. “the facilitator needs some experience in both artistic and organizational worlds”.

### 2.3. Lessons from the art school.

Baker & Baker identified three broad characteristics of art education that they advise to be included into business development curricula with the intention to stimulate participants creativity. They are doing it highlighting those crucial differences between arts and management education. The lesson from the art schools is that “learning environments are conducive to creative activity, and may, therefore, provide business faculty pedagogical strategies intended to enhance the creative behaviors of ...business students” (Baker & Baker, 2012). Those characteristics that create the right environment that inspires creativity are:

- A focus on process while championing a climate of exploration and reflection. The proposed classroom environment could be described as classroom with no specific goals, conscious aims, structure and tasks. Instead focus should be given to process of inquiry. Goals may give sense of security but they limit dialogue that directs to new possibilities and creative approaches. No focus on goals or measurements applied to the end result of a learning process stimulates “motivation for exploration and discovery”. However such an environment may not be comfortable for business people at first because they are not used to it. It involves more uncertainty, more probability of failure while experimenting and necessity to take more risk. From the other side all those features that rise more anxiety are necessary conditions for inventions. So the role of business education providers to create environment where they are accepted and are essential element of the learning process.
- A broad liberal arts education that illuminates personal and societal attributes and increases scientific knowledge. Managers can benefit while experiencing literature, philosophy, history as well as technology and natural science. Entering “new” areas can help overturn assumptions and can give fresh look at problems or their solutions. New diverse perspectives can lead to Argyris effect of double-loop learning where “novelty” is achieved not by mastering concepts (which is mostly done on formal education programs) but questioning them (Argyris, 1991). It also stimulates systems thinking advocated by Senge (Senge, 1997). Management education may benefit a lot when it involves other numerous disciplines and derives from them; it may benefit applying the concept of interdisciplinary learning involving multiple professors in the process.



- The development of observation skills that expands the student's capacity for empathy and enhances problem solving. Objective observation is necessary for critical thinking. It helps to dig through, identify and overcome assumptions. Skill of objective observation deepens the understanding of problems. This in turn prevents from putting frameworks and already available schemes as solutions. Again such approach to problem solving may not be comfortable to those managers that are shaped by the formal education "dominated by a simple transfer of facts, vocabulary, theories, and formulas" (Baker & Baker). Devoting more time to activities based on observation rather than already elaborated knowledge transfer and its memorizing is a condition to create learning environment for creativity development.

In addition to those three conditions mentioned above Baker & Baker mention two other important issues:

- "Artists" alone "often lack the contextual knowledge or the motivation to assist in specific industry problems, and educating them about the necessary technology can be impractical, time consuming, and expensive" (Baker & Baker, 2012). So there should be collaboration by specialists from field of management and art "interdisciplinary collaboration".
- "Small group discussions that allow students to play with a variety of ideas can support the creative process" (Baker & Baker, 2012).



## Summary of key findings

- The evolutionary challenge for humanity is to elaborate new strategies under the conditions of rapid and complex change that societies are experiencing at the turn of the centuries. This same challenge applies to management.
- Management is expected to transform itself and the way the work of management is performed. Managers should adopt organizations to new economic, technological, social and political conditions; they should take care of efficiency of organizational operations in those new conditions but also connect it with more commitment and responsibility for sustainable growth of the global economy. To make this change, management needs new mindset enabling to create innovation and stay agile in times of constant change and uncertainty.
- This shift may happen with the necessary changes in the area of management and leadership competencies development methods. The limitations of traditional business and management education practices become more and more apparent. Alike managers, management educators need to transform the perception of their role and the method that they are applying.
- The instruction and content centred mode needs to give way to more independent learning practices, more interdisciplinary approach and opportunities to develop critical thinking and inspiration. Mastering knowledge domains can't be the only priority. Education should give the capacity to adapt and navigate in the increasingly knowledge based economy.
- Looking for new, innovative methods of management development, interests turned to IT technology, neuroscience and Humanities. Along with IT, Humanities and especially Arts have been applied in management practice for their capability to develop creative, team based collaborative skills and ability to improvise rather than analytical, individual rivalry skills grounded in trust for complex planning procedures.
- Humanities and natural science give very powerful metaphors and analogies to create innovative strategies for the modern management and development of management and leadership competencies. Theories on innovative methodologies in management development, building on the advantages and benefits of Humanities refer most of all to the use of analogy for learning. They take notice to some key factors that are influential for creating effective learning environment.
- Implications coming from theories on innovative methodologies in management development to practical applications involve:



- **Putting participants in a novel, simulated context**

The basis of analogy is to ascertain the similarity of relations between elements of different domains – deep structure of the analogy. This deep structure should closely reflect workplace problems and the working environment of the learners but the analogy with its surface should come from a new to the participants domain to help them to find new insights.

- **Maximum possible realism of the analogy**

Education event should be based on experience and engagement in analogy. That triggers motivation and emotional involvement of participants which is necessary for the inquiry as basic element of a learning process. Materials and locations that are used to build the analogy should be as close to the authentic analogy context as possible. This realism stimulates the imagination and helps participants to “enter” new reality and adapt behaviours in unfamiliar situation.

- **The priority of more developed managers as participants**

Learning with analogy is seen as most useful for executives because of the skills that they already developed: working with the multiplicity of meaning, more across-referenced knowledge with rich connections, professional intuition, higher efficiency in problem solving and quick framing.

- **Collaborative learning in groups**

Learning process based on groups benefits in two ways: a - groups generate more variety of ideas which supports the creative process, b – groups progressively lessen the dependence of participants from experts and so help to develop independent individual learners.

- **Focus on process not results**

Unlike in the traditional approach to training design and delivery less importance should be given to specific goals, conscious aims, structure and performance indicators. The priority should be given to the process and movement in a sequence of learning-performing-reflecting. Devoting more time to activities based on the observation and reflection on “the analog” should through the debrief session lead to better understanding of a structure of compared situations and then lead to the learning objective. It can be achieved only by reducing time constraints and pressures on measurable and explicit results.

- **Classroom environment focused on the acceptance of uncertainty**

Fear and stress directly affect learning. Learning with analogies based on inquiry unlike traditional learning based on the transfer of knowledge elaborated beforehand involves more uncertainty, more probability of failure while experimenting and necessity to take more risk.



Providers of the education event need to help participants to release stress coming from those features and learn how to use them as essential elements of the learning process.

- **Interdisciplinary learning involving multiple professors in the process.**

Learning process based on the use of analogy requires both expertise in organizational worlds and expertise to deliver the analogy with the maximum realism as it can be obtained. So the delivery process requires at least two specialists collaborating during the educational event or one but then equally well-experienced in both fields.

- **Consolidation with the workplace.**

Involvement of educators should be extended further than the experience of analogy and education event. Usually education events end with elaboration of new patterns for competence development or organizational changes but their consolidation in a new form requires a lot of time afterwards. Education event should then be followed by continued work, focused on application to the work environment.



## References

A.

Biela A., (1989) „Analogia w nauce”. Pax, Warszawa 1989.

Gagliardi P., Czarniawska B. (Ed.) „Management Education and Humanities”. Edward Elgar Publishing Limited, 2006.

Góralski A., (1980) „Twórcze rozwiązywanie zadań”, PWE, Warszawa 1980

Hawkins B., (2004), “Bądź kreatywny i pomysłowy”. Helion, 2004.

Kolb. D. A. and Fry, R. (1975) “Toward an applied theory of experiential learning”. in C. Cooper (ed.) *Theories of Group Process*, London: John Wiley.

Koźmiński A. K., (2008) „Zarządzanie w warunkach niepewności”. PWN, 2008.

Lucas B., (2009), “rEvolution – how to thrive in crazy times”. Crown House Publishing, 2009.

Sadler-Smith E., (2009), “The intuitive mind – profiting from the power of your sixth sense”. John Wiley & Sons, 2009.

Senge, P.M. (1997), *The Fifth Discipline: The Art. And Practice of the Learning Organization*. Century Business, London.

B.

Adler N. J., (2006). “The arts & leadership: now that we can do anything, what will we do?”. *Academy of Management Learning & Education*, 2006, Vol. 5 No. 4. 486-499.

Argyris C. (1991), “Teaching smart people how to learn”. *Harvard Business Review*, May-June 1991, pp. 99-109.

Baker D. F., Baker S. J., (2012). “To catch the sparkling glow: a canvas for creativity in the management classroom”. *Academy of Management Learning & Education*, 2012, Vol. 11 No 4, 704-721.

Bingham C. B., Eisenhardt K. M., (2011). “Rational heuristics: the simple rules that strategists learn from process experience”, *Strategic Management Journal* 32: 1437-1464 (2011).

Devasagayam R., Johns-Masten K., McCollum J., (2012). “Linking information literacy, experiential learning, and student characteristics: pedagogical possibilities in business education”. *Academy of Educational Leadership Journal*, Volume 16, Nb 4. 2012, pp 1-18.

Hamel G., (2006), “Management innovation”. *Harvard Business Review*, February 1, 2006, vol. 84, issue 2 p. 72-84.



Houde J., (2007), "Analogically situated experiences: creating insight through novel contexts". Academy of Management Learning & Education, 2007, Vol. 6. No. 3, 321-331.

Kozlinska I., (2011), "Contemporary approaches to entrepreneurship education". Journal of Business Management, 2011, No 4.

Mazurek A., "Z ekologią i Internetem w przyszłość – trendy nadchodzącej dekady w badaniach Deutsche Post DHL". Nowoczesna firma, marzec 2010.

Nęcka E., (1982) „Z badań nad efektywnością techniki twórczego myślenia”. Zeszyty Naukowe Uniwersytetu Jagiellońskiego, Zeszyty 3-4, Kraków 1982.

Rabasso C. A., Rabasso J., (2011), "Educating responsible transcultural managers for open environments and organisations". 2011 IJES Vol. 19 no 2 pp. 33-55.

Smith G. E., (2007), "Management history and historical context: potential benefits of its inclusion in the management curriculum". Academy of Management Learning & Education, 2007, Vol. 6 No. 4. 522-533.

Surma J., (2009), "Supporting strategic decision making with case-based reasoning". International Journal of Business Insights & Transformation, Oct 2009-March 2010, vol. 3 issue 1, p.4-9.

Taylor S. S., Ladkin D., (2009). "Understanding arts-based methods in managerial development". Academy of Management Learning & Education, 2009, Vol. 8. No. 1, 55-69.

Tung R. L., (2006). "Of arts, leadership, management education, and management research: a commentary on Nancy Adler's *The arts & leadership: now that we can do anything, what will we do?*". Academy of Management Learning & Education, 2006. Vol. 5 No. 4. 505 – 511.

C.

"Learning and Talent Development" CIPD Annual Survey Report 2012.

"Understanding the brain. The birth of a learning science". Centre for Educational Research and Innovation, OECD 2007.