OPEN ACCESS

The 3rd World Sustainability Forum
1-30 November 2013

http://www.sciforum.net/conference/wsf3

Article

The Relationship between Self-Directed Learning and Management Competencies Sustainability: Russian Managers Perspective

Kestutis Viliunas

Independent researcher

E-Mail: kestutis.viliunas@gmail.com

Received: 23 September 2013 / Accepted: 31 October 2013/ Published: 01 November 2013

Abstract: In the knowledge age work related self-directing learners are very valued in their respective organisations. This intellectual capital allows organisations to be more flexible, sustainable and to maintain its competitive edge in a turbulent economic environment. Literature review shows that self-directed learning is the foundation for the knowledge age. Therefore well-conceived implementation of self- directed learning is crucial for the strategic development and success of organisations in the 21st century. It is reasoned that work related self-directed learning is the most important and effective way to develop management competencies. Therefore is essential that managers move quickly to welcome change, but at the same time it requires from them to embrace a self-directed learning mind-set. Self-directed learning constitutes the most important way of acquiring and developing sustainable competencies at work. It yields sustained behavioural change and provides hope that people can develop the competencies that matter most for outstanding performance. Therefore the research question in this paper investigates whether Russian managers' management competencies correlate with work related self-directed learning. Empirical data were collected according to quantitative research methodology. Descriptive statistics, correlation, factor analysis and regression were used for statistical data analysis. Results showed that Russian managers are very keen self-learners, but it failed to show statistically significant correlation between their management competencies and self-directed learning. Directions for future research were proposed.

Keywords: self-directed learning, management competencies, sustainability, learning, Russian management.

1. Introduction

In the knowledge age organisations see employees as intellectual capital. Employees themselves, rather than just information, will become the resources that allow organisations to respond quickly and

effectively to rapid change. Jantunen (2005) states that knowledge is presumed in an organisation as a strategic asset which can help the organisation maintain its competitive ability. In fact, knowledge-based assets and work related learning capabilities are critical for its innovation activities (Jantunen, 2005). So, knowledge is considered the most important resource in organisations (Choe, 2004) and the characteristics and problems of knowledge do not differ because of different geographic locations (Singh et al., 2008). Learning is at the core of these demands - whether it's learning a new skill, knowing how to manage existing and new knowledge, or creating organisational structures that support continuous learning.

Therefore the aim of this paper is to investigate whether Russian managers have high predisposition to work related self-directed learning or not. Also this paper will investigate whether high predisposition to work related self-directed learning is predicting higher scores in management competencies.

In the following sections of the paper concept of self-directed learning and its key empirical findings, also management competencies concept will be discussed; research methodology, research results and its analysis will be provided as well. At the end of the paper discussion and conclusions additional to the research limitations and directions for further research are provided.

2. Concept of self-directed learning

Self-directed learning has been actively researched for more than three decades. In 1970s self-directed learning was defined as a process in which individuals take initiative with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes (Knowles, 1975). Tough (1979) agrees with Knowles (1975) by defining self-directed learners as those who identify, assess and select appropriate learning, identify criteria for assessing the learning, and critically question information and circumstances of learning experience to maximise learning potential. Interesting assumption has been also made by Knowles (1975), which declares that learners become increasingly self-directed as they mature. Researchers agreed, that during the self-learning process people can also formulate independent opinions and beliefs, accept alternative points of view, receive criticism and are able realistically appraise their own learning capabilities

In late 1970s and 1980s one of the classics in the self-directed learning research – Lucy M. Guglielmino - has studied the readiness for self-directed learning (Guglielmino, 1978). She states that people must possess eight factors to be considered ready to pursue self-directed learning: openness to learning, self-concept as an effective learner, initiative and independence in learning, informed acceptance of responsibility, love of learning, creativity, future orientation, and the ability to use basic study and problem-solving skills. Other personal attributes identified for self-directed learners are confidence, commitment, self direction, and critical reflection (Candy, 1991; Pratt, 1988). Chene (1983) has also offered three elements that characterize self-directed learners: independence, ability to make choices, and capacity to articulate norms and limitations of a learning activity.

Through the 1990s self-directed learning was viewed as one of the most common ways in which adults pursue learning throughout their life span (Candy, 1991). People supplement and at times substitute self-directed learning for learning received in formal settings. Since *lifelong learning* in mid-1990s has become a fashionable *concept, it has also influenced the expansion of self-directed learning concept. It was suggested, that o*ne of the lifelong learning's principles should be the provision of the people with the skills and competencies necessary to continue their own self-directed education beyond the completion of formal schooling. It was assumed that self-directed learning is one of the best and most effective ways of learning in the lifelong learning process. Merriam and Caffarella (1991) also have noticed that learning in adulthood means becoming more self-directed and autonomous. Critical awareness of meaning and self-knowledge is a key dimension to self-directedness.

In summary, self-directed learning is defined as self-learning in which learners have primary responsibility for planning, carrying out, and evaluating they own learning experiences. Self-directed learning can be successful and powerful when it is systematic. It can take place equally inside and outside of the formal education institutions and does not infer learning in isolation. The learners may draw on others as help and extra recourse to assist in their learning activities. It is also considered as a necessary factor for lifelong learning implementation.

3. Self-directed learning key empirical findings

Allen Tough (1971) was among the firsts to research the area of self-directed learning. His findings suggested that approximately 90 percent of all adults conduct at least one major learning effort or learning project each year. He argues that the average person conducts five to seven separate learning projects in one year. According to Tough (1971), a person spends an average of one hundred hours per learning effort which adds up to a total of five hundred hours in all of his or her efforts in the year. This represents an average of almost ten hours a week.

Knowles (1980) identified that self-directing their own learning appeals to adults because adults value personal autonomy. He describes the adults with whom he worked in adult education classes as different from youths in several important ways. These include their self-concept as persons who are "responsible for their own decisions, for their own lives"; and that they were individuals over 30 years of age who have "a greater volume and a different quality of experience" (p.56).

Meanwhile, Candy (1991) questions whether the learner's right to choose what to learn and how to learn is an appropriate goal for formal education, for example, university courses: "… there are important constraints on the extent to which people can or should strive to be self-directed, particularly in learning formal or technical bodies of knowledge, as opposed to acquiring greater self-knowledge." (p.114), Boyatzis (1995) have had opposite insight towards self-directed and not self-directed learning: "People learn most effectively when they are in control of the learning process and can choose developmental activities best suited to their personal situation" (Boyatzis, 1995, p. 51). Although, Candy (1991) agreed that adults are responsible for their own learning, but he was questioning whether adults should be responsible for their own teaching.

Knowles (1980) argued that adults are motivated to learn by such factors as job satisfaction, self-esteem, and quality of life. Meantime, Caffarella (2000) suggested that there are four reasons why people engage in self-directed learning: (1) to learn specific content, (2) to acquire specific knowledge or (3) skill, (4) to enhance the learners abilities to be self-directed in their learning (draws on humanistic philosophy of learning).

In summary, researchers in the field of self-directed learning were questioning how much adults are involved in self-directed learning, whether they should be responsible for their own teaching, not only learning, what motivates them to self-direct they own learning, and how effective is self-directed learning.

4. Management competencies

4.1. Competence definition

The lack of a precise or widely accepted definition of competency in the academic literature is considered problematic (Gorsline, 1996; Nordhaug, Gronhaug, 1994). To define a term "competency" is difficult because of the two reasons. First of all, there are two terms - "competency" ("competencies") and "competence" ("competences"), which attribute multiple meanings depending on the context and the perspective advocated. Second, the words "competency" and "competence"

means many things – from the things organisations do well to the qualities that each employee must have, to the knowledge and skills necessary to perform a task, to characteristics and attributes.

As with the definitions, the areas of focus are also different. "Competency" area of focus is the definition of skills, knowledge, attributes, and behaviours that successful people have. It is thought that if other people know what skills, knowledge, attributes, and behaviours successful people have, these others will be motivated to acquire them and will in turn become more successful. Competency models are used in a variety of ways by organisations to build training, hiring, evaluation, and assessment programs. Meanwhile, "competence" area of focus is the definition of measurable, specific, and objective milestones describing what people have to accomplish to consistently achieve or exceed the goals for their role, team, division, and whole organisation. Competence models can be used to provide guidelines to success, assess measurable gaps, and direct people to tools, resources, and training that are directly aligned with the work results required of the job and with the goals of the organisation.

The current studies use the term "competency" in order to describe personal abilities, reflected in certain behaviour level. High competency in this case refers to an individual's ability to perform respectively to the certain level of required competency (Widdett, Hollyforde, 2003 a, 2003 b). Meantime, the term "competence" defines a specific, work related, successfully to perform necessary behaviour. High perceived competence is understood as the ability to perform well in work related tasks required from the organisation (Widdett, Hollyforde, 2003 a, 2003 b).

In this paper, the term "competency" will be used, because it is appropriately linked to individuals rather than to specific job tasks.

4.2. Concept of management competency

As work changes more rapidly, competencies become more useful because they are more effective than job descriptions in clarifying what characteristics effective performers share in common (Rothwell, 2002). Competencies provide the basis for effective recruitment, selection, and development of high-performing managers and employees. The attention has moved from hiring employees who could perform a certain task, often related to technical knowledge, to hiring employees for their potential, their ability to perform a set of tasks in the near future (Rodriquez et al., 2002). This potential refers to the knowledge and skills acquired by the individual. "In rapidly changing business environments, organisations are recognizing the value of a workforce that is not only highly skilled and technically adept, but more importantly, a workforce that can learn quickly, adapt to change, communicate effectively, and foster interpersonal relationships" (Rodriquez et al., 2002, p. 309).

According to Rodriguez et al (2002) there is a need for widely accepted management competencies definition, which would be specific enough to allow meaningful outcome assessment.

Management competencies describe the characteristics and behaviours needed to successfully perform a role with management responsibilities. It often includes competencies related to leadership, recourse management, organisational awareness, communication, life-long learning etc. Garavan and McGuire (2001) management competency define as an attribute based concept, which is utilised to perform one or another type of work. Management competencies are considered in a context free way, i.e. the person possessing specific set of competencies will be a high performer irrespective of the workplace context.

Many descriptions of the management competency do take in to account the human factor - when competencies are used, how they are used and the influence of personal characteristics on their usage (Sandberg, 2000). It is not the competencies themselves are significant, but the way individual experiences work which is fundamental to their competency (Tyre, Heppel, 1997; Fielding, 1988). In this case management competencies are formatted internally, rather than externally.

In summary, management competencies are general descriptions of the underlying characteristics and behaviour needed to successfully perform a management role. The competencies provide a clear set of organisational expectations and enable managers to assess their strengths and development needs in relation to the competencies. At the same time, employees know what organisation expects from them.

5. Research question

Research question this paper investigates links together work related self-directed learning and management competencies.

Competencies can be developed. Boyatzis (2004) mentions in his study that many managers have attended training, but have attained only small change in performance. He has discovered that a self-directed learning process yields sustained behavioural change and provides hope that people can develop the competencies that matter most for an outstanding performance. According to Illeris (2004) and Skule (2004), self-directed learning constitutes the most important way of acquiring and developing competencies at work. It highlights the importance of work related self-directed learning toward the managers' competencies. Managers also acquire competencies through formal training, but experience, reflection, making mistakes, self-educations are common learning methods observed in the previous studies (Cheetham, Chivers, 2001; Billett, 2000; Gerber, 1998).

As above mentioned research show work related self-directed learning is the most important and effective way to develop management competencies. People acquire most of their competencies at work and most of the time learning by themselves - using self-directed learning techniques. There should be pointed out that the learning takes place during work, not during specially allocated time for learning. Therefore it is hard for workers to acknowledge, that they are learning.

Self-directed learners have a lot of freedom in choosing what to learn, how to learn, when, where and how fast to learn. They can identify their own strengths, weaknesses and set goals. Scholars deducted that at work it can happen only in an organisational environment, which emphasises learning culture, belief in the self-education, mutual respect, collaboration and empowerment by personal accountability and ownership. Therefore it is hypothesised that this research will support the findings of Guglielmino (1978) and Russian managers will score high and very high in self-directed learning. Research also show that culture has an influence on work related self-directed learning scores, so research object of this paper is supported by the Russian culture, which holds learning in very high regard. As Guglielmino (1978) noted people who have highly developed work related self-directed learning skills, perform better in problem solving tasks, have higher degree of creativity and high degree of change, they tend to determine their own learning needs and accomplish their learning. Because of the overwhelming work related self-directed learning success in a various work-life areas it is proposed that it will correlate with the following management competencies: communicating effectively, working under pressure, decision making, problem solving, developing others, managing process, managing relationships, managing oneself, team building, and learning continuously.

This debate frames following research question this paper investigates: does Russian managers' management competencies correlate with work related self-directed learning?

Hypotheses 1: Russian managers score high and very high on self-directed learning.

Hypotheses 2: work related self-directed learning correlates with Russian managers' management competencies.

6. Research methodology

Empirical data analysis in this paper is based on quantitative research. Research instrument was structured questionnaire consisting of three parts: social – demographical characteristics, work related self-directed learning and management competency. Work related self – directed learning part in this research was adapted from Guglielmino and Giuglielmino (1978) and Cheetham and Chivers (2001). Meanwhile, management competencies part was adapted from Whetten and Cameron (2010).

This research reflects work related self-directed learning by getting the participants to answer the questions connected with self-directed learning from the standpoint of how they are independently learning at work. This question includes following items: (1) I expect to be learning all my life, (2) I think learning is boring, (3) It is clear to me what I have to learn next, (4) I tend to avoid what I don't understand, (5) I know how to learn, when I have something to learn, (6) When I start a new project, it takes time before I get going, (7) When I am learning in a formal way, I expect some guidance on what to do, (8) I know where to get the information, when I need it, (9) I better learn on my own, (10) When I have a good idea, I find it difficult to implement it, (11) Only I am responsible for my learning, (12) It is difficult to understand what I read, (13) If I fail to learn I don't blame myself, (14) I can tell when I lack knowledge about something, (15) I get bored easily in the libraries, (16) I admire people who are always learning new things, (17) When I am learning I am thinking about my goals, (18) I feel relieved when I've finished learning, (19) If I look at others I am not as keen on learning as they are, (20) When I learn in a group I tend to take a lead, (21) I love discussions, (22) I hate learning when it is challenging, (23) I think learning is fun, (24) I need to learn how to learn, (25) If I learn or don't learn – it doesn't matter to me.

Management competencies were adapted from Whetten and Cameron (2010) and applied in questionnaire construction of this research. Slight changes were made in the formulation of the competencies and "Managing conflict" competency was changed to "Learning continuously", because it is more adequate to the research question. In the end, the following competencies were used in the 2nd questionnaire of this research: (1) communicating effectively, (2) working under pressure, (3) decision making, (4) problem solving, (5) developing others, (6) managing process, (7) managing relationships, (8) managing oneself, (9) team building, (10) learning continuously.

102 participants took part in this online research (from 102 participants 96 answered the questionnaire completely). Research sample (convenience sample approach) criteria were following: (1) Russian nationals, (2) Moscow based residency, (3) managerial position at work, and (4) workplace based and /or work related self-learning practice.

Research participants represented different socio – demographical characteristics: (1) gender - male and female, (2) educational level – bachelors and masters degree, (3) business fields - market research, telecommunications, pharmaceutical, retail, and public relations, (4) managerial level (middle management).

Research data were collected via online questionnaire during April and May of 2012.

The data analysis was carried out in five steps. Step one was to analyse descriptive statistics on the responses to 25 item self-directed learning measure. Step two was to carry out and analyse Pierson's correlation between self-directed learning and management competencies measures. In order to explore further relationship between those two measures it was important to look at whether there was any underlying relationship. Therefore for the step three the data was tested to see, if it is strong enough and correct enough for principle components factor analysis before it was carried out. Then reliability test was performed (step four) to see if chosen factors are reliable enough to carry out regression analysis as a final step.

7. Empirical data analysis

7.1. Self-directed learning descriptive statistics

Respondents were requested to evaluate 25 self-directed learning items using the Linkert scale where 1 is "Almost never true of me; I hardly ever feel this way" and 5 – „Almost always true of me; there are very few times when I don't feel this way" (see Appendix 1 "Self-directed learning mastery evaluation"). Research data show that all managers are very positive towards they ability to self-direct learning process. None of the items were evaluate negative or very negative. 14 items were evaluated positive or very positive, others – neutral with the positive lean more than negative.

94 % of participants love discussions, 92 % - admire people who are always learning new things, and 90 % of the managers agree that only they are responsible for their own learning. These responses show that Russian managers are eager to learn by themselves and are responsible for why and what they learn.

Learning is not boring for 85 % of the participants, for further 84 % it is not difficult at all to understand what they read, and 82 % of participants- can tell when they lack knowledge about something. It shows that managers are enjoying self-learning process, have some of the needed skills for this process and can successfully indentify their learning needs and take responsibility for it. 87 % of participants think about their goals when they learn, which confirms their ability to manage their learning process and shows that managers are goal oriented people, and will not waste time on learning if it is not a part of their learning strategy, and does not reflect their goals. 81 % of the managers mattered if they learn or not.

Understanding of learning as life-long activity is a key in order to be able to tackle work-related learning needs and not only. 79 % of the managers follow life – long learning approach and are expecting to be learning all their life. They are quite confident about themselves as self–directed learners - 73 % know where to get information, when need it, and 70 % know how to learn, when they have to learn (although, 59 % of managers mentioned that they need to learn how to learn). 65 % of the managers even thought that learning is fun.

Therefore the first hypothesis "Russian managers score high and very high on self-directed learning" is accepted.

7.2. Pearson's correlation analysis

Pearson's correlation analysis was conducted to see if there is a simple relationship between self-directed learning and management competencies. Six correlations were found – four positive and two negative. The correlations matrix shows following positive correlations as significant: (1) "Communicate effectively" correlates with "It is clear to me what I have to learn next" $r(96) = -0.195$, $p<0.05$ (negative correlation was achieved). (2) The second correlation was "Problem solving" which correlates with "I admire people who are always learning new things" ($r(96) = 0.205$, $p<0.05$). (3) Also "Developing others" ($r(96) = 0.255$, $p<0.05$) correlates with the same item – "I admire people who are always learning new things". (4) "Managing Oneself" ($r(96) = 0.202$, $p<0.05$) was correlated with "I admire people who are always learning new things". The last four correlations are positive. The correlations matrix shows following negative correlations as significant: (1) "Communicating effectively" correlated negatively with "I hate learning when it is challenging" ($r(96) = -0.210$, $p<0.05$) and (2) "Decision Making" correlated with "If I learn or don't learn it doesn't matter to me" ($r(96) = -0.253$, $p<0.05$).

General concern looking at the correlation matrix is that all correlated items have very low correlation coefficient and all correlations are very weak, therefore the findings have to be treated very cautiously. Next step is factor analysis, which will show how many factors explain the variability between the correlated factors.

7.3. Factor analysis

This research used questionnaire made up of 2 parts: first part is self-directed learning measure and second part is management competencies measure. The first part was made up of 25 items, which measured how self-directed Russian managers were in learning (Mean= 76.76, SD=6.734, Cronbach's α=0.509). The second part of the questionnaire involved 10 management competencies, which measured how competent participants were in each of the competency (Mean=35.43, SD= 7.132 and Cronbach's α=0.894).

Using principle component factor analysis this research aims to discover the factor structure of a self-directed learning and management competencies measures and to examine its internal reliability. By doing that it will be possible to reduce item numbers in both measures (self-directed learning and management competencies) and after performing reliability testing conduct regression analysis in order to see if there is any dependability between the two measures.

Kaiser-Guttman rule was used to decide the number of factors to choose from the total number of items. Kaiser-Guttman rule states that the number of factors is equal to the number of factors with eigen values greater than 1.0. It is also supported by the Scree Plots (Figure 1, Figure 2), which shows how many factors explain the largest part of the variance. From the figure 1 can be seen that 5 factors explain the most of the variance for 25 items self-directed learning measure and from the figure 2 can be seen that only 3 factors explain the biggest part of the variance for the management competencies measure.

Figure 1. Scree Plot I

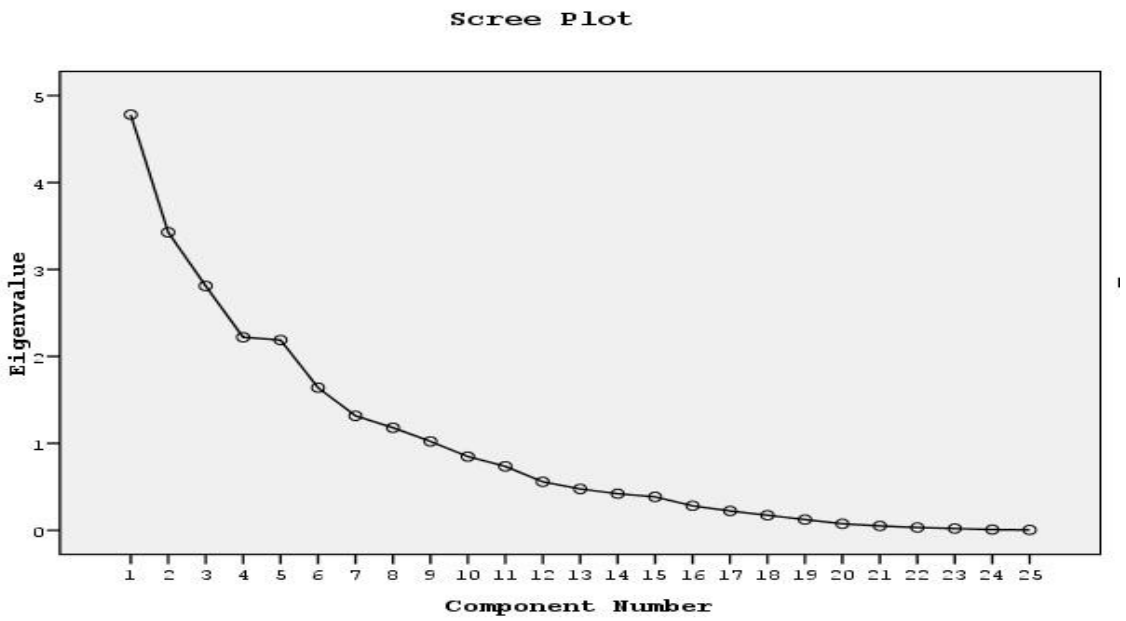
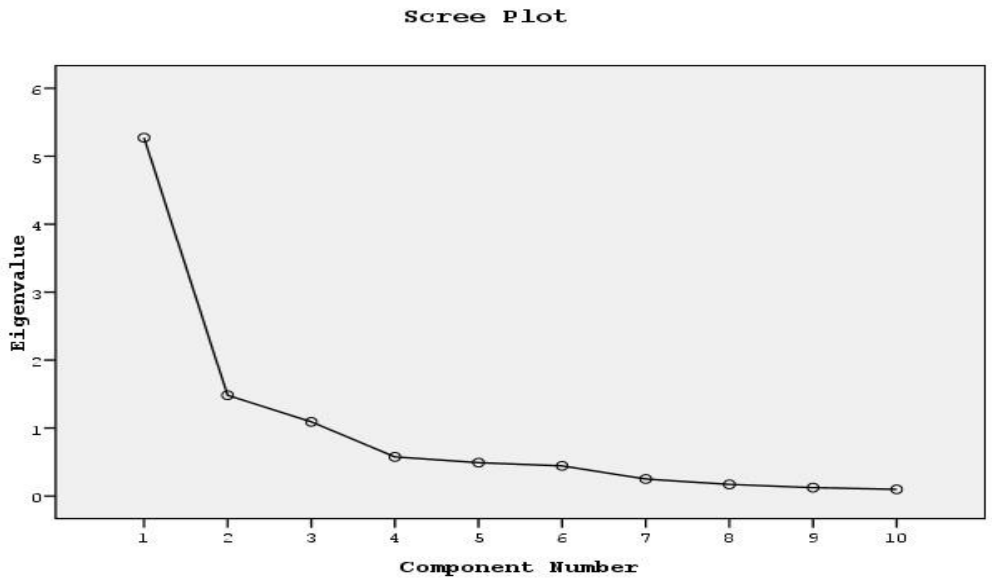


Figure 2. Scree Plot II



After performing Orthogonal (varimax) rotation on the self-directed learning measure, twenty five items converged in to nine items. From those nine factors five emerged as the most descriptive and reliable (correlation $p > 0.5$). First factor has six items, second factor – four items, third factor – three factors, the fourth, and the fifth factors has three items each. The chosen factors were: F1 – "Self-directed learning acumen"; F2 –"Negative aspects of learning"; F3 – "Learning is boring"; F4 – "Obstacles in learning"; F5 – "Knowing how to learn and learning alone".

For self-directed learning measure factor loadings were as follows. 6 items loaded on to the factor 1 (F1 -"Self-directed learning acumen". Mean=4.033, SD=0.707, Cronbach's α=0.843); they are all related be meaning. The items are: "I expect to be learning all my life" (Mean=4.05, SD=1.089, r=0.842), "It is clear to me what I have to learn next" (Mean=3.33, SD=1.102, r=0.766), "I know where to get the information, when I need it" (Mean=4, SD=1.005, r=0.686), "Only I am responsible for my learning" (Mean=4.38, SD=0.757, r=0.526), "I can tell when I lack knowledge about something" (Mean=4.11, SD=0.793, r=0.747), and "If I learn or don't learn – it doesn't matter to me" (Mean=4.32, SD=0.877, r=-0.648). Because the last value is negative it is necessary to reverse the last score.

4 items loaded on to the factor 2 (F2 –"Negative aspects of learning". Mean=2.041, SD=0.776, Cronbach's α=0.760); it is clear that they are related also. The items were: "When I have a good idea, I find it difficult to implement it" (Mean=2.43, SD=1.122, r=0.663), "It is difficult to understand what I read" (Mean=1.89, SD=0.916, r=0.875), "I admire people who are always learning new things" (Mean=1.35, SD=0.906, r=-0.773), "I hate learning when it is challenging" (Mean=2.50, SD=1.152, r=0.648). The item before the last has a negative score, therefore it has to be reversed also.

3 items loaded on to the factor 3 (F3 – "Learning is boring". Mean=1.908, SD=0.634, Cronbach's α=0.747); they are also all related. The items were: "I think learning is boring" (Mean=1.90, SD=0.747, r=0.904), "I love discussions" (Mean=1.76, SD=0.661, r=-0.523), "I think learning is fun" (Mean=2.32, SD=0.840, r=-0.815.). The last to items have negative score, therefore they have to be reversed.

3 items loaded on to the factor 4 (F4 -"Obstacles in learning". Mean=2.739, SD=0.519, Cronbach's α=0.714)); all items are positively correlated. The items loaded on to this factor are: "I tend to avoid what I don't understand" (Mean=2.10, SD=1.031, r=0.782), "If I look at others I am not as keen on learning as they are" (Mean=2.61, SD=0.988, r=813) and "I need to learn how to learn" (Mean=3.50, SD=1.205, r=0.501).

3 items loaded on to the factor 5 (F5 -"Knowing how to learn and learning alone". Mean=2.413, SD=0.553, Cronbach's α=0.653). Three items correlates and loads on to this factor: "I know how to learn, when I have something to learn" (Mean=4.04, SD=0.857, r=0.909) and "I better learn on my own" (Mean=3.20, SD=1.072, r=-0.585). The last item "I need to learn how to learn" (r=-0.551) is discarded, because it has appeared in the factor 4.

After performing Orthogonal (varimax) rotation on the management competencies measure 10 items converged in to three items. These three items were: F1 - self management & development, F2 - Managing - process decisions & problems, F3 - Communication & relationship building. They had 3, 3 and 4 items in the respectively.

For management competencies measure factor loadings were as follows. 3 items loaded on to the factor 1 (F1 - "Self management and development". Mean=3.468, SD=0.947, Cronbach's α=0.865): "Learning continuously" (Mean=3.75, SD=0.962, r=0.858), "Managing oneself" (Mean=3.52, SD=0.962, r=0.768), "Working under pressure" (Mean=3.14, SD=1.253, r=0.808).

3 items loaded on to the factor 2 (F2 - "Managing process, decisions and problems". Mean=3.729, SD=0.914, Cronbach's α=0.698): "Problem solving" (Mean=3.69, SD=1.039, r=0.631), "Decision making" (Mean=3.68, SD=1.091, r=0.858), "Managing process" (Mean=3.82, SD=0.995, r=0.891).

4 items loaded on to the factor 3 (F3 - "Communication and relationship building". Mean=3.442, SD=0.707, Cronbach's α=0.817): "Communicating effectively" (Mean=3.70, SD=0.545, r=0.756), "Team building" (Mean=3.30, SD=0.985, r=0.712), "Developing others" (Mean=3.48, SD=1.015, r=0.584), "Managing relationships" (Mean=3.29, SD=0.882, r=0.807).

7.4. Reliability analysis

Kline (1999) notes, that although the generally accepted Cronbach's α value of 0.8 is appropriate for cognitive tests, such as intelligence tests, for ability tests a cut-off point of 0.7 is more suitable. He goes on to say that when dealing with psychological constructs values below even 0.7 can, realistically, be expected because of the diversity of the constructs being measured. However, Cortina (1993) notes that such general guidelines need to be used with caution because the value of alpha depends on the number of items on the measure. Alpha is also affected by reverse scored items.

Because the questionnaire used in this study was developed from scratch and was not tested for reliability before using it on the subjects, some items might be not reliable enough. Therefore in this research it is accepted that Cronbach's α is lower than 0.7. It was found that the lowest alpha was 0.653 and this value is accepted as reliable and the factor is used for the final regression analysis.

All negative scores were reversed before performing reliability tests on the new factors and new values were computed using SPSS.

In this research Cronbach's reliability test was performed on all new factors. From the 25 self-directed learning items five new factors were selected and they appear to have good internal consistency (reliability).

7.5. Regression analysis

Before carrying out regression analysis new variable was computed from the three management competencies' factors using SPSS. From then on management competencies were one variable.

From correlation table (see Appendix 2) can be seen that none of the self-directed learning factors correlate with management competencies.

The unadjusted multiple R for this data is 0.225, but that the adjusted multiple R is -0.002. This rather large change is due to the fact that a relatively small number of observations are being predicted with a relatively large number of variables. The unadjusted value of R^2 means that all subsets of predictor variables will have a value of multiple R that is smaller than 0.225. These variables in combination does not significantly (Sig. F Change =0.963) predict competency development from self-directed learning (see Appendix 3).

The slope or coefficient for F1 – "Self-directed learning acumen" is positive (β =0.115); management competencies are increasing when managers are score high in "Self-directed learning acumen", but relationship is statistically insignificant p>0.1.

The slope or coefficient for F2 – "Negative aspects of learning" is negative (β = -0.398); management competencies are decreasing when "Negative aspects of learning" are increasing, but relationship is statistically insignificant p>0.1.

The slope or coefficient for F3 – "Learning is boring" is positive (β =0.303); management competencies are increasing when "Learning is boring", but relationship is statistically insignificant p>0.1.

The slope or coefficient for F4 "Obstacles in learning" is positive (β =0.064); management competencies are increasing, when managers are score high in "Obstacles in learning", but relationship is statistically insignificant p>0.1.

The slope or coefficient for F5 – "Knowing how to learn and learning alone" is negative (β = -0.110); management competencies are decreasing when managers score low in "Knowing how to learn and learning alone", but relationship is statistically insignificant p>0.1.

No significant relationships were found, so hypothesis 1 is rejected. Therefore second hypothesis "Work related self-directed learning correlates with Russian managers' management competencies" is rejected.

8. Research limitations and direction for further research

Several limitations were indentified while conducting this research. First of all, the nature of research object – self-directed learning, is quite intangible, hard to quantify and hard to research, because it is spontaneous, implicit and sometimes unconscious. It is also hard to know if and how respondents were experiencing work related self-directed learning. It can only be presumed that it might be during various interactions with the colleagues and supervisors, observing others work during meetings and workshops.

Second remark related to limitations of this research is measuring of self-directed learning mastery. There should be mentioned that only subjective notion of mastery of self-directed learning was investigated in this research, i. e. it reflected only subjective interpretation of the participants, if they have scored high at self-directed learning or not. It might be only the interpretation of respondents themselves, which does not reflect the objective reality.

It can also be presumed that work related self-directed learning positively influences managers' outstanding performance. But self-directed learning along with knowledge and management competencies are only one side of the coin to become an outstanding manager. One has to have the drive to develop and to have values, beliefs and motivational drivers - sense of calling, mission, motives and traits to become one.

Unfortunately in this study work related self-directed learning methods were not investigated, therefore respondents could have gained their skills and knowledge not necessarily through self-directed learning, but also through other methods of informal learning.

Therefore recommendations for further studies include objective self-directed learning mastery measurement, holistic research about the factors for an outstanding managers' performance, and also methods of self-directed learning.

Further limitations will be discussed in "Discussion and conclusions" chapter.

9. Discussion and conclusions

This study has looked at two areas concerning manager's working life: management competency and work related self-directed learning.

According to the research data, first research hypothesis "Russian managers score high and very high on self-directed learning" was accepted. Data show that the majority of Russian managers are keen or very keen in self-directed learning. These findings support findings of other researchers around the world that managers tend to practice self-directed learning (Livingstone, Eichler, 2005; Borghans et al., 2006), enjoy self-directed learning (Cracken, Winterton, 2006; Skule, 2004) and agree that this is beneficial for them (Long, Morris, 1995). Additionally, this research also showed that Russian managers support general notion of respect for education and knowledge in Russian business culture.

The second hypothesis "Work related self-directed learning correlates with Russian managers' management competencies" was rejected. Several reasons related to this should be discussed. First of all, research questionnaire was self compiled on the basis of Whetten and Cameron (2010), Guglielmino and Giuglielmino (1978), Cheetham and Chivers (2001) works and did not go through any reliability tests before giving it to the participants, which could have influenced the correlation results. Second, reason why self-directed learning did not have statistically significant influence on the management competencies could have been the sample size. Third, self-directed learning is very complex phenomena; it depends on many variables, not only the ones which have been anticipated to investigate in this research. As a concept, self-directed learning is hard to investigate, because most of the learning is spontaneous, unconscious, integrated in work and very hard to identify, as Eurat (2000) and Marsick and Watkins (1999) have noted. And finally, this research was limited not only by sample size, but also by the industry sectors (market research, telecommunications, pharmaceutical, retail, and public relations) and middle managerial level, therefore it can only talk about those managers, who have participated in this research, without generalizing it to all Russian managers. Managers sample taken from other sectors and from executive management level could have shown different results.

Therefore results of this research do not support findings of Boyatzis (2004), which argues that self-directed learning provides hope that people can develop the competencies that matter most for

outstanding performance. Also Illeris (2004) and Skule (2004) finding that self-directed learning constitutes the most important way of acquiring and developing competencies at work, which highlights the importance of work related self-directed learning toward the managers' competencies, could not be supported. The results of this research do not endorse Guglielmino (1978) findings, that people who have highly developed work related self-directed learning skills, perform better in problem solving, have higher degree of creativity and high degree of change; but it supports her findings, that people who have highly developed work related self-directed learning skills tend to determine their own learning needs and accomplish their learning.

Conflict of Interest

The author declares no conflict of interest.

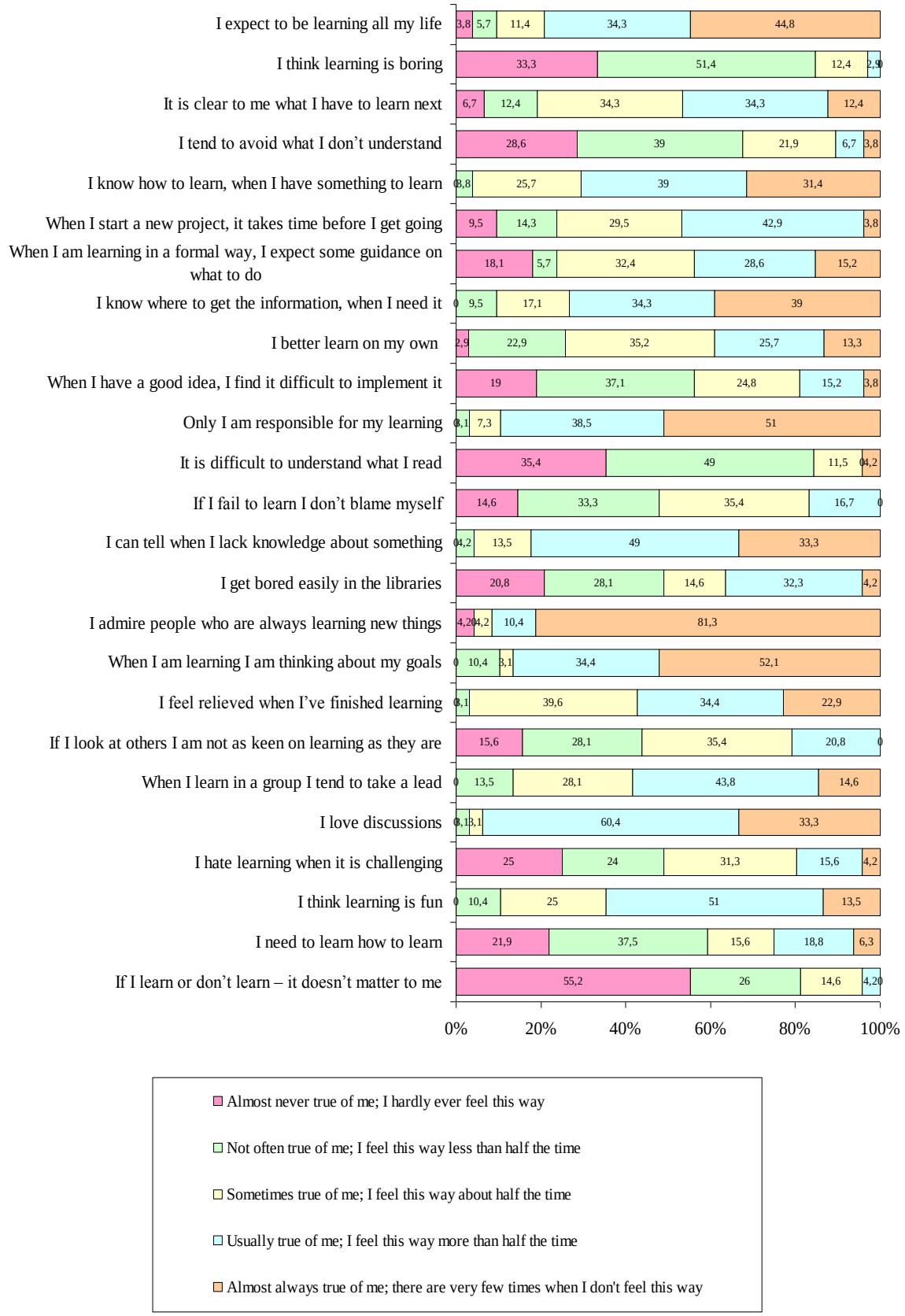
References

1. Billett, S., (2000). Guided learning at work. *Journal of Workplace learning,* 12 (7), 272-285.
2. Borghans, L., Golsteyn, B., De Grip, A. (2006*). More Working is More Learning. Determinants of Knowledge Developments. Den Bosch: CINOP.*
3. Boyatzis, R.E. (1995). Sometimes in the pursuit of learning you have to stop teaching. *Adult Assessment Forum, 4*(4), 13-15.
4. Boyatzis, R.E. (2004). Competencies. In N. Nicholson, P. Audia, M. Pillutla (eds.), *Blackwell's Encyclopedic Dictionary of Management: Organizational Behavior* (*2nd Edition).* Oxford: *Blackwell.*
5. Caffarella, R. S. (2000). Goals of self-learning. In G. Straka (Ed.), *Conceptions of self-directed learning: Theoretical and conceptual considerations*. Munster: Waxmann Press.
6. Candy, P. C. (1991). *Self-direction for lifelong learning: A comprehensive guide to theory and practice*. San Francisco: Jossey-Bass.
7. Cheetham, G., Chivers, G. (2001). How professionals learn in practice: an investigation of informal learning amongst people working in professions. Journal of European Industrial Training, 25 (5), 270-292.
8. Chene, A. (1983). The concept of autonomy in adult education: A philosophical discussion. *Adult Education Quarterly*, 1, 38-47.
9. Choe, J. M. (2004). The consideration of cultural differences in the design of information systems. *Information & Management, 41*, 669–684.
10. Eraut, M. (2000). Non-formal learning and tacit knowledge in professional work. *British Journal of Educational Psychology*, 70, 113–136.
11. Fielding, N. (1988). *Joining Forces: Police Training, Socialisation and Occupational Competence*. London and New York: Routledge.
12. Garavan, T. N., McGuire, D. (2001). Competencies and workplace learning: Some reflections on the rhetoric and the reality. *Journal of Workplace Learning*, 13 (3/4), 144 - 163.
13. *Gerber*, R. (*1998*). How do workers *learn* in their work?, *Learning* Organization, 5 (4), 168 - 175.
14. Gorsline K. A competency profile for human resources: No more shoemaker's children. Human Resource Management, 35 (1), 53–66.
15. Guglielmino, L. M. (1978). *Development of the self-directed learning readiness scale*. Doctoral dissertation, Dissertation Abstracts International, 38 (6467).
16. Guglielmino, P. J., Guglielmino, L. M. (2006). Culture, self-directed learner readiness, and per capita income in five countries. *SAM Advanced Management Journal, 71*(2), 21-28.
17. Ileris, K. (2001). Transformative Learning in the Perspective of a Comprehensive Learning Theory. *Journal of Transformative Education,* 2, 79–89.
18. Jantunen, A. (2005). Knowledge-processing capabilities and innovative performance: an empirical study. *European Journal of Innovation Management*, 8 (3), 336-49.

19. Knowles, M. (1980). *The modern practice of adult education: from pedagogy to andragogy*. New York, Cambridge: The Adult Education Company.
20. Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. Englewood Cliffs: Prentice Hall/Cambridge.
21. Livingstone, D.W., Eichler, M. (2005). Mapping the Field of Lifelong (Formal and Informal) Learning and (Paid and Unpaid) Work. Conference "Future of Lifelong Learning and Work", Toronto.
22. Marsick, V. J., Watkins, K. E. (1999). *Facilitating learning organizations: Making learning count*. Brookfield: Gower Publishing.
23. Merriam, S. B., Caffarella, R. S. (1991). *Learning in adulthood*. San Francisco, Oxford: Jossey-Bass Publishers.
24. Nordhaug, O., K. Gronhaug (1994). Competences as resources in firms. *International Journal of Human Resource Management***,** 5(1), 89-106.
25. Pratt, D.D. (1988). Andragogy as a relational construct. *AdultEducation Quarterly, 38(3),* 160-181.
26. Rodriguez, D., Patel, R., Bright, A., Gregory, D., Gowing, M. K. (2002). Developing competency models to promote integrated human resource practices. *Human Resource Management*, 41(3), 309-324.
27. Rothwell, W.J. (2002). Putting success into succession planning. *Journal of Business Strategy*, 23 (3), 32 – 37.
28. Sandberg, J., (2000). Competence – the basis for a smart workforce. In: R. Gerber and C. Lankshear (Eds) *Training for a Smart Workforce.* London: Routledge.
29. Singh, M.D., Kant, R. Narain, R. (2008). Knowledge management practices: a sectorial analysis". *International Journal of Innovation and Learning,*5 (1), 13-21.
30. Skule, S. (2004). Learning conditions at work: a framework to understand and assess informal learning in the workplace. *International Journal of Training and Development*, 8(1), 8-17.
31. Tough, A. (1971). *The adult's learning projects: A fresh approach to theory and practice in adult learning.* Toronto: OISEBaskett.
32. Tough, A. (1979). *The adult's learning projects* (2nd Ed.). Austin: Learning Concepts.
33. Tyre, M.J., Heppel, E. (1997). The Situated Nature of Adaptive Learning in Organisations. *Organisational Science*, 1, 71 - 83.
34. Whetten, D.A., Cameron K.S. *Developing Management Skills*. New Jersey: Prentice Hall.
35. Widdett, S., Hollyforde, S. (2003 a). *The competencies handbook*. The Cromwell Press, Wiltshire.
36. Widdett, S., Hollyforde, S. (2003 b). A practical guide to competencies: how to enhance individual and organisational performance. London: Chartered Institute of Personnel and Development.

Appendixes

Appendix 1: Self-directed learning mastery evaluation, %



Appendix 2: Regression analysis' correlation table.

		Competency (average)	Factor1	Factor2	Factor3	Factor4	Factor5
Pearson Correlation	Competency (average)	1,000	,076	-,183	-,145	,004	-,034
	Factor 1	,076	1,000	-,050	-,088	-,296	,244
	Factor 2	-,183	-,050	1,000	,924	,066	-,002
	Factor 3	-,145	-,088	,924	1,000	,031	,103
	Factor 4	,004	-,296	,066	,031	1,000	-,135
	Factor 5	-,034	,244	-,002	,103	-,135	1,000
Sig. (1-tailed)	Competency (average)	-	,232	,037	,079	,486	,371
	Factor 1	,232	-	,315	,197	,002	,008
	Factor 2	,037	,315	-	,000	,260	,493
	Factor 3	,079	,197	,000	-	,382	,158
	Factor 4	,486	,002	,260	,382	-	,096
	Factor 5	,371	,008	,493	,158	,096	-
N	Competency (average)	96	96	96	96	96	96
	Factor 1	96	96	96	96	96	96
	Factor 2	96	96	96	96	96	96
	Factor 3	96	96	96	96	96	96
	Factor 4	96	96	96	96	96	96
	Factor 5	96	96	96	96	96	96

Appendix 3: Regression model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change	R Square Change	F Change	df1	df2
1	,225(a)	,051	-,002	,72877	,051	,963	5	90	,445

a Predictors: (Constant), Factor 5, Factor 2, Factor 4, Factor 1, Factor 3.
b Dependent Variable: Competency (average).