

Leadership skills and the role of adaptability and creativity in effective leadership: A literature review geared toward an integrative model

Author: Mark Holtkamp, s0218979
University of Twente
P.O. Box 217, 7500AE Enschede
The Netherlands
markholtkamp85@gmail.com

Leadership has traditionally been seen as a trait-based and genetically inherited construct. However, contemporary literature proposes that effective leadership is based also on skill, as a mediator of traits and effective leadership. This literature review analyzes the relatively scant literature on effective leader skills. We do so in order to seek which relationship exists between leader traits, skills and effective leadership. Also, given that adaptability and creativity are known to be essential for organizational performance and survival, we analyze which effect creativity and adaptability have on the relationship between skills and effective leadership. By integrating the literature on leadership skills, and an emphasis on creativity and adaptability, we create a new effective leader-skills model. We conclude this literature review with the idea that leader traits, training and experience influence the level of skill an individual can acquire. Also, we conclude that skill in solving organizational problems constitutes effective leadership and that traits can be seen as just one cause of an individual leader's level of creativity and adaptability, both of which moderate the relationship between skill and effective leadership: by enabling an individual to use their skill effectively in helping to solve novel and complex organizational and follower problems.

Supervisors: Prof. dr. Celeste Wilderom; Marcella Hoogeboom, MSc

Keywords

Change management, skills, leadership, leadership skills, adaptability, creativity

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.
3rd IBA Bachelor Thesis Conference, July 3rd, 2014, Enschede, The Netherlands.
Copyright 2014, University of Twente, Faculty of Management and Governance.

1. INTRODUCTION

The literature on effective leadership styles and traits in a management context goes back decades. The field of the identification, formation and development of leadership skills, however, is relatively young. As of today, there are only a few serious theories and models available that address leadership skills (Mumford, Zaccaro, Harding, Jacobs, & Fleischman, 2000; Lord & Hall, 2005); we not little consensus exist among them. As underdeveloped these models still are, they are already somewhat outdated and do not incorporate the latest insights from the larger field of management on adaptability and creativity, whose practical importance has been stressed by several authors (Nelson, Zaccaro & Herman, 2010; Kozlowski, Gully, Brown, Salas, Smith & Nason, 2001; Le Pine, Colquitt & Erez, 2000; O'Connell, McNeely & Hall, 2010; Pulakos, Arad, Donovan & Plamondon, 2000). The goal of this paper is to combine the most important existing models of leadership skill formation and supplement them with recent insights on a leader's degree of adaptability and creativity, a quality widely recognized to be of importance for leadership effectiveness. Typical for these leadership skill formation models is that they are primarily focused on hard, measurable skills and do not include soft skills such as adaptability and creativity (Nelson et al., 2010) Hence, there is a need for a more comprehensive model, which fits current business/management-development type of needs. Furthermore, this paper will end up with some suggestions how the proposed integrated model can be tested in future research.

Following the above, the research question central to this paper is:

What do we know about the importance of adaptability and creativity in the context of effective leadership and how do leadership skills in general tend to develop in a management context?

In paragraph 2 the concept of skill is being addressed first. Then, in paragraph 3, we focus on leadership from a historical perspective, leading to a contemporary definition of 'leadership skill'. In the fourth paragraph existing models and theories on the development of leadership skills are presented. Paragraph 5 focuses on recent views on adaptability and creativity which are combined in paragraph 6 with the models that are presented in paragraph 4. Finally, in paragraph 7 the research question is answered and suggestions for future research are made.

2. SKILLS

A skill is "the ability, coming from one's knowledge, practice, aptitude, etc., to do something well" (Skill, 2014, June 26) or "the ability to carry out the tasks and duties of a job in a competent manner" (Elias & McKnight, 2001) which is almost synonymous. A problem with the term 'skill' is that, in comparison with the terms 'profession' and 'occupation,' it can have significant different meanings between cultures because of differences in the construction and use of these concepts (Elias & McKnight, 2001), for example: the English term of skill translates to *Geschicklichkeit* in German, which actually means suitable or qualified instead of the ability to do something well. As you can see, these differences can lead to misunderstandings. Because of these cultural differences, this paper focusses on Anglo-Saxon definitions of skill in order to use a singular concept.

According to Cunha and Heckman (2007), skill is a social construct that is a powerful determinant of wages, schooling, participation in crime and success in many aspects of social and economic life. Furthermore, skills are produced by genes, investment and environmental influence (Cunha & Heckman,

2007, Mumford et al., 2000). Cunha and Heckman (2007) developed a model of how skills are acquired or formed. This model indicates that people possess a number of abilities that range from pure cognitive skills such as IQ, to pure noncognitive, soft skills like patience, risk aversion, and time management. These skills are used with different weights in different tasks and situations; on the labor market and in social life. The human skill formation process is governed by a multistage process that corresponds with the life-cycle of a person in which cognitive and noncognitive skills have a positive relation of self-productivity in increasing skill (Cunha & Heckman, 2007). In other words, skills that are formed during one stage of life augment skills attained in later stages of life, leading to a self-reinforcing and cross-fertilizing growth of skills, so that skills produced at earlier stages raise the output of investment at subsequent stages.

In this paper 'skills' are defined as the ability to do something well, which can be both cognitive and noncognitive; to some extent, they are formed by genes; investment or training and less conscious environmental or context-specific, including cultural influences.

3. LEADERSHIP AND LEADERSHIP SKILLS

In this section we focus on leadership skills and explore the contents of this social construct from a historical perspective, which leads to a contemporary definition of 'leadership skill'.

Leadership is "to do, or get done, whatever is not being adequately handles for group needs" (Mumford et al., 2000). In the last two centuries this definition has not changed much. What changed is the view on what makes someone a good leader or how qualities for good leadership come to arise. Until the beginning of the 20th century the "great man" leadership theories were most prominent (Kirkpatrick & Locke, 1991). For instance, Darwin (1918) stated: mental qualities, which are associated with good or ill success are passed on by natural inheritance from generation to generation in accordance with laws sufficiently well understood to enable us to base practical proposals thereon". These ideas were driven by an upper class elite who believed, or at least carried out, that leadership qualities were transferred by genes and were reserved for a certain subgroup of society. This paradigm changed at the beginning of the 20th century when the so called 'trait theories' emerged. These trait theories did not focus on the idea of the inheritance of leadership qualities, but focused on the idea that leaders possess different characteristics (like capacities, motives, and patterns of behavior) than non-leaders. Halfway the 20th century however, Stogdill (1948) challenged the trait theories by stating that "A person does not become a leader by virtue of the possession of some combination of traits" (p. 64). He made this statement based on a profound literature study from which he concluded that there is no universal set of personal characteristics related to effective leadership.

In line with the trait theories, Kirkpatrick and Locke (1991) state that effective leaders are different from other people in a sense that they have a number of traits such as: drive, leadership motivation, honesty and integrity, cognitive ability and knowledge of the business. As Kirkpatrick and Locke (1991) state, these traits do not tell the whole story, they are just a precondition for effective leadership. For a leader to be effective he or she also has to act by for example formulating a vision, setting goals or by role modeling. Leadership traits enable a person to acquire necessary leadership skills to be an effective leader. Stating that the need to act in order to be effective fits our earlier formulated definition of 'skill': the ability to do something

well. In short, leadership skills are abilities to be an effective leader which are enabled by certain key traits. They are the interface between personal characteristics and action in leadership practices. This relationship between traits, skills and effective leadership is shown in figure 1.

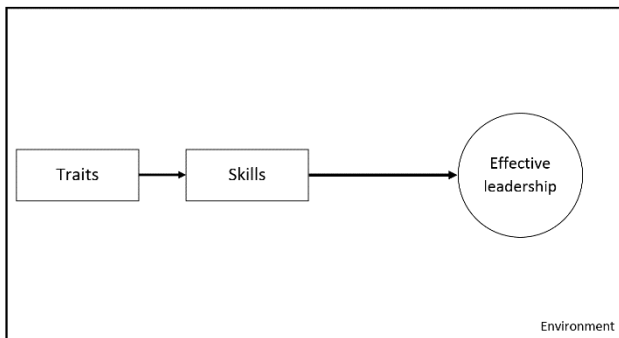


Figure 1. The assumed basic relationships between human traits, skills and effective leadership

4. EFFECTIVE LEADERSHIP SKILLS IN A MANAGEMENT CONTEXT

Now that we have clarified what skills are, how they are formed and how they fit into dominant discourses of leadership, in the below we are going to explore how leadership skills may affect effective leadership in a management context. Among the three most respected models of the formation of effective leadership skills, we present a synthesis as well as prospective extension..

4.1 Leadership skills for a changing world: Solving complex social problems

First of all, the theory of Mumford et al. (2000) is explored. These authors created a framework that explains the relationship between experience, wisdom and perspective-taking, on one hand, and knowledge of people, knowledge of the organization, and knowledge of the problem and work roles, on the other hand; they all have an effect on certain leadership skills that are necessary to be effective. These skills are grouped by the knowledge they require. Knowledge of people leads to communication skills, skill in making structure in an organization, and implementation skills. Knowledge of the organization leads to skills such as identifying restrictions and requirements, creating support, formulating plans and visions, and protecting outcomes. Finally, knowledge of problem and role leads to skills such as defining problems, gathering information, formulating an understanding, and generating trial solutions. The proficiency in these skills is mediated by wisdom, experience and perspective-taking on one side and knowledge of three key areas (people, organization and problem).

4.1.1 Growth of skill

Nelson et al. (2000), O’Connell et al. (2008) and Mumford et al. (2000) state that knowledge and skills grow as a function of education and experience as leaders progress through their careers. This contrasts with the great man leadership view that people are born as leaders (Mumford et al., 2000, p. 21). However, certain personal attributes (or traits) such as ability, motivation and personality of an individual can influence how effective he or she can develop important skills (Mumford et al., 2000; Cunha & Heckman, 2007). The first attribute associated with effective leadership are general cognitive abilities such as intelligence. By training and education, crystallized cognitive abilities, also known as trained abilities, can be formed that are necessary to be an effective leader, such as oral and written

expressions in order to acquire, exchange and manipulate information in most problem domains (Mumford et al., 2000). Motivation, the second attribute associated with leadership, means that someone is willing to enter situations in which he or she can develop skills. This is divided by Mumford et al. (2000) into three characteristics: 1) willingness to tackle difficult and challenging organizational problems, and using these as a vehicle of organizational growth; 2) willingness to exercise influence by dominance; and 3) social commitment to the good of the organization. Personality is the third attribute of an individual that determines whether he or she can develop skills to be an effective leader. A large number of personality traits have been associated with leadership, like openness, tolerance for ambiguity, curiosity, confidence, risk taking, , and independence (Kirkpatrick & Locke, 1991; Mumford et al., 2000; Nelson et al., 2010).

The four characteristics of general cognitive ability, crystallized cognitive ability, motivation, and personality lead to problem solving skills, social judgment and social skills, and knowledge. This in turn leads to the ability to solve organizational problems which leads to effective leadership (Mumford et al., 2000).

4.2 Identity, deep structure and the development of leadership skill

Lord and Hall (2005) present a theory of leadership development which proposes that leadership skills can be viewed from the perspective of a general theory of learning and expertise. This is coupled with changes in information processing and underlying knowledge structures when skills develop. Furthermore, Lord and Hall (2005) propose that leadership skills progress from a novice level, to an intermediate level and finally to an expert level. Each skill level emphasizes different knowledge and information processing capabilities. Because leadership skill development is not only a matter of traits but also action, training and experience, they propose that identity, meta-cognitive processes, and emotional regulation are critical factors in developing the deeper cognitive structures that they associate with leadership skills. By going through these phases of novice, intermediate and expert level leadership skills, individual leaders may develop unique identities and values (Lord and Hall, 2005).

4.2.1 Novice level

Leaders at a novice level are primarily concerned with their own preliminary identity as leader and rely on information processing from the working-memory to create unique responses to novel situations. Leaders that are at a novice stage incur a heavy penalty in cognitive load when faced with organizational problems because they think in surface features and need to create novel solutions, i.e. re-inventing the wheel. Also, leaders at novice level try to get support and acknowledgement from their social surroundings in their role as leader. This means that they focus on individual level identities that emphasize uniqueness and differentiation from others. However, individual level identities promote self-benefiting behavior while group level identities promote behavior that benefits others (Lord & Hall, 2005).

4.2.2 Intermediate level

Novice level leaders that are accepted in their role as leader become more efficient in their self-monitoring skills and start to develop context specific knowledge and connectionist networks that enable them to cue such knowledge. This leads to more efficient information processing and can therefore be classified as intermediate level leaders. These intermediate level leaders create fewer unique solutions to business problems and use connectionist networks and integration with meta-cognitive

processes to create a higher level understanding of the problem. The orientation of intermediate level leaders shifts from the self to others, and leadership skills begin to form that enable the leader to perceive differences among others as critical aspects of the organizational context. This shift in the self to others is enabled by the greater information processing capacities an intermediate level leader has, freeing up more cognitive resources for creating group level identities. Specific other individuals become included in the leaders self-identity, making leaders who develop these positive and differentiated relationships more effective leaders (Lord & Hall, 2005).

4.2.3 Expert level

When the shift to a group-centered form of leadership that is associated with intermediate level leadership is combined with additional experience to form a more principled capacity to form and foster alternative identities, expert level leaders start to emerge. They are able to have a more abstract, general understanding of follower development and are able to shape identities of others. Expert level leaders are aware of the elements that comprise their leadership style, which are more or less effective in different situations. They learn to assimilate differences with their own underlying values to create leadership that is sensitive to follower context as well as being authentic. This level of leadership is commonly said to be unattainable if one has less than 10,000 hours of experience (Lord & Hall, 2005).

4.2.4 Skills at different levels

Lord and Hall (2005) indicate which information processing skills are available to the leader at each level and how knowledge is accessed. What is shown is that these skill levels build upon on another and each skill level corresponds with an increase in information processing ability, increasing ability to develop group-level identities, and use them in different context, being able conserve cognitive resources by gaining a more context-driven knowledge base that leads to fewer unique solutions and more collaboration with others and finally a principled understanding of situation and others in terms of values, emotions and identities. Also, leadership skills are differentiated into six domains: task, emotional, social, identity level, meta-monitoring and value orientation. Lord and Hall (2005) created a model in which knowledge content of different leadership levels is shown for each level such as can be seen in table 2.

5. ROLE OF ADAPTABILITY AND CREATIVITY IN THE CONTEXT OF LEADERSHIP SKILLS

As we have seen, none of the models by Mumford et al. (2000) and Lord and Hall (2005), include adaptability nor creativity as a core skill for effective leadership, while many (Nelson et al., 2010; O'Connell, McNeeley and Hall, 2008; Pulakos, Arad and Donovan, 2000; Kozlowski, Salas and Smith, 2001; Hoever, Knippenberg, & Van Ginkel, 2012) see them as critical skills for organizational performance and survival. Without adaptability and creativity, organizations cannot cope with the demands the current environment places on them (Hoever et al., 2012; Sacramento, 2013). The exclusion of adaptability and creativity makes the previous presented models obsolete in the current environment of rapid change. Therefore, this paper tries to incorporate the models of Mumford et al. (2000), Lord and Hall (2005), and Sacramento et al. (2013) with the concepts of adaptability and creativity.

5.1 Adaptability

As Nelson et al. (2010), Kozlowski et al. (2001), Le Pine et al. (2000), O'Connell et al. (2010), and Pulakos et al. (2000)

state, the organizational environment is changing in an increasingly rapid pace. Adaptability is an increasingly important skill in organizational success and performance. Adaptability has been defined as a *"functional change (cognitive, behavioral, and/or affective) in response to actual or correctly anticipated alterations in environmental contingencies"* (Nelson, et al., 2010, p. 132).

The ability to become more adaptable depends on two classes of individual characteristics, those that can or cannot be trained (Nelson et al., 2010). These characteristics can be divided into attributes such as cognitive ability and personality that are very hard or impossible to influence, and attributes that are easier to influence such as experience, wisdom, knowledge and motivation (Pulakos et al., 2010; Mumford et al., 2000; Cunha & Heckmann, 2007). Therefore, some individuals will have a higher proficiency in becoming adaptable than others. The attributes which can be influenced, however enable anyone, regardless of attributes that cannot be influenced, to be trained in adaptability to some degree. To summarize, there is an overlap between trained adaptability skills and the ability to be or become adaptable because of the relationship between attributes that cannot be influenced and the ability of a person to train in adaptability. Like with other skills, to become successful in adaptation one needs training and the ability to be or become adaptable.

5.2 Adaptability training

According to Nelson et al. (2010), adaptability training can consist of: a) experiential variety, which is incorporating variety into practice scenarios or other training stimuli that requires trainees to change their existing performance strategy in a fundamental way such that an entirely new strategy is considered, or b) strategic information provision and frame-changing guidance which is providing information in the form of feedback and guidance before, during, and after events. Also, the environment plays a role in becoming adaptable. For instance: the type of school someone attended, opportunities in business and encouragement of friends or family. The family plays a powerful role in shaping abilities through genetics, parental investments, and through choice of child environments. From a variety of intervention studies, it is known that ability differences in children from various socioeconomic groups can be reduced if remediation is attempted at early age (Cunha & Heckmann, 2007). Evidence has shown that a) parental influences are key factors governing child development; b) early childhood investments must be distinguished from late childhood investments; c) an equity-efficiency trade-off exists for late investments, but not for early investments; d) abilities are created, not solely inherited, and are multiple in variety; e) the traditional ability-skills dichotomy is misleading both skills and abilities are created; and f) the "nature versus nurture" distinction is obsolete (Cunha & Heckmann, 2007).

5.3 Strategic information provision and experiential variety as tools for developing adaptive leadership skills

Nelson, Zaccaro and Herman (2010) make a distinction in two sorts of expertise or skill: routine expertise and adaptive expertise. Routine expertise is the skill to deal with tasks and problems that are familiar and therefore do not need a new frame of reference. Adaptive expertise is *"fundamentally different from routine expertise, as it reflects a deeper understanding of a content domain that enables individuals to change their responses in alignment with unanticipated, unfamiliar, and uncertain environmental information"* (Nelson et al., 2010, p. 132).

Nelson et al. (2010) go on and state that experts in adaptation recognize changes in task priorities and the need to modify strategies and actions. Cognitive frame changing, the capacity to switch among various perspectives or frames of reference, is a core skill in adaptive problem solving. It allows solving problems that have changed fundamentally and thereby avoiding the problem of fixation on obsolete strategies. A number of concepts that are closely related to cognitive frame changing have been identified by Nelson et al. (2010) such as: perspective-taking, cross-cultural code switching, switching methodological mindsets, and divergent thinking. Perspective taking is a skill that facilitates understanding how another individual sees the world, which is important for effective negotiations and interpersonal relationships. Cross-cultural code-switching is a skill that enables individuals to interpret environmental stimuli and identify culturally appropriate responses by changing the cultural frames they deploy. Switching methodological mindsets is a skill by which an individual can think about problems in a new way that allows for creative insights, for instance by adopting multiple means of analysis. Finally, divergent thinking is a skill by which underlying logics become more different from another in a team setting, by which more fundamental questions about a problem can be asked for a better understanding of the problem.

A problem with cognitive frame changing is that it is a very hard thing to do. It requires individuals to recognize their enacted mindsets and then consciously evaluate and alter them, which is not an easy task (Nelson et al., 2010). However, strategies are formulated that allow an individual to develop cognitive frame changing skills such as: experiential variety, self-regulation, adaptive guidance and error management training.

5.4 Adaptability in the workplace: Development of a Taxonomy of Adaptive Performance

Pulakos, Arad and Donovan (2000) describe and measure adaptive performance as a combination of eight skills: a) handling work stress; b) handling emergencies or crisis situations; c) solving problems creatively; d) dealing with uncertain and unpredictable work situations; e) learning work tasks, technologies and procedures; f) demonstrating interpersonal adaptability; g) demonstrating cultural adaptability; and h) demonstrating physically oriented adaptability. The last skill, demonstrating physically oriented adaptability, is not relevant for leadership skills and is therefore omitted from this paper. These skills as an indicator of adaptive performance were measured in a study of 9,462 critical incidents in 21 different jobs within 11 different military, federal government, state government, and private sector jobs in the United States. This eight-dimensional study was empirically evaluated and intra class correlation ranged from .73 to .98, indicating high agreement among respondents regarding the adaptive performance requirements of their jobs. As table 3 in appendix C shows, the correlations among the dimensions ranged from .30 to .69. More specifically, significant correlations (ranging from .59 to .69) resulted between the following dimensions: dealing with uncertain/unpredictable work situations; solving problems creatively; learning work tasks, technologies, and procedures; and handling work stress. These results reflect some inherent overlap between these dimensions; for example, solving problems and learning are often what one does to deal with unpredictable and changing situations, and unpredictable situations, learning new tasks, and dealing with difficult problems can easily cause stress. Handling emergencies or crisis situations and demonstrating physically oriented adaptability were highly correlated with each other ($r = .63$), but

they were generally the least correlated with the other dimensions. The framework of Pulakos et al. (2000) provides us with a seven-dimensional taxonomy of adaptive performance.

5.5 Workplace duties or opportunities? Challenge stressors, regulatory focus, and creativity

Sacramento, Fay and West (2013) created a framework based on the Challenge-Hindrance Stressors Framework and Regulatory Focus Theory, which argues that the effect of challenge stressors on creativity is moderated by regulatory focus. This research highlights the lack of creativity as a variable in dominant discourses of leadership. The difference in regulatory focus, which can be either a promotion focus or a prevention focus, creates a positive or negative relationship with creativity regardless whether the regulatory focus is authentic or induced. In other words, individuals who see high job demands as a challenge will be more creative than individuals who see high job demands as a threat.

5.5.1 Stressors

Stressors are defined as “environmental events in the workplace requiring an adaptive response of some kind” (Sacramento et al., 2013, p. 142), and although they are commonly associated with negative consequences, stressors can also be linked to positive consequences such as personal initiative. This depends on the kind of stressor that is encountered, challenge stressors are seen as an opportunity for growth and achievement (e.g. workload, responsibility, time pressure and job scope), while hindrance stressors are seen as constraining in personal development and accomplishment (e.g. bureaucracy, organizational politics, job insecurity and role ambiguity). Evidence supports this statement, showing that challenge stressors have a positive relationship with job satisfaction, commitment and job performance, while hindrance stressors have a negative relationship with job satisfaction, commitment and job performance. Therefore, although challenge stressors induce strain, they also lead to motivation because individuals are more likely to experience a positive relationship between coping with the demands, likelihood of overcoming them and achieving a desired outcome. The opposite goes for hindrance stressors, which create strain without positive outcome.

5.5.2 Regulatory focus

Sacramento et al. (2013) suggest that there are two distinctly different motivational orientations: promotion focus which is oriented towards ideals and achieving gains, and prevention focus which is oriented towards security and preventing loss. Although individuals possess both promotion and prevention focus as a trait, there are stable individual differences in the relative preference in which to use. Environmental changes can influence this preference for a short amount of time. Each focus is associated with different goals, desired end-states, information processing styles, and behavioral approach to change. In short, individuals who are focused on the avoidance of loss will be less likely to be creative in their response to changes in the environment than individuals who seek challenges and rewards will be more creative in dealing with environmental change.

5.5.3 Effects of stressors and regulatory focus on creativity

Sacramento et al. (2013) state that challenge stressors are work events that require an adaptive response and that whether this response is something novel or tried-and-tested depends on the regulatory focus of that individual. Individuals that have a strong promotion focus are sensitive to the presence of positive

outcomes, are watchful for opportunities and are eager in strategizing towards their goals. Individuals with a strong prevention focus are sensitive to the presence of negative outcomes and possibility of threat, and therefore will be avoidant and vigilant. Sacramento et al. (2013) therefore state that an individual with strong promotion focus will be more likely to commit error by commission than omission, in other words: they are more likely to act in error than to miss an opportunity (i.e., “Nothing ventured, nothing gained”). Also, individuals with a promotion focus have a more holistic, global information processing style than individuals with a prevention style; the latter style is more focused on analytic thinking and accuracy.

Because of this difference in regulatory focus and corresponding behavior towards stressors, solutions towards environmental change and organizational problems will be more or less creative, leading to better or worse organizational performance depending on the regulatory focus of the individual. This means that managers should be aware of the dominant regulatory focus within a team, ensuring that if creative solutions need to be found, promotion focus is the dominant focus. Also, leaders can have a significant influence on the dominant focus within a team, meaning that they themselves should be aware of their own regulatory focus and adapt accordingly. Concluding, we can state that regulatory focus, as a trait, influences the way skills are implemented. It is important to understand this relationship because regulatory focus severely influences creativity, which is essential to the way leadership skills are utilized in organizational problem solving in novel and demanding situations.

5.6 Perspective taking as key to unlocking diversity’s potential

Hoever, Knippenberg and Van Ginkel (2012) created a model that displays the effect of a team’s diversity on its creativity which is moderated by the degree to which team members engage in perspective taking. They furthermore propose that perspective taking helps realize the creative benefits of diversity of perspectives by fostering information elaboration. Also, these researchers use the construct of creativity as a vessel to solve organizational problems, innovating, and adapting to changing environments. The definition of perspective taking is stated as: “an observer tries to understand, in a nonjudgmental way, the thoughts, motives, and/or feelings of a target, as well as why they think and/or feel the way they do” (Hoever et al., 2012, p. 984). Creativity is defined by them as the “joint novelty and usefulness of ideas regarding products, processes, and services” (Hoever et al., 2012, p. 983) and is seen by to be critical to organizational survival and performance.

5.6.1 Role of perspective taking

Perspective taking is seen by Hoever et al. (2012) as a mediator of team creativity. Also, perspective taking, as a cognitive process that is directed at an external target, can facilitate social interaction and reduces stereotyping and in-group favoritism, increases cooperative behavior, elicits creative ideas, and improves emotional regulation. In teams, perspective taking is argued to aid team situation model construction and tacit coordination. Team members’ trait perspective taking has been seen to reduce person-oriented conflict. And while perspective taking has been mostly considered to be an individual-level skill, there are arguments that perspective taking can become an emergent group process in which group members show high levels of convergence. Also, perspective taking has been linked to higher communication satisfaction, which may improve a person’s mood, motivation, and liking of the other: all of which are argued to promote perspective taking. This reciprocity in the

emergent team process of perspective taking helps teams to capitalize on their diversity on creative tasks by fostering the sharing, discussion, and integration of diverse viewpoints and information (Hoever et al., 2012). Analyzing another person’s viewpoint may lead to cognitive reframing, which helps integrating perspectives and ideas that have been linked to creativity.

5.6.2 Heterogeneous versus homogeneous teams

Hoever et al. (2012, p. 985), however, state that “perspective taking will not be equally beneficial for homogeneous teams”. This is because perspective taking will not reveal new insights when there are no different approaches to an organizational problem. Even worse, it might reinforce existing perspectives and/or increase cognitive load without the benefits of perspective taking and therefore reduce the effectiveness of a team.

5.6.3 Individual versus team

While the model of Hoever et al. (2012) was focused on team perspective taking, their findings led them to believe that perspective taking is not always an emergent team process but sometimes also an individual skill. Therefore, perspective taking may be a ‘tool’ or skill for individuals with which to harness their team’s cognitive resources for their own creativity. Also, organization-level variables such as reward structure may affect team members’ motivation to engage in perspective taking and to use the gained insights for the collective benefit (Hoever et al., 2012, p. 992). Finally, Hoever et al. (2012) conclude that team diversity may even hinder perspective taking, but that perspective taking may also reduce the negative consequences of team diversity. This ambiguity is indicated to be a vector for future research.

5.6.4 Advantage of perspective taking skill

The research of Hoever et al. (2012) showed that perspective taking not only mobilized diverse perspectives, but also helped uncover unshared information and thereby creating competitive advantage: compared to teams who do not engage in perspective taking. The ability to engage as a leader in perspective taking –at the right time and place- may help therefore diverse teams to elaborate on their perspectives and information: in order to arrive at more creative solutions, leading to higher organizational performance.

6. EFFECTIVE LEADERSHIP

After reviewing the leadership models of Mumford et al. (2000), Lord and Hall (2005), Sacramento et al. (2013), as well as the adaptability and creativity models by Nelson et al. (2010), Pulakos et al. (2010), and Hoever et al. (2012), we note that none of the models give a full, holistic view of the relationship between traits, skills and effective leadership. Instead we propose that traits influence skills, skills influence effective leadership and that adaptability and creativity moderate the relationship between skills and effective leadership.

6.1 Traits

Both Mumford et al. (2000) and Lord and Hall (2005), propose that traits have a large influence on the formation of skills and the type of skills that are formed. Where Mumford et al. (2000) state that traits such as cognitive ability, crystallized cognitive ability, motivation and personality are the basis for social judgment and social skill, problem solving skills, and knowledge, Lord and Hall (2005) focus on the information processing and identity-forming skills and state that during one’s progress through their career, individuals gain more efficient cognitive information processing and therefore gain the ability to think more abstractly and principled and thus requiring less

cognitive resources to solve problems. This increased efficiency in organizational problem solving skill means that leaders become more effective in creating organizational performance and group-level identities that sustain that performance. Sacramento et al. (2013) propose that the trait of regulatory focus, being either more promotion or prevention focused, dictates whether a person is able to solve problems in a creative fashion when an individual is under strain that is perceived to be an opportunity or will seek to prevent loss by a more conservative approach. Nelson et al. (2010) regard traits as being partially responsible for the effectiveness an individual can acquire in a skill and the amount of skills one can acquire, traits being attributes that cannot be influenced such as general cognitive ability and personality, and attributes that can be influenced such as motivation, knowledge and experience. Pulakos et al. (2000) state that personality; cognitive ability; and problem understanding are keys to adapting and solving organizational problems in a creative manner.

What we can see is that there is actually little difference in the models of Mumford et al. (2000), Lord et al. (2005), Nelson et al. (2010), and Pulakos et al. (2000) that we have analyzed and that we can state that there are indeed two categories of skills, one of which that can be influenced such as knowledge, motivation and experience, and the other being traits that cannot easily be changed such as personality and cognitive ability. Therefore, we move on to the impact of traits on skills.

6.2 Skills

Having already concluded that traits influence skills in both their effectiveness and an individual's ability to gain or train skills, we analyze which skills have a positive relationship with effective leadership. The models by Mumford et al. (2000), Lord et al. (2005), Sacramento et al. (2013), Hoever et al. (2012), Nelson et al. (2010), Pulakos et al. (2000) that we have analyzed in this paper all state that various skills are important for solving organizational problems. Where they differ is in the relationship they seek to explain between skills and problem solving skills.

Where Mumford et al. (2000) state that social judgment and social skill, problem solving skills, and knowledge are the basis for organizational problem solving, Lord et al. (2005) put their focus on the information processing skills and task, emotional, social, identity level, meta-monitoring, and value orientation skills. An explanation and examples of these skills can be found in appendix C.

However, there is general consensus that solving organizational problems leads to higher organizational performance (Mumford et al., 2000; Lord et al. 2005; Sacramento et al., 2013; Hoever et al., 2012; Nelson et al., 2010; Pulakos et al., 2000) and that solving organizational problems constitutes effective leadership (Mumford et al., 2000; Lord et al. 2005; Sacramento et al., 2013; Hoever et al., 2012; Nelson et al., 2010).

6.3 Adaptability and creativity

As Nelson et al. (2010) and Pulakos et al. (2000) state, adaptability is an increasingly important skill for problem solving. However, adaptability is not the only skill that is important for solving organizational problems and effective leadership. We have already concluded that adaptability is a function of trainable and untrainable attributes, and training and experience. Therefore we propose that adaptability is not a mediator, but rather a moderator of the relationship between

skills and organizational problem solving. This is shown in figure XXX.

As Sacramento et al. (2013) and Hoever et al. (2012) propose, creativity is also a key skill in organizational problem solving that is a function of traits that are either influenceable or uninfluenceable and training. This is quite similar to the relationship that Nelson et al. (2010) and Hoever et al. (2012) have found regarding adaptability. Creativity has been linked with adaptability, but is not the same thing. Therefore we propose that creativity is also a mediator of the relationship between skills and organizational problem solving.

6.4 The relationship between traits, skills and adaptability in effective leadership

Thus, having concluded that effective leaders solve organizational problems (Mumford et al., 2012; Lord & Hall, 2005; Sacramento et al., 2013; Hoever et al., 2012; Nelson et al., 2010), that traits influence the skills to solve organizational problems, and that creativity and adaptability both moderate the relationship between skills and organizational problem solving, we propose the following model in figure 2 that visualizes these relationships.

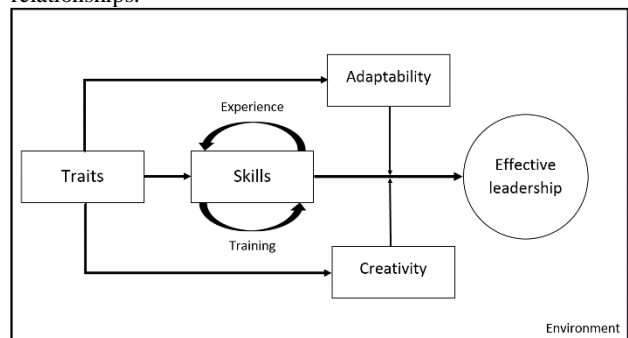


Figure 2. Basic model of traits, skills and effective leadership, with moderating factors

What is shown is that noncognitive abilities (e.g. risk-taking, patience, perspective taking), cognitive abilities (e.g. IQ level, written and oral capacities), personality, motivation and regulatory focus (promotion or prevention focus) comprise the traits that enable a person to gain relevant skills that enable a person to be an effective leader (Mumford et al., 2000; Nelson et al., 2010; Lord & Hall, 2005). Furthermore, skills that enable an individual to be an effective leader are affected by experience and training, which leads to increasing efficiency in information processing and greater proficiency in these skills (Lord & Hall, 2005). Furthermore, an individual that is adaptable will be a more effective leader because of better use of skills in novel, demanding situations than a person that does not (Nelson et al., 2010; Pulakos et al., 2000). The same goes for an individual that is creative in using his or her skills to solve organizational problems (Lord & Hall, 2005; Hoever et al., 2012; Sacramento et al., 2013). Adaptability and creativity, we propose, are not directly related to effective leadership but do moderate the relationship between problem solving skills, information processing skills, knowledge and social skills, and effective leadership. Also, the degree to which an individual can be adaptable and creative depends on their traits (Nelson et al., 2010; Pulakos et al., 2000; Hoever et al., 2012; Sacramento et al., 2013). The model as shown in figure 2 can now be filled in by the factors we have found in the literature we have analyzed as is shown in figure 3.

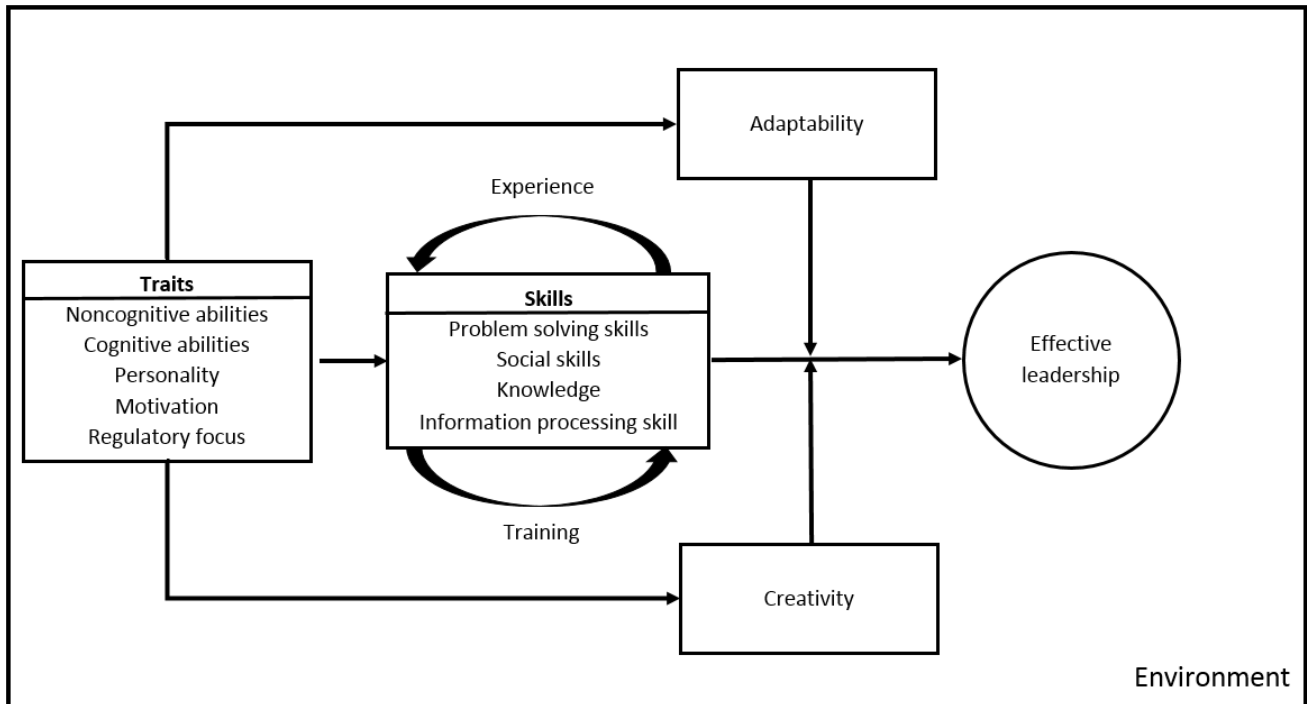


Figure 3. Full, proposed model of the relationship between leader traits, skills and effective leadership: With adaptability and creativity as the moderating variables

6.5 Theoretical relevance

What this paper and model contributes to the scientific community is a holistic view on the relationship between traits, skills, adaptability, creativity and effective leadership, where other models have not integrated these aspects into a model that explains effective leadership. For instance, Mumford et al. (2000) disregard creativity and adaptability completely; Lord and Hall (2005) do not recognize the relationship between adaptability and creativity, and effective leadership; Nelson et al. (2010) do include adaptability as a moderator of leadership skills, but neglect to include creativity; Hoever et al. (2012) take a very focused approach to creativity but neglect other leadership skills; and Sacramento et al. (2013) propose that regulatory focus is key to the way leadership skills are applied, but do not fully explain what these leadership skills are. Researchers can use the new model in this paper to better understand how effective leadership is formed, what lies at its basis, what factors influence effective leadership and what factors can or cannot be influenced. Also, researchers can use this model as a base for future research, perhaps explaining the values that underlie behavior and thereby influence the application of skills, whether values are a part of a trait or how these values are formed. One can also argue that regulatory focus and perhaps noncognitive abilities and motivation as well are part of an individual's personality, this is a good vector for future research to discern the vague lines between these social constructs.

7. CONCLUSION AND DEBATE

As we have analyzed various models that describe traits, skills, effective leadership skills, adaptability and creativity, we have created a new model that incorporates all variables and fills in the model which describes the relationship between traits, skills and effective leadership that we have shown at the beginning of this paper. When integrating various insufficient models into a new model that is sufficient in explaining a relationship, a number of challenges arise such as mismatching variables or different uses of the same term. Luckily, the models

by Mumford et al. (2000), Hoever et al. (2012), Sacramento et al. (2013), Lord and Hall (2005), Nelson et al. (2010), and Pulakos et al. (2000) do not contradict each other in usage of terms or variables, but rather try to relationships towards effective leadership, problem solving or organizational performance from different viewpoints. However, the organizational environment is changing in an ever faster pace which places heavy demands upon the leaders of today and therefore the most important skill in solving organizational problems nowadays is being adaptable (Nelson et al., 2010; Hoever et al., 2012) and creative (Sacramento et al., 2013).

Reflecting now on the main question of this paper: "What do we know about the importance of adaptability and creativity in the context of effective leadership and how do leadership skills in general tend to develop in a management context?" we can conclude that skill is a social construct that is a powerful determinant of wages, schooling, participation in crime and success in many aspects of social and economic life that is produced by genes, investment and environmental influence (Cunha & Heckmann, 2007; Mumford et al., 2000). Of all the skills a person can possess, a number of skills are important to enable a person to be an effective leader, which means that a person is capable of effectively solving organizational and follower-related problems or issues that are often vague, undefined and have to be solved in a time-limited and resource constrained environment (Mumford et al., 2000). These leadership skills are produced by traits that to some extent can be influenced (Mumford et al., 2000; Lord & Hall; 2005; Cunha & Heckmann, 2007; Nelson et al., 2010), given that traits are formed by the interplay among genes, willful investment and less-conscious environmental or contextual influences (Cunha & Heckman, 2007). Hence, leadership skills are influenced by traits, training and experience, and leadership skills enable a leader to solve organizational problems/issues which contributes to various degrees of effective leadership (Mumford et al., 2000; Lord & Hall, 2005; Nelson et al, 2010). Also, as an individual progresses through his or her career, his or her level of efficiency

in processing information increases, freeing up more cognitive resources for problem solving, a more principled understanding of the work environment and fostering of group-level identities. Furthermore, we propose that both adaptability (Nelson et al., 2010; Pulakos et al., 2000) and creativity (Sacramento et al., 2013; Hoever et al., 2012) moderate the relationship between leadership skills and effective leadership, by enabling an individual to use their skills to more effectively solve novel and challenging organizational problems.

Since the author of this paper had a limited amount of time of ten weeks to write this paper concurrently with working full-time as process manager, the model as shown in figure XXX has not been validated, which has severe implications for external reliability. An interesting topic for future research would be to clarify the boundaries between the various traits that enable an individual to gain leadership skills. Also, future research could be done to validate the model in this paper. As this paper shows, it is important to keep models of leadership up to date and in line with changes in the environment which is why I was compelled out of my own experience as a process manager to create a new model that explains effective leadership in a contemporary manner.

8. ACKNOWLEDGEMENTS

I would like to thank the University of Twente for enabling me to follow an interesting and mostly positive experience over the last six years. The campus and all its associations have had a pulling effect on me: even before I started studying here. Without the experience I gained as chairman of the Supervisory Board of the Student Union, chairman of the KSUT (Sportkantine) foundation and involvement in various layers of decision making on Campus, I would not have had the job as business process manager at Brookhuis that I have today.

Also, I would like to thank my supervisors Prof. Dr. Wilderom and Hoozeboom, MSc for helping and guiding me in writing this paper, even though time was in little supply because of my full-time job. The guidance they gave, even in the evenings and weekend, helped me write the paper you see today.

Finally, I would like to thank my wife for her excellent feedback and unrelenting support, without which I would not have finished my Bachelors' programme.

9. BIBLIOGRAPHY

- Boddy, D. (2008). *Management: An Introduction (4th ed.)*. Essex: Prentice Hall
- Burns, J.M.G. (1998). Transactional and transforming leadership. *Leading organizations*. Sage Publications
- Cunha, F., Heckman, J. (2007). The technology of skill formation. *The American Economic Review*, 97(2), 31-47
- Daft, R.L., Murphy, J. Willmott, H. (2010). *Organization: Theory and Design*. Hampshire: South-Wales
- Elias, P., McKnight, A. (2001). Skill Measurement in Official Statistics: Recent Developments in the UK and the Rest of Europe. *Oxford Economic Papers*, 53(3), *Special Issue on Skills Measurement and Economic Analysis*, 508-540
- Hoever, I., Knippenberg, D., Ginkel, W., & Barkema, H. (2012). Fostering Team Creativity: Perspective Taking as Key to Unlocking Diversity's Potential. *Journal of Applied Psychology* 97(5), 982-996
- House, R.J. (1996) Path-goal theory of leadership: Lessons, legacy, and a reformulated theory. *The Leadership Quarterly*
- Lord, R. & Hall, R. (2005). Identity, deep structure and the development of leadership skill. *The Leadership Quarterly*, 16, 591-615

- Kirkpatrick, S.A., Locke, E.A. (1991). Leadership: Do Traits Matter? *The Executive*, 5(2), 48-60
- Kozlowski, S., Gully, S., Salas, E., Smits, E., & Nason, E. (2010). Effects of Training Goals and Goal Orientation Traits on Multidimensional Training Outcomes and Performance Adaptability. *Organizational Behavior and Human Decision Processes*, 85(1), 1-31
- Kuhn, P., Weinberger, C. (2005). Leadership Skills and Wages. *Journal of Labor Economics*, 23(3), 395-436
- Le Pine, J.A., Colquitt, J.A., & Erez, A. (2000). Adaptability to changing task contexts: effects of general cognitive ability, conscientiousness, and openness to experience. *Personnel Psychology*, 53.
- Leadership. (2014, June 26) *dictionary.com*.
- Mumford, M.D., Zaccaro, S.J., Harding, F.D., Jacobs, T.O., Fleischman, E.A. (2000). Leadership skills for a changing world: solving complex social problems. *Leadership Quarterly*, 11(1), 11-35
- Nelson, J.K., Zaccaro, S.J. & Herman, J.L. (2010). Strategic information provision and experiential variety as tools for developing adaptive leadership skills. *Consulting Psychology Journal: Practice and Research*, 62(2), 131-142
- O'Connell, D., McNeeley, E. & Hall, D. (2008). Unpacking Personal Adaptability at Work. *Journal of Leadership & Organizational Studies*, 14(3), 248-259
- Pulakos, E.D., Arad, S., Donovan, M.A., Plamondon, K.E. (2000). Adaptability in the workplace: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology*, 85(4), 612-624
- Sacramento. C., Fay, D., West, M. (2013). Workplace duties or opportunities? Challenge stressors, regulatory focus, and creativity. *Organizational Behavior and Human Decision Processes*, 121, 141-157
- Skill. (2014, June 26) *dictionary.com*.
- Stogdill, R. (1948). Personal factors associated with leadership: A survey of the literature. *The Journal of Psychology: Interdisciplinary and Applied*, 25(1), 64