The Influence of Leadership on Innovation: a Case Study in the Telecommunications Industry in South Africa

Pascalis Adams, Hannelie Nel and Annlizé Marnewick
Postgraduate School of Engineering Management
Faculty of Engineering and the Built Environment
University of Johannesburg
Auckland Park, Johannesburg, South Africa
pascalisadams@gmail.com, hannelien@uj.ac.za, amarnewick@uj.ac.za

Abstract

Leadership is the engine of an organisation and innovation is recognised as a critical success factor for an organisation's survival. Leadership is at the core of creating an innovative culture within an organisation, and employees play a vital role in the execution of innovative outputs. The purpose of this research was to examine the relationship between leadership and employee innovation and to provide an inventory of leadership behaviours that promote innovation at an individual and organisational level. Through examining literature, the research will present a list of characteristics and values that are required to cultivate and promote innovation. These characteristics were studied by means of a case study in a telecommunications organisation to establish whether the organisation embraces innovative behaviour. The scope of the literature review examined the different leadership characteristics required at the individual, group, and organisational level. Data in the case study was collected by means of a questionnaire and analysed to provide recommendations to the organisation on ways to improve the cultivation of innovation within their workforce.

Keywords
Creativity, Innovation, Leadership, Organisation

1. Introduction

Leadership is the engine of an organisation and innovation is recognised as a critical success factor for an organisation's survival. Leadership is at the core of creating an innovative culture within organisations and employees play a vital role in the execution of innovation. Innovation is a process that can be managed and this encourages organizational leadership in that managers can plan, control, and organise all aspects of innovation to positively influence the outcome. Therefore, it is important to understand how leadership as a discipline affects innovation; and consequently, how a leader's behaviour affects innovative behaviour within the company workforce.

Since the implementation of Black Economic Empowerment (BEE) in South Africa, diversity and transformation in the workplace have made considerable progress given that the country has undergone significant changes in management and leadership within a relatively short time. A lack of business acumen, entrepreneurial drive, management skills and education, together with low technology savviness, resistance to change and a lack of leadership affect an organization's work processes (Safavi and Tweddell, 1990; Hall and Sandelands, 2009; Olawale and Garwe, 2010). Despite these challenges, innovative methods remained and are still an effective solution for leaders in society (Yan, Maladzhi and Makinde, 2012). As with any paradigm shift, South African leaders needed not only to implement new approaches and techniques, but also novel ways of thinking.

Anticipating the need for change leads to success in organisations, and this is achieved with minimal effort with a focus on improving outcomes (Agbor, 2008). These organisations are driven by leaders who constantly and effectively communicate the vision and strategy of the organisation, and where everyone in the organisation shares in the set of beliefs about why the strategy and vision are important (Pearce and Manz, 2009). Successful leaders

© IEOM Society International

identify the need for transformational change and provide a balance between innovation and self-control to take cautious risk.

This paper aims to highlight which leadership characteristics cultivate and promote innovation within a company at the organisational and individual level, and to determine through case study if these characteristics are being implemented by the organisation. Through determining which characteristics influence innovation, organisations will be able to apply these findings to promote an innovative culture in a company. Furthermore, it will assist leaders to understand which behavioural characteristics are needed to stimulate innovative thinking within the organisation.

The paper starts with a literature review compiling an inventory of individual and organisational characteristics affecting the implementation of innovation within an organisation. A description of the case study follows to establish if the identified characteristics are being implemented within the telecommunications industry; and the paper concludes with recommendations at an individual and organizational level.

2. Literature Review

The rate of globalisation is increasing rapidly as idea generation, new knowledge and global diffusion increases. Creativity and innovation have a big role to play in organizational survival in the twenty-first century (Martins and Terblanche, 2003; Armstrong, 2007). To remain relevant and sustainable within this highly competitive economic environment, businesses must invest in creativity and innovation. To accomplish an outcome such as creativity and innovation, considerable devotion should be directed towards how employees perceive their organisation's leadership (Khalili, 2016).

In the 21st century, the creative process which ultimately drives innovation depends on an appropriate leadership style (Martins and Terblanche, 2003; Emam, 2015). Innovation is a company-wide objective, but employees cannot innovate unless the organisation's leadership empowers them to do so, whilst creating an atmosphere that rewards and values their contribution (France, Mott and Wagner, 2007). Workforce creativity and innovation can only be achieved if there is competent and effective leadership in the workplace (West and Sacramento, 2012); and it is important to understand what drives an organisation towards innovation. Leadership is one of the central factors that influences innovation, since it can develop an organisation's capacity to innovate and is also responsible for managing the company culture. The latter is achieved through granting autonomy for innovative activities, and by challenging employees towards implementing new ideas and processes (Choon-Sik, Woowon and Joongwha, 2007).

Flynn and Chatman (2001) classify innovation into three genres, namely: individual, group, and system innovation (Flynn and Chatman, 2001). On an individual level the key determinants for innovation include commitment, learning and personality. At a group level, the key determinants are determined by the team's attributes, namely size, diversity, stability, principles, leadership and communication. Organisational structure and corporate culture form part of the system level determinants (Szczepańska-Woszczyna, 2015). Creative people are highly motivated people who develop their knowledge in their field of occupation or interest. These individuals are not necessarily genius or adaptors. Creative people do not follow the status quo – they implement unconventional ways of thinking and problem solving (Bulens, Kreitner and Kinicki, 2002). Group creativity is driven by a cohesive culture that supports teamwork, collaboration and diversity. Organisational creativity and innovation are supported through the efficient utilisation of resources and the execution of strategy, all led by an effective leadership structure (Bulens *et al*., 2002).

According to Martins and Terblanche (2003), leadership is one of the dimensions that describe the culture of an organisation, together with strategy, structure, support mechanisms, behaviours that encourage innovation, and communication (*ibid.*). Figure 1 provides a graphical representation of these determinants, and each determinant is briefly expanded below.

Strategy: Leadership plays a role in creating a company-wide innovation strategy that will encourage the development and implementation of new products, procedures and services (Iya, 2015).

Structure: A leadership style that allows for freedom, flexibility and teamwork will promote creativity and innovation within the organization (Martins and Terblanche, 2003).

© IEOM Society International

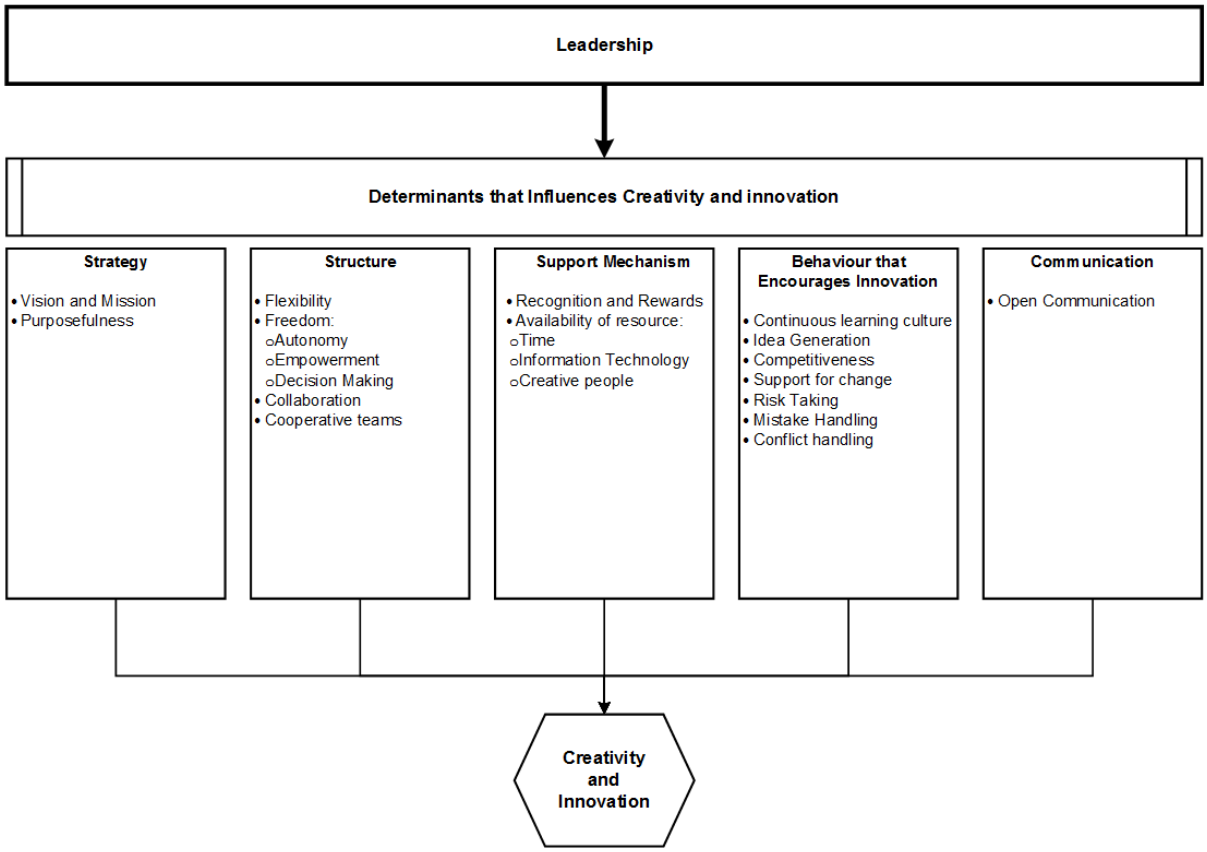

Figure 1. Leadership determinants that influence creativity and innovation (Martins and Terblanche, 2003:70)

Support mechanism: Support mechanisms must be established in the workplace to create an environment that encourages creativity and innovation (Iya, 2015).

Behaviour that encourages innovation: Creativity and innovation manifest from values and norms that stem from specific behavioural characteristics that promote such behaviour (De-Jong and Hartog, 2007; Iya, 2015).

Communication: Leaders who promote transparency that is built on trust have a positive effect on influencing creativity and innovation (Martins and Terblanche, 2003; Yidong, 2012).

Investigating the relationship between leadership and innovation in a developing country's context is important as these organisations often face macroeconomic volatility, intense competition and institutional instability (Tybout, 2000; Farashahi and Hafsi, 2009). For an organisation to deliver unmatched creative and innovative results, management must provide demonstrable and appropriate leadership (Andriopoulos, 2001; Jung, Wu and Chow, 2008; Michaelis, Stegmaier and Sonntag, 2010). Managers who understand how their leadership style affects innovation are more likely to cultivate innovative behaviour within their organisation (Reiter-Palman and Illies, 2004). Industry leaders in the 21st century need to recognize their role in this new economic age, where their ability to generate, exploit, and distribute knowledge, has become of utmost importance in creating wealth and gaining a competitive firm advantage. The researchers identified the most consensual characteristics obtained from the literature review and illustrate the twelve characteristics required by leaders to cultivate and promote innovative behaviour within their workforce in Table 1.

Leadership styles can be classified in any of the following genres, viz. result oriented; autocratic leadership; employee oriented; transactional leadership; democratic leadership; and transformational leadership (Senior and Fleming, 2006). According to Samad (2012), leadership styles are based on four paradigms including classical,

© IEOM Society International

transformational, organic and transactional (Samad, 2012). Classical leadership is based on a leader's behavioural and emotional reaction to decision making. Transactional leadership is where the leader manages their employees' tasks. Transformational leadership is categorised by a leader's inspirational motivation, individualised consideration, and charisma. This kind of leader inspires followers to be committed and responsible in achieving the goal at hand. The role of transformational leaders is to inspire and motivate employees to go beyond their current perceived abilities. The last paradigm is organic leadership, which is built on teamwork and collaboration with no role differentiation between employee and employer (Samad, 2012).

Table 1. Leadership characteristics required to promote innovative behaviour

No.	Characteristic	Description
1.	Charismatic Influence	They motivate followers to perform and go beyond their perceived expectations, allowing them to achieve supreme work objectives. These kind of leaders instil respect, faith, pride, and communicate a mission and vision to their followers (De-Jong and Hartog, 2007; Iya, 2015).
2.	Individualised Influence	This kind of leader influences employees through motivation, loyalty, admiration, inspiration, respect, and by fostering a collective sense of mission. This leader pays attention to the developmental needs of their followers, in ways that stimulate their learning experience (De-Jong and Hartog, 2007; Cheung and Wong, 2011).
3.	Self-Efficacy	This leader provides psychological arousal and verbal persuasion to develop followers' self-efficacy. This allows followers to be motivated to generate novel ideas and to solve problems (Ryan and Tipu, 2013).
4.	Inspirational Motivation	The leader uses emotion to appeal to their followers. They provide inspiration and encouragement during the process of idea generation, allowing followers to willingly express their novel ideas (De-Jong and Hartog, 2007).
5.	Intellectual Stimulation	These leaders challenge employees to think differently by viewing old problems from a new perspective. They encourage followers to question old assumptions, challenge the status quo, and realize their curiosity (Cheung and Wong, 2011; Iya, 2015).
6.	Delegation	This is a power sharing process, where the leader allows a subordinate autonomy in the way in which they conduct their tasks and responsibilities, thus empowering followers to willingly fulfil and deliver on their responsibilities (Samad, 2012).
7.	Innovative Role-Modelling	These leaders inspire their followers to adopt creative and innovative behaviour. Leaders play an important role in promoting innovative behaviour through championing creativity and innovation (Cheung and Wong, 2011; Samad, 2012).
8.	Recognition and Reward	This type of behaviour involves showing appreciation and giving praise to others for their achievements and innovative initiatives (De-Jong and Hartog, 2007).
9.	Support for Innovation	This refers to the way a leader behaves towards creativity and innovation in the workplace. This includes a variety of behaviours that support innovation within the workplace namely: acceptance, consideration, empathy, friendliness, and patience (Garacia-Morales, 2012).
10.	Feedback	Leaders who provide feedback, improve the possibility of effective implementation, thus contributing to employee innovation. Employees are enthusiastic towards expressing their creative behaviour when their leaders provide timeous feedback (Akkermans, 2011).
11.	Consulting	This leader promotes and encourages employee participation in decision making. Consultation encourages employees to generate novel ideas, and is a necessary task required before co-workers can make suggestions or implement improvements (De-Jong and Hartog, 2007).
12.	Providing Vision	By providing a vision, leaders can communicate their ambitions and organisational objectives to their employees. This enables followers to channel their efforts towards innovative behaviour (Samad, 2012; Ryan and Tipu, 2013).

Not all leadership styles are conducive to the cultivation of creativity and innovation. Successful companies have shown that collaborative and shared leadership is best suited if leaders want to unlock the complete innovative potential of their organisation - rather than an autocratic and hierarchical leadership style (Askenas, Ulrich, Jick and Kerr, 2002). Organisations operating with an autocratic and hierarchal modus-operandi where higher ladder executives control the information, allocation of manpower, work, and decision making – produces a workforce that is less creative, less empowered, less proactive and less productive (Hornstein and Guerre, 2006; Agbor, 2008). This leadership approach has minimal chance of cultivating innovation within an organisation.

© IEOM Society International

The alternative to this is a leadership style that inspires, motivates, empowers, and coaches its staff (Yan, Maladzhi and Makinde, 2012; Maladzhi and Yan, 2014). These leaders know that in-order for the organisation to survive, all individuals who come with various skill sets and tools, will transform the organisation towards an innovative culture. Therefore, an organisation can only become fully innovative if all its members are participants and ambassadors for leadership (Realin, 2003; Yan, Maladzhi and Makinde, 2012).

3. Research Methodology

To investigate the characteristics a leader requires to cultivate innovative behaviour within their organisation, research and an in-depth understanding of the relationship between leadership and innovation are required. A case study approach was selected to enable the researchers to acquire comprehensive primary data directly from the participants in the case. A quantitative methodology was utilised and the value thereof is that the approach has direct and immediate relevance to managers since it addresses issues that they see as important through quantifying employees' attitudes towards the organisation (Saunders, Lewis and Thornhill, 2009). Data was collected by a questionnaire that was administered through an online platform.

The researchers structured the questionnaire to ensure consistency and relevance of questions posed to the sample group. The sampling group was chosen in a deliberate manner – this yielded the most relevant and reliable results. The sample group comprised 111 individuals from an engineering and operations environment in a Pay Television company operating in South Africa and Africa. The data collected was subjected to quantitative analysis to respond to the research questions. The researchers analysed the data by means of quantifying similar responses, allowing the researchers to deduce valid and relevant conclusions from the findings.

4. Results

From the 111 selected participants, only 47 responded to the questionnaires equating to a response rate of 42% which was deemed sufficient for reliable and valid data analysis. The respondents were asked to answer each question employing a five-point Likert scale.

4.1 Feedback on Organisational Perspectives

This section provides the results from all 47 participants regarding the organisation's ability to innovate and the results are provided in Figure 2.

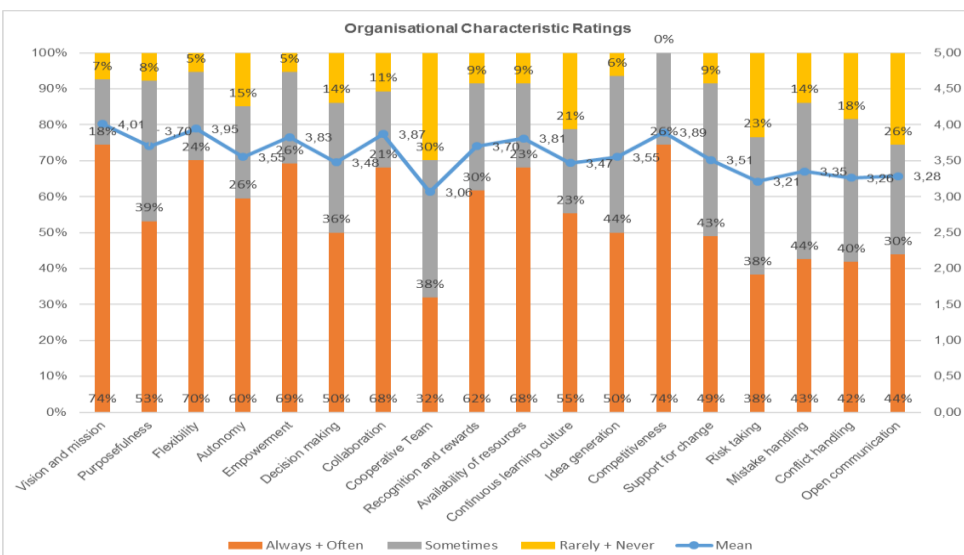

Figure 2. Cumulative ratings for questions 1 - 31

© IEOM Society International

The feedback indicates that there are three organisational characteristics that score a frequency rating of 70% and higher, namely, vision and mission, flexibility, and competitiveness. There are four characteristics that are between 60% and 70%, namely, empowerment, collaboration, recognition and rewards, and the availability of resources. The characteristics that receive the lowest frequency rating are cooperative teams and risk taking with a cumulative percentage of 32% and 38% respectively.

4.2 Feedback on Management's Perspective

These responses provided the management's perspective regarding their ability to cultivate innovation within their teams through the implementation of the identified characteristics.

Figure 3 indicates that the majority of the management team rated all the characteristics positively; the responses falling between the ratings of always and often. The majority of the ratings are between 80% and 90% with a mean of above 4. The characteristics to receive the highest ratings are support for innovation and consultation, each receiving a rating of 95%. The characteristics that received the lowest ratings are self-efficacy and intellectual stimulation with an average rating of 50% and 75% respectively.

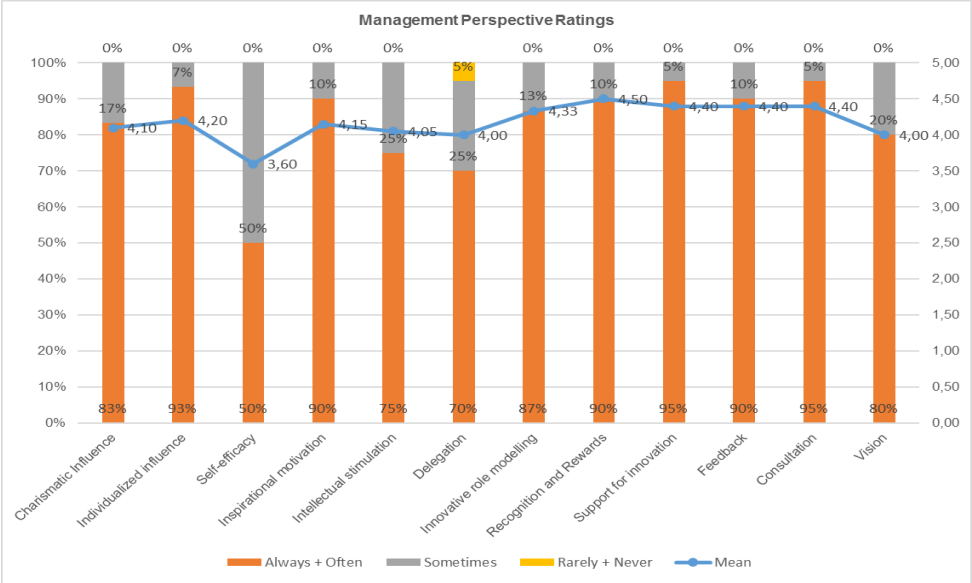

Figure 3. Ratings per characteristic for question 32 - 56

4.3 Feedback on Employee Perspectives

These responses provided the employee's perspective regarding the management team's ability to cultivate innovation within the team through the implementation of the identified characteristics.

From Figure 4 it can be noted that the highest ratings are between 60% and 67%, with charismatic influence and delegation being the highest rated characteristics with an average of 67% each. The characteristics to receive the lowest ratings were recognition and consultation with an average rating of 29% and 34% respectively.

© IEOM Society International

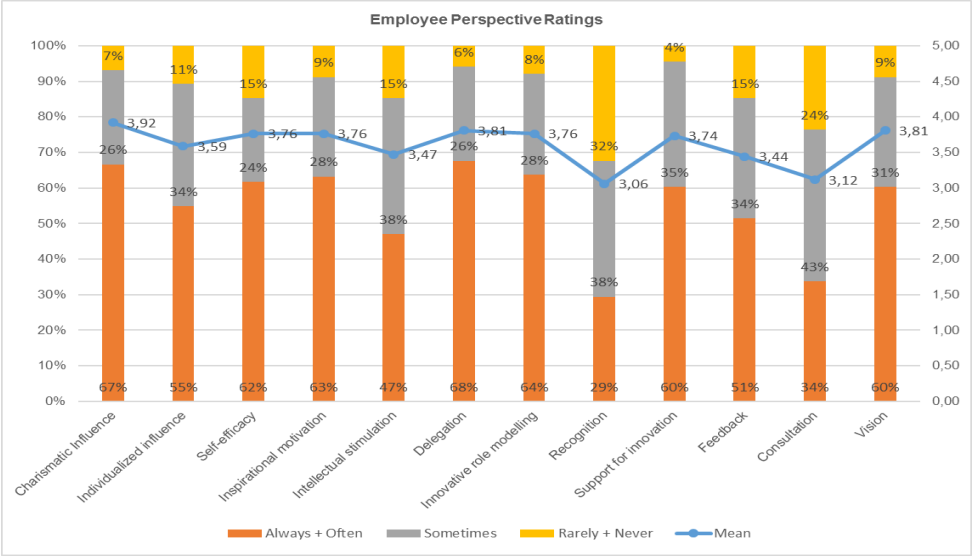

Figure 4. Ratings per characteristic for question 57 - 81

5. Discussion

The descriptive statistics are discussed in further detail below.

5.1 Organisational Characteristics

Figure 5 indicates that most of the characteristics in which the organisation underperforms lie within the categories of 'Behaviours that encourage innovation' and 'communication'. These characteristics are centred on specific behaviours that inhibit or promote innovation. The findings revealed the following:

Continuous learning culture: the knowledge and skills of the work force are not kept up to date, which hinders creative and innovative thinking. Employees lack inquisitiveness and communication which further hinder the innovative process, although team work is emphasised from a managerial level. Coupled with this is the lack of idea generation which is attributed to employees feeling that their skills and knowledge are not being utilized by the organisation. This could be contributed to the fact that employees feel that their daily job tasks do not truly reflect their skill set.

The findings also indicate that change is not supported and welcomed by the organisation's management team. There is reluctance from employees of the organisation towards risk taking because of the manner in which mistakes are dealt with. The manner in which mistakes are addressed in an organisation could determine whether employees feel free to behave creatively and innovatively.

Conflict handling was another characteristic that was poorly rated. It was found that disagreements in the workplace are not dealt with in a constructive manner by the management team but rather left to evolve into unmanageable situations. During decision making phases some employees feel that their ideas or viewpoints are not supported within their team, and this could be due to a virtual hierarchy that is formed within a team through experience and years of service to the organisation. Reluctance in communication in the workplace stems from a lack of trust by employees towards their peers and the management team (Martins and Terblanche, 2003). Employees need to feel emotionally safe to act innovatively, and for this to happen trust must to be cultivated.

© IEOM Society International

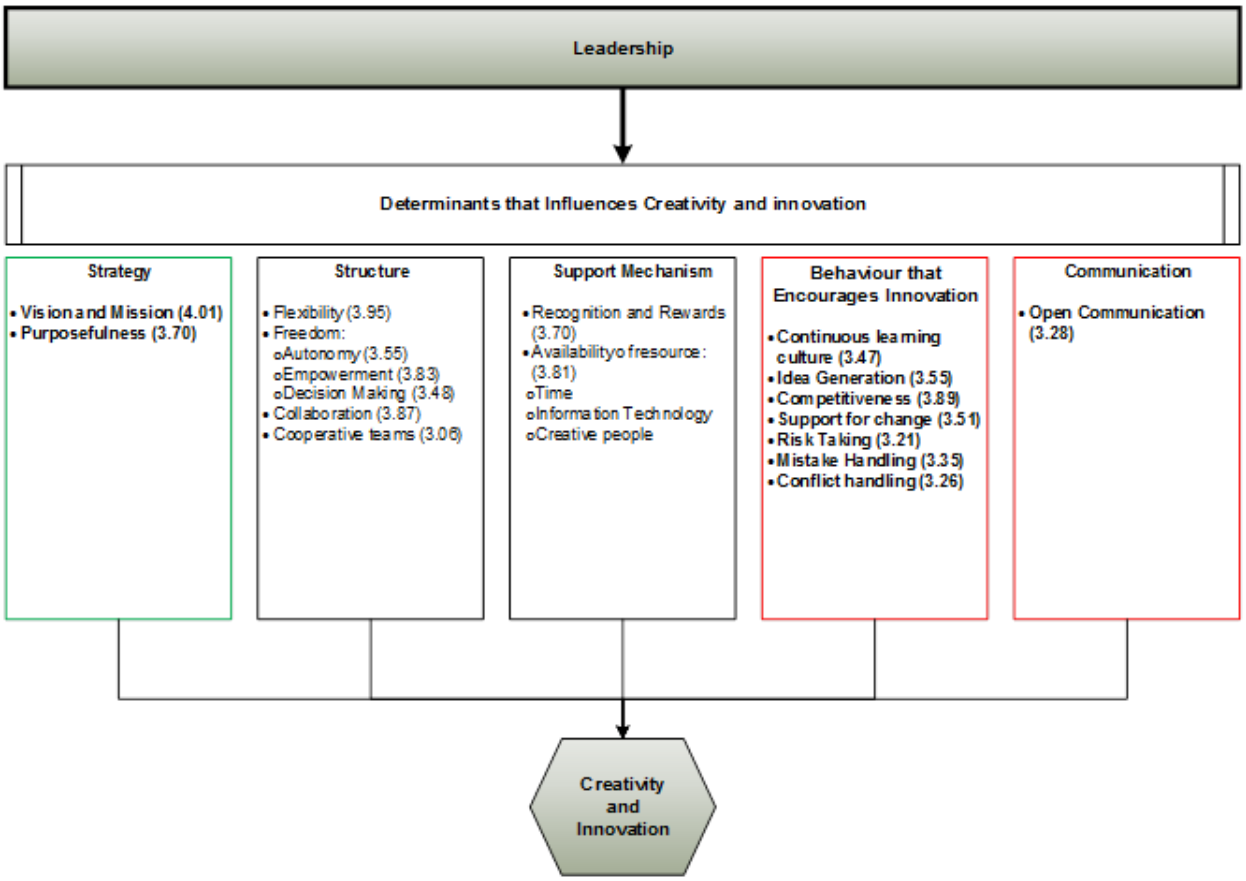

Figure 5. Leadership determinants with mean ratings

Figure 5 indicates that vision and mission, flexibility, collaboration and competitiveness are the highest rated characteristics, with strategy being the highest rated category. An innovative strategy is one that encourages the development of new services and products (Robbins, 1996). According to Covey (1993) the birth of creativity and innovation within an organisation can be found in a shared vision and mission. The vision and mission of an organisation is customer and market orientated, with a focus on solving customer needs. The value of purposefulness needs to be reflected in the vision and mission of the organisation.

5.2 Management vs Employee Perspective

Figure 6 compares the results from the employee and management perspectives. The analysis provides the management and employee perspectives respectively, to establish consensus on which characteristics are poorly implemented and those that are embraced by the management team.

A positive consensus was reached for charismatic influence and vision. Employees agree that their management team motivates them to perform and go beyond the perceived expectation, allowing them to achieve their objectives. Leaders of the organisation communicate the organisation's vision and objectives to their employees allowing work outputs to be aligned with company objectives. However, there was consensus that the management team lacks the ability to instil self-efficacy within the workforce, which stems from a lack of verbal and psychological motivation to generate novel ideas and solve problems.

In addition, there was misalignment in the responses from the management team and employees regarding consultation, recognition and rewards, feedback and individualised influence. The majority of the management team believes that they consult and provide sufficient feedback to their employees.

© IEOM Society International

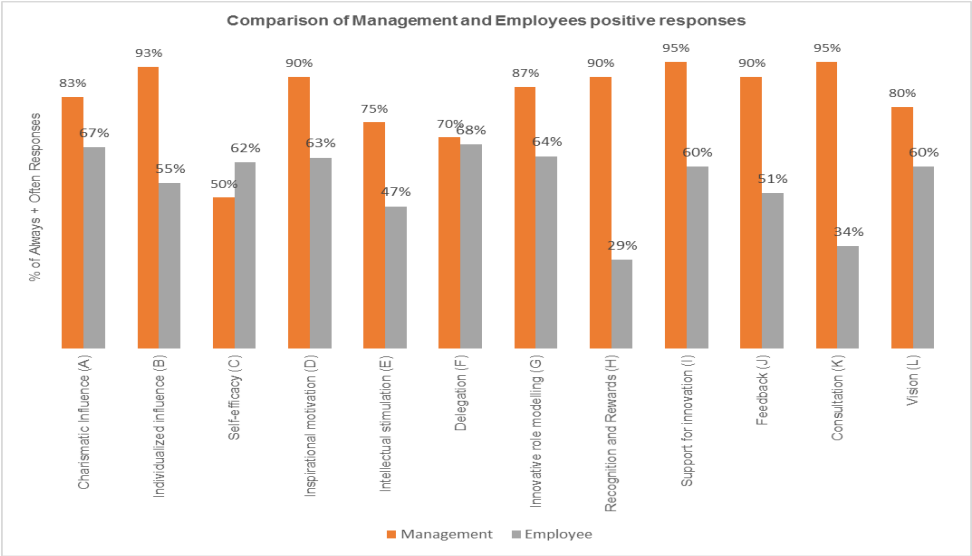

Figure 6: Positive response comparison

Employees do not believe this to be true. The majority of employees said that they are not part of the decision-making process and are not provided a platform to provide their input. A lack of consultation from the management team undermines employees' motivation, thus depriving the creation of new ideas (De-Jong and Hartog, 2007).

Recognition and rewards was another characteristic with misaligned views. This potentially stemmed from the management team not providing the correct recognition and rewards to its employees. Management should be considerate in the method of reward and recognition because employees' perception of satisfaction may vary amongst personnel. Feedback is a reward which could enhance employee motivation. A misalignment in individualised influence also shows that the management team does not pay due attention to the needs of their subordinates on an individual level.

6. Recommendations

6.1 Organisational Level

Freedom is one of the core values in the literature reviewed that cultivates innovation, and is manifested through autonomy, decision making and empowerment. Consequently, it is recommended that the management team empowers and encourages their employees to do their work with minimal supervision, and within agreed guidelines and procedures. To build a cooperative team, the focus should be placed on the team goals, with an emphasis on each person's contribution to the team's objective. All employees should be eligible for recognition and reward, regardless of the employee's position within the organisation. Peer-to-peer recognition may include verbal praise by colleagues in recognition of a peer's valuable contribution.

Behaviours that encourage innovation and communication traits must be the foci within the organisation. The way in which an organisation deals with mistakes will determine an employee feels free to act innovatively. Tolerance of mistakes is essential in the development of a culture that promotes creativity. Through creating an atmosphere of tolerance, employees will also be able to express their creativity through risk taking.

Furthermore, it is recommended that organisational focus should be placed on encouraging employees to have personal communication, information sharing and mentorship programs between different designation levels in the organization, for example between senior and specialist and engineers and technicians, since this will create and maintain a learning culture within the company. An open-door communication policy is recommended, which could

© IEOM Society International

include open communication and collaboration amongst individuals, teams, departments and management. This may be included in all employees' performance ratings as a communication key measuring indicator.

6.2 Individual Level

Self-efficacy in employees may be instilled through the acknowledgment of employee accomplishments. Successful and acknowledged experiences lead to a greater feeling of self-efficacy. The absence of consultation in the workplace weakens an employee's enthusiasm and denies a project from fresh and novel ideas. This can be overcome by involving employees in the decision-making process by hosting, for example, brainstorming sessions.

To ensure that there is a feedback loop between senior management and employees, it is recommended that debriefing sessions are held between line managers and subordinates. Additional recommendations include training for poor performing team members which are included as key performance indicators and followed-up to monitor progress. Coaching and mentorship create an ideal environment for exploring new ideas and developing action plans whilst maintaining continuous support and feedback. Such action allows for leaders to have individualised influence over subordinates, and alternatively empowers subordinates to operate beyond their current level of performance.

6. Conclusion

The first research question was to identify which characteristics influence innovative behaviour in an organisation at an individual and organisational level. Through literature review the organisational characteristics that promote an innovative culture in an organisation were identified; and it was found that creativity and innovation in an organisation can be influenced by multiple variables. From the literature findings, it was established that there are four organisational values that cultivate and promote innovation within an organisation, namely strategy, structure, support mechanism, behaviours that support innovation, and communication. It was established that if these determinants are not supported within an organisation, innovation will not prevail. The influence of each determinant on innovation was analysed through an empirical study to determine if these values are being adopted within a company in the telecommunications industry.

The study was limited to an organisation within the telecommunications industry in South Africa, and this presents an opportunity to extend the research to other engineering sectors. Other disciplines, such as Finance and Human Resources, may also benefit from the work by evaluating what constitutes innovative behaviour within the particular field of knowledge. The findings may be employed by the telecommunications industry in South Africa to guide leaders within such firms to promote and instil innovation in their employees towards competitiveness and business sustainability.

References

Agbor, E., Creativity and Innovation: The Leadership Dynamics. *Journal of Strategic Leadership*, vol.1, no.1, pp. 39-45, 2008.

Akkermans, H., A Leadership Lever for Innovation. *Journal of Creative Behaviour*, vol.45, no.3 pp. 161-187, 2011.

Andriopoulos, C., 2001. Determinants of organisational creativity: a liturature review. *Management Decision*, 39(10), pp. 834-840.

Armstrong, L., Competing in the global higher education marketplace: outsourcing, twinning and franchising. *New Directions for Higher Education*, vol.140, no.1 pp. 131-138, 2007.

Askenas, R., Ulrich, D., Jick, T., and Kerr, S., The boundaryless organization: Breaking the chains of organisational structure. San Fransisco, Jossey-Bass. 2002.

Bulens, M., Kreitner, R., and Kinicki, A., *Organisational Behaviour*, Berkshire: McGraw Hill. 2002.

Cheung, M., and Wong, C., Transformational leadership, leader support, and employee creativity. Leadership and Organisation Development Journal, vol.32, no.7, pp. 656-672, 2011.

Choon-Sik, Woowon, and Joongwha, Effects of Transformational Leadership and Selfleadership on Innovative Behaviors: Mediating Roles of Empowerment. International Area Review, vol.10, no.2, pp. 163-174, 2007.

Covey, S. R., Innovation at four levels. *Executive Excellence*, vol.10, no.9, pp. 3-5, 1993.

© IEOM Society International

De-Jong, J., and Hartog, D., How Leaders Influence employees' innovative be behaviour. European Journal of Innovation Management, vol.10, no.1, pp. 41-64, 2007.

Emam, A., 2015. Is Innovation a Myth ?! - A Road to Practical Innovation For Companies. [Online] Available at: https://www.linkedin.com/pulse/innovation-myth-road-practical-companies-ayman-emam?trk=v-feedandlipi=urn%3Ali%3Apage%3Ad_flagship3_feed%3BX0asR4sY5a%2FrLIeqfjMCPA%3D%3D [Accessed 15 03 2017].

Farashahi, M., and Hafsi, T., Strategy of firms in unstable institutional environments. Asia Pacific Journal of Management, vol.26, no.4, pp. 643-666, 2009.

Flynn, F., and Chatman, J., Strong Cultures and Innovation: Oxymoron or Opportunity?. Chichester: John WileyandSons, Ltd. 2001.

France, C., Mott, C., and Wagner, D., The Innovation Imperative: How Leaders Can Build an Innovation Engine. Oliver Wyman Journal, vol.23, pp. 45-52, 2007.

Hall, J., and Sandelands, E., Addressing South Africa's engineering skills gap. Education and Training, vol.51, no.3, pp. 215-219, 2009.

Hornstein, H., and Guerre, D. D., Bureaucratic organizations are bad for our health. Ivey Business Journal Online, pp. 1-4, 2006.

Iya, S., The Role of Organisational Culture in Promoting Creativity and Innovation: A Review of The Literature, Multidisciplinary International Journal, vol.1,no.1, pp. 9-30, 2005.

Jung, D., Wu, A., and Chow, C., Towards understanding the direct and indirect effects of CEOs' transformational leadership on firm innovation. Te Leadership Quarterly, vol.19, pp. 582-594, 2008.

Khalili, A., Linking transformational leadership, creativity, innovation, and innovation-supportive climate. Management Decision, vol.54, no.9, pp. 2277-2293, 2016.

Maladzhi, R., and Yan, B., Effect of Inspirational and Motivational Leadership on Creativity and Innovation on SME's. Malaysia, IEEE, 2014.

Martins, E., and Terblanche, F., Building organisatinal culture that stimulates creativity and innovation. European Journal of Innovation Management, vol.6, no.1, pp. 64-74, 2003.

Michaelis, B., Stegmaier, R., and Sonntag, K., Shedding light on folowers' innovation implementation behaviour: The role of transformational leadership, commitment to change, and climate for initiative. Journal of Managerial Psychology, vol.25, no.4, pp. 408-429, 2010.

Olawale, F., and Garwe, D., Obstacles to the growth of new SMEs in South Africa: A principal component analysis approach. African Journal of Business Management, vol.4, no.5, pp. 729 – 738, 2010.

Pearce, C. L., and Manz, C. C., Is Shared Leadership the Key to Team Success?. Organizational Dynamics, vol.38, no.3, pp. 234-238, 2009.

Realin, J., The leaderful organization: How to bring out leadership in everyone. San Francisco, Berrett-Koehler Publishers. 2003.

Reiter-Palman, R., and Illies, J., Leadership and Creativity: Understanding leadership from a creative problem-solving perspective. The Leadership Quarterly, vol.15, pp. 55-77, 2004.

Robbins, S. P., Organisational Behaviour: Concepts, Controversies, Aplications. Englewood Cliffs: Prentice-Hall. 1996.

Ryan, J., and Tipu, S., Leasership effects on innovation proensity: A two-factor full range leadership model. Journal of Business Research, vol. 66, pp. 2116-2129, 2013.

Safavi, F., and Tweddell, C.E., Attributes of success in African Management Development Programmes: Concepts and Applications. Journal of Management Development, vol.9, no.6, pp. 50-63, 1990.

Samad, S., The Influence of Innovation and Transformational Leadership on Organizational Performance. Malaysia, Procedia, pp. 486-493, 2012.

Saunders, M., Lewis, P., and Thornhill, A., Research methods for business students. 5 ed. London: Prentice Hall. 2009.

Senior, B., and Fleming, J., *Organisational Change*, London: Prentice Hall. 2006.

Szczepańska-Woszczyna, K., Leadership and organizational culture as the normative influence of top management on employee's behaviour in the innovation process. Poland, Procedia Economics and Finance, pp. 396-402, 2015.

Tybout, R., Manufacturing firms in developing countries: How well do they do, and why? Journal of Economic Literature, vol.38, no.1, pp. 11-44, 2000.

West, M., and Sacramento, C., Creativity and innovation: the role of team and organisational climate. In: M. Mumford, ed. Handbook of Organisational Creativity. London: Academic Press, pp. 359-385, 2012.

© IEOM Society International

Yan, B., Maladzhi, W., and Makinde, O., Creating Innovation Culture through Visionary Leadership in Small Medium Enterprises. Hong Kong, s.n. 2012.
Yidong, T., How Ethical Leadership Influence Employees' Innovative Work Behaviour: A Perspective of Intrinsic Motivation. Journal of Business Ethics, Sep, vol.116, no.1, pp. 441-455, 2012.

Biographies

Pascalis Adams completed his undergraduate studies in electrical engineering at the University of Johannesburg. He obtained his B-tech degree in Electrical Engineering in 2015 at the Tshwane University of Technology. He also holds an NQF level 5 certificate in broadcast engineering. He has 8 years of experience in the telecommunications industry and is a registered member of Engineering Council of South Africa (ECSA). His field of expertise is in satellite communications.

Dr Hannelie Nel is a Senior Lecturer at the Postgraduate School of Engineering Management in the Faculty of Engineering and the Built Environment, University of Johannesburg; and a Visiting Associate Professor at North-West University, South Africa. She holds a Doctorate in Engineering Management with twenty years' experience in both industry and academia. Dr Nel is a Fellow of the Southern African Society for Industrial Engineering and serves on the Board of the Society for Engineering Education.

Professor Annlize Marnewick is a Professor at the Postgraduate School of Engineering Management in the Faculty of Engineering and the Built Environment, University of Johannesburg, where she focuses on the supervision of research masters and doctoral students. Before joining the academia she was involved in industry with a technical record of 15 years in architecture, design and the implementation of system and software engineering projects with specialisation in requirements engineering. She is a registered professional engineer (Pr Eng) with ECSA.

© IEOM Society International