



The Role of Leaders in the Effective Implementation of Transformational Initiatives in
South African Gold Mines

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Abstract

Acting on behalf of the its executive council, the Chamber of Mines of South Africa conducted research into the impediments to improvements to health and safety in the mining industry. The study concluded that there was a need for a transformational change of the mining culture to embed health and safety as part and parcel of production. The study further concluded that the involvement of senior executives and underground mineworkers was critical to the success of the initiative. This was to ensure that the initiative does not end with the people who were running it in the mines.

This study led to the implementation of the MOSH Leading Practice Adoption System which was intended to ensure that the culture of health and safety was embedded in the culture of the mining industry to an extend where mineworkers were perceived, and saw themselves, as part of the decision process specifically on health and safety.

The leaders of the mining industry were critical in creating an environment that would ensure that impediments to the transformational initiative were removed as well as creating incentives for the change initiative.

This research was conducted in 2012 with the objectives of establishing the role played by leaders in the effective implementation of transformational initiatives with a specific focus on the MOSH Leading Practice Adoption System. To establish this qualitative research was conducted with a group of underground mineworkers and mine officials who wer part of the transformational initiative.

The findings of this research, supported the findings of a survey conducted early in the year that the transformational initiative did not achieve the intended results of transforming the behaviours and attitudes of underground mineworkers.

Literature is sparse on transformational initiatives that are industry-wide as the MOSH Leading Practice Adoption System was. Based on Organisational Development and Transformation principles, recommendations are made on how an industry-wide initiative could be successfully implemented.

Keywords

Role of leaders in transformation; MOSH Leading Practice Adoption System; mining industry; transforming organizations; mine safety.

Declaration

I declare that this research project is my own work. It is submitted in partial fulfillment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Jabulani Maphalala

Date

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Appendix 1

Chapter 1: Introduction to the Research Problem

Effective and sustainable transformation in organisations means much more than just doing things differently from how they have been done in the past. Organisational transformation includes change of values, visions and culture towards the adoption of different behaviours and attitudes throughout the entire organisation. To be effective, organisational transformation should start with top management and cascade down throughout the organisation to all employees including those at the lowest level of the organisational hierarchy. Executive leaders shape the character of the organisation+ (Early, 2006, p. 245).

Because organisations are integrated as systems as what happens at one level affects, and often influences, what happens at the levels below, it is critical that the roles to be played by people at various levels of organisations are well clarified. This is particularly so in situations where the impact of the transformation is planned to largely impact on a particular employee category of the organisation. Clarifying the roles of all people and the impact of their actions and behaviours on those in other levels of the organisation leads to the inclusiveness of the transformational initiative rather than it being perceived as the concern of a particular section of the organisation. Inclusiveness creates a sense of being part of the transformational initiative which in turn encourages cooperation in the process (Senge, 2006).

In some situations, the inclusiveness and the roles to be played by all people in an organisation's transformation initiative can be clear while in others it may not be as clear. For example, where the objective of the transformational initiative is to make the organisation operate in a more environmentally friendly manner, the roles to be played by all people in the organisation tend to be more easily understood. However, in situations where the objective of the transformational initiative is perceived to impact a specific category of the workforce, the roles to be played by those outside that category tends to be less clear. It is therefore imperative that in such circumstances, communicating the vision of the initiative and the various roles to be played is robust and invigorated to clarify roles, motivate and encourage inclusive participation in the process.

The role played by leaders of organisations in leading such transformations is critical if they are to succeed. As leaders lead people, the extent to which the transformation initiative is successful depends on the degree to which the organisational culture has changed and in how people behave and think differently following the transformational intervention. Such transformation will be differentiated from compliance by its sustainability beyond the watchful eyes of those in authority where the transformation is related to regulatory compliance.

Pless and Maak (2004) describe an inclusive culture as an organisational environment that allows people with multiple backgrounds, mindsets and ways of thinking to work effectively together and to perform to their highest potential in order to achieve organisational objectives based on sound principles+ (Pless and Maak, 2004, p. 130). They add that in such an environment different voices are respected and heard, diverse viewpoints, perspectives and approaches are valued and everyone is encouraged to make a unique and meaningful contribution+(Pless and Maak, 2004, p. 130).

In situations where people have to depend on each other, in some cases on matters of life and death, an environment of trust is critical. Pless and Maak identify trust as one of the preconditions of an inclusive culture.

In her study on academic performance, Ngcobo (2010) also notes that cultures of successful schools are characterised by common understandings in relation to issues of importance to the community+(Ngcobo, 2010, p. 25).

In addition to the organisational transformation starting with top managers, the commitment of senior executives must be visible to all people in the organisation with communications from credible and accessible sources supporting the initiative. Cummings and Worley (2009, p. 508) suggest the use of external consultants to drive the transformational initiative as externally recruited executives are three times more likely to initiate such change than are existing executives+.

1.1 Background to the Research Problem

In 2008, the Chamber of Mines of South Africa introduced an organisational transformational initiative intended to change the occupational behaviour and attitudes of underground mineworkers towards one where they would work in a manner in which health and safety became part of their working culture rather than focusing only on production. This transformational initiative was called the Mining Industry Occupational Safety and Health (MOSH) Leading Practice Adoption System. The objective was that, by adopting the occupational health and safety culture, therefore making the culture their own rather than following something of external origins, meeting production targets by underground mineworkers would only be acceptable by themselves and their managers if this was attained in a manner that prioritized their health and safety.

This transformational model was developed by the Chamber of Mines with assistance from Decision Partners, a consultancy firm based in Canada with expertise in change management, leadership and behavioural change.

As a voluntary private sector member-based organisation, the role of the Chamber of Mines in this initiative was to identify what was seen as leading practices in health and safety amongst its members and develop processes that would enable these to be adopted by other mining companies to facilitate the widespread adoption throughout the industry. Research conducted by the Chamber of Mines in 2007, with the assistance of Decision Partners revealed that the prevailing occupational culture in the mines manifested itself in behaviours and attitudes that acted as barriers to the adoption and use of technology to improve health and safety in the mines. These behaviours and attitudes also led to a potentially harmful focus on production, often at the expense of healthier and safer working practices.

For the transformational initiative to be successful in changing behaviours and attitudes, it was to be introduced in such a manner that it would lead to enthusiastic adoption by the mining company leaders and their employees, particularly underground mineworkers who were most affected by unhealthy and unsafe working conditions and practices.

The Chamber of Mines was given this task by its Executive Council because of its centrality as an organisation to which they all belonged. The role of the Chamber of Mines was to develop a transformational model for the enthusiastic adoption of technology and the transformation of behaviours and attitudes towards occupational health and safety by mining companies and their employees. The Chamber of Mines was to do this by identifying leading practices from its member companies who perform well on health and safety issues and introduce the leading practices and facilitate their widespread adoption by other mining companies. The Chamber of Mines did not, however, have the power to enforce compliance where this was seen as lacking as the mining companies were independent entities. This left the companies with an option to adopt at their own discretion.

The introduction of the Mining Industry Occupational Safety and Health Leading Practice Adoption was in response to the failure of mining companies to meet the health and safety targets agreed to by the mining industry, the Department of Mineral Resources (then called the Department of Minerals and Energy) and representatives of organized labour at the Mine Health and Safety Council (MHSC) Summit of 2003.

The MHSC is a statutory body established in terms of the Mine Health and Safety Act of 1996 to regulate matters related to health and safety in the mines. The Act was enacted to provide for the protection of the health and safety of employees and other persons at mines+and, inter alia:

- to promote a culture of health and safety;
- to provide for the enforcement of health and safety measures;
- to provide for appropriate systems of employee, employer and state participation in health and safety matters;
- to establish representative tripartite institutions to review legislation, promote health and enhance properly targeted research;
- to provide for effective monitoring systems and inspections, investigations and inquiries to improve health and safety;
- to regulate employers' and employees' duties to identify hazards and eliminate, control and minimise the risk to health and safety; and
- to entrench the right to refuse to work in dangerous conditions.

(Mine Health and Safety Act, 1996).

The MHSC was made up of representatives of organized labor, the Chamber of Mines, representing mining employers and representatives of the Department of Minerals Resources. Part of Section 43 of the Mine Health and Safety Act (1996) stipulates that the MHSC has to arrange and coordinate a tripartite summit whose purpose is to review the state of health and safety in the mines at least every two years (Mine Health and Safety Act, 1996).

For safety, the agreement reached at the 2003, MHSC Summit stated that mining companies would ensure that the number of people killed while on duty in the mines would be reduced by 20 percent per annum over a ten-year period.

When the MHSC agreement was reached in 2003, mine fatality figures for the previous year stood at 290 with the largest contribution being the gold mining sector with 172 people killed in that year (Chamber of Mines, 2012). In the same year, the gold mining industry employed 198 465 people compared to the mining industry figure of 435 628 (Chamber of Mines, 2012). Therefore, the gold mining industry employed 46 percent of the mining workforce and contributed about 60 percent in the number of people killed in the industry. The 20 percent per annum reduction rate of mine deaths was found to be attainable as some mining companies had managed to achieve such results despite operating under similar conditions as their counterparts who performed much worse.

Table 1 outlines the annual figures of people who have been killed in the mines from 1993 to 2002. Industry fatality figures, rather than occupational health statistics, were used because of the accessibility and speed of accessibility of data. Occupational diseases, such as silicosis and noise induced hearing loss occur over time and annual contraction figures are not as easy to ascertain.

Table 1: South African Mine Fatalities 1993 to 2002				
	Gold	Coal	Other	Total
1993	426	90	70	586
1994	371	54	57	482
1995	415	31	107	553
1996	315	45	97	457
1997	277	40	80	397
1998	252	42	72	366
1999	207	28	74	309
2000	175	31	81	285
2001	182	19	87	288
2002	172	20	95	287

Source: Chamber of Mines Facts and Figures (2001, 2008)

In terms of the agreement reached in 2003, the number of people killed in the mines should have been reduced to 184 by the end of 2007. It therefore became clear that the initiatives put in place to reduce mine deaths had not achieved the desired results. This was despite the fact that the leaders of mining companies were sharing information on ways in which health and safety could be improved in the industry. This sharing took place at the meetings of mine managers such as the Association of Mine Managers of South Africa (AMMSA) and South African Colliery Managers Association (SACMA). Furthermore, information was shared within mining professional bodies such as the Southern African Institute of Mining and Metallurgy (SAIMM). By 2007, mining company leaders, on the Executive level were also outspoken about the need to improve health and safety in the industry (MiningMX, 7 June 2007).

The inability to attain the annual safety targets agreed to in 2003 led the Executive Council of the Chamber of Mines to task the Chamber of Mines with finding solutions that would significantly improve health and safety in the mines more quickly.

The investigation undertaken by the Chamber of Mines took the form of a study conducted in 2007 to determine the reasons why, despite the sharing of information on Health and Safety on at least two senior hierarchical levels of the mining industry, that many mines

continued to perform dismally in these areas. Some of the major mining companies had operations in other countries and were able to compare the South African performance with their foreign operations.

In conducting the study, a Chamber of Mines task team, comprised of senior managers in health and safety whose members were nominated from different Chamber-member mining companies worked with Decision Partners. In addition to identifying barriers to the implementation of shared health and safety information, the study was also intended to establish what could be done to expedite the implementation of known health and safety leading practices throughout the industry.

The study revealed that:

- There was a lot of sharing on interventions to improve health and safety in the mines but this shared knowledge was not filtered through to the levels within the hierarchical structures of the mining companies where it could make a difference;
- %ockets of excellence+ existed in the mining history which could, if adopted by other mining companies could assist in improving health and safety;
- There was an existence of what was referred to as the %ot invented here syndrome+ whereby mine employees resisted any interventions that emanated elsewhere, particularly from different mining companies;
- Technological interventions alone were not likely to attain the required results. To be successful, a change in behaviours of leaders on the supervisory level was necessary to assist in creating enabling environments to the underground mineworkers to change their own behaviours and attitudes (Decision Partners, 2007).

It was following the presentation of the results of the study that the executive leaders of the Chamber of Mines member mining companies tasked the Chamber of Mines with establishing the MOSH Leading Practice Adoption System as a pilot project to provide a vehicle for the implementation of the findings of this research. If successful, the Chamber of Mines Learning Hub was to be established to drive the initiative as a unit rather than as a project. The objectives of the MOSH Leading Practice Adoption System were to identify leading practices in health and safety amongst the Chamber of Mines members and to facilitate a transformational process that would change occupational behavior in the mines

from one where mine accidents were considered to be the inevitable outcome of mining activity to one where harm to people was to be considered an exception rather than a norm (Chamber of Mines, 2008). %Zero harm+was adopted as the vision for this initiative. The Focus areas of the MOSH Leading Practice Adoption System were on %Identifying and facilitating the widespread adoption of leading practice in the areas of dust, noise, falls of ground and transport and machinery accidents+(Stewart, 2007, Section 13.2, p.5 para 4).

To achieve this, the MOSH Leading Practice Adoption Team would identify a leading health or safety at a %source mine+, refine the practice and test it at a separate mine following which it would be rolled out for widespread adoption (Steward, 2011).

While there was improvement in safety following these interventions (see table 2), by the end of 2011, the mining industry, as a collective, had failed to meet the annual safety goals set out by the industry in 2003.

Year	Number of Fatalities	Percentage
2002	290	1
2003	269	-7
2004	246	-9
2005	201	-18
2006	200	0
2007	220	10
2008	171	-22
2009	168	-2
2010	128	-24
2011	123	-4

SOURCE: Department of Mineral Resources, 2012

1.2 Purpose and Objectives of the Research Project

This research paper is intended to establish the role played by leaders of mining companies in this transformational initiative. The study focuses on the gold mining sector which was the highest contributor to mine deaths and therefore where success of the initiative would have the greatest impact in reducing overall mine deaths.

The profession of mining requires training in earth sciences related to breaking rocks to extract the minerals contained in them. The research was intended to establish whether these leaders, encumbered by their professional backgrounds, were able to effectively and successfully facilitate the necessary transformational change in mining occupational culture for underground mineworkers to the extent where the behavioural aspect of the MOSH Leading Practice Adoption System was entrenched as part of operations.

1.3 Scope of the Research

Though the MOSH Leading Practice Adoption System was targeted at both health and safety, this study focused on safety as the success of the initiative was easily identified and data more accessible due to the immediacy of its impact. The research was limited to some gold mining companies which were part of the MOSH Leading Practice Adoption System. The gold mining sector was the largest contributor to deaths in the mining industry.

Data collected before the MOSH Leading Practice Adoption System was started in 2008 was used to assess prevailing perceptions at the time as well as on the basis for planning the transformational intervention. The results of this study were used to assess whether the transformation of the culture of health and safety was embedded as part of the production process, and if not, whether the failure to transform the behaviours and attitudes towards health and safety was as a result of the inability to implement the transformational initiative. To determine the role played by the leaders of mining companies to set the tone, motivate, enable and create a sense of urgency would also be examined as this was the single most important aspect of the transformational initiative. Particular attention would be given to whether feedback from the 2007 study was taken into account in implementing the MOSH Leading Practice Adoption System.

During the course of 2012 a survey was conducted amongst officials of mining companies who were involved in the implementation of the system in their companies. The results of this survey, conducted as part of an MBA core course assignment, were also used to assess the views of these mine officials to determine the role played by the leaders if the mining companies in the process.

1.4 The Need for the Research

The South African mining industry is a major contributor to the economy of the country which is largely based on the primary industry sectors. During the last five years, South Africa has moved from being the largest producer of gold in the world to becoming number five after China, the United States, Australia and Russia. While this fall can partially be attributed to lower grades per ton, one of the contributors is loss of productivity due to health and safety related mine closures in terms of section 54 of the Mine Health and Safety Act (1996) which empowers mine inspectors to close mines or sections of mines which they deem as unsafe. Many of these closures occur during investigations following mine deaths. Understanding impediments to a substantive improvement in mine health and safety could lead to greater annual output in the mines as well as the saving of lives due to a reduction in mine deaths.

The negative publicity faced by mining companies, following mine deaths, and the financial implications of operational stoppages of mines perceived to be unsafe and unhealthy by government while investigations on the causes of accidents are underway, provides incentives for leaders of mining companies to ensure that the health and safety of mineworkers is prioritised. It is therefore in the interests of mining companies that accidents leading to loss of life in the mining industry are drastically reduced. The MOSH Leading Practice Adoption System was designed as an industry initiative rather than a company-specific one. This research sought to establish whether an industry-wide transformational initiative was possible.

This problem was selected because it provided an opportunity to establish the critical role played by leaders in successful transformational initiatives in large complex institutions. Identifying the root cause of the failure of the transformational initiative could assist in

finding a solution that would lead to the saving of more lives in the mining industry if it were to be properly implemented.

1.5 Evidence Verifying the Identification of the Problem

By the end of 2011, 123 people were killed while working at South African mines. In accordance with the undertakings made in 2003, this figure should have been 31. Clampitt and Berk (1996) posit that one of the reasons why organisations fail in their change management initiatives was because the methods they used to introduce the changes were not well understood by those implementing them. Could this have been the case in the mining industry? This research sought to answer that question and to establish what the role played by leaders was to ensure that transformation did take place.

Chapter 2: Literature Review

2.1 Introduction

This review focuses on the theory related to the effectiveness of leaders in organisational transformation initiatives and the role they play in the transformation of their organisations. In addressing these issues, literature looking into why some transformation initiatives are successful, while others fail, is also reviewed as part of the research study into the role played by mining company leaders in the initiative to transform the behaviours and attitudes of underground mineworkers to prioritise safer mining occupational practices in the process of their work.

This review will look into:

- The need for transformation in organisations;
- The role of leaders in transformational initiatives;
- Criteria for successful transformational initiatives

2.2. The Need for Transformation in Organisations

2.2.1 The Impact of Political and Regulatory Discontinuities on Organisations

A change in the environment in which an organisation operates can force such an organisation to redefine its role to re-align itself with the business realities around it if it is to survive. Such a change can be a result of market forces or political pressures. Cummings and Worley (2009) suggest that organisations are not likely to undertake transformational changes unless they, inter alia, have reasons good enough for them to do so. Such reasons may be a result of industrial disruptions such as legal, political, economic, and technological conditions that disrupt the competitiveness of the industry (Cummings and Worley, 2009). In South Africa, the democratic elections that took place in 1994 were one such disruption necessitating a change in the relations between government and business, and business and its employees, with very far reaching implications that transformed the environments in which businesses operated in the country.

2.2.2 Consequence of Regulatory Discontinuities on Organisational Dynamics

Bornman (1999) points out that in addition to changing the personal life of each individual, a period of big changes could also have a great impact on relations between individuals and the groups they belong to as well as on the relations between different groups. Bornman (1999) says that such changes create social identity crises whereby orthodox assumptions of identity are challenged. Challenges to orthodox assumptions disrupt the mental models that keep societies together.

2.2.3 The Need for Organisational Responses to External Discontinuities

Within an organisational setting, the disruption of the mental models that keep structures within organizations manifested itself in the expectations of black workers and the fears of white males who might have felt threatened by a perceived lack of future opportunities on the basis of their social identities (Wöcke and Sutherland, 2008).

Booyesen (2007) says the tensions and conflicts between diverse social identity groups are common in many countries in the world and lead to major disruptive factors. These identity driven conflicts are embedded in the articulation of, and the threats or frustrations to people's collective need for dignity, recognition, safety, control, purpose, and efficacy+ (Booyesen, 2007, p. 6).

Because of cultural biases, members of different groups compare their group with other groups, with a favourable bias toward the group to which they belong (positive discrimination), and competing with groups to which they do not belong+ (Booyesen, 2007, p. 4). This is further compounded by lack of understanding of issues influencing the position of other groups. Triandis (2006) suggests that a person who is familiar with one cultural system tends to be ethnocentric and consider different norms alien to their culture as abnormal.

The positive discrimination factor that Booyesen (2007) refers to leads to perceptions of other norms as being abnormal and as being inferior. Triandis (2006) asserts that a lot of training is needed for people to overcome feelings of cultural superiority.

While tensions arising out of the cultural biases of different groups founded on ethnic or cultural chauvinism could be negative, they create the basis for categorizations and labeling. Categories and labels are widely utilized by individuals in organisational settings to help structure and simplify the social environment, primarily for reasons of understanding, consensus, and control+(Ashforth and Humphrey, 1997, p. 43).

Within this context, organizations needed to adjust and realign internal employee/employee and employer/employee dynamics in new psychological contracts. Psychological contracts are promises and expressed, or implied, that deal with exchange agreements between employer and employee+ with each party contributing to the relationship (Wöcke and Sutherland, 2008, p. 529). It can, however be added that for organisational and the development of a uniform organisational culture, employers should facilitate the development of positive psychological contracts to breakdown ethnic and cultural chauvinism.

These external events necessitate strategic transformational changes in organizations. Nadler and Tushman (1989, p. 196) call strategic changes brought about by external events as relative changes. The disruptive changes that took place in South Africa after 1994 required transformative initiatives in organizations.

2.3. The Role of Leaders in Transformational Initiatives

The role of leaders in a transformational initiative is critical. While critical, organisational transformation initiatives are not easy to implement. Nadler and Tushman (1989, p.197) say that organizational transformation will be more difficult when implemented in complex organizations. Because of their difficulty, they should start with the chief executive and the executive team if they are to be sustainable (Stevens 2011). Barret (2006) concedes that organisational transformation begins with the personal transformation of the leader ò the chief executive officer or the leader of the organization+ who must be willing and committed to his or her own personal transformation to change the culture+ of the organisation (Barret, 2006, p. 87). The personal transformation of the leader means that the leader must "qualitatively" perceive, think and behave differently from how he or she

did before the transformational initiative was started (Cummings and Worley, 1996, P. 505).

This is because the chief executive, with the assistance of his or her executive team, shapes the culture and character of the organization. (Early, 2006). Executive leaders are therefore vital for dealing with structural impediments to innovation, such as poorly designed measurement and reward systems (Senge, 2006).

In driving a transformational initiative, the chief executive is likely to experience resistance, both covert and overt, as most people would not understand the need for change and could be comfortable in the way things are. Changes would disrupt their comfort zones which could have been beneficial to them (Stevens, 2011, Barret, 2006). The chief executive therefore needs to help the executive team understand how transformation would help them (Stevens, 2011). Such an understanding would ensure that the whole executive team's mental models on transformation are aligned and the team is able to work together to remove any structural impediments to innovation. It is this alignment which ensures that the top executives of the organisation form a close-knit group that is of key importance to all aspects of that organisation's operations and therefore provides the necessary support for the chief executive (Early, 2006, p. 248).

Balogun (2001) notes the importance of first transforming people to be responsive to changes as such changes could be disruptive to their work. He suggests that this could be done through communication, education, training and support in relation to the intended changes.

Senge (2006), identifies three levels of organisational leaders necessary for a successful organisational transformation. These are the executive leaders who must shape the overall environment and take ownership of the initiative; the line leaders who must integrate the initiatives into daily work; and the network leaders who must help and spread new ideas and practices throughout the organisation (Senge, 2006).

The importance of committed leaders to the successful and sustainable implementation of transformation (Found and Harvey, 2007) is supported by Casida and Parker (2011) whose study established that leadership directly impacted performance and effectiveness.

This is because, as Found and Harvey (2007) point out, that leadership denotes a relationship between a leader and those following whereby the leader should have certain competencies which followers do not have. One such competency, critical to leadership, is the ability to influence people so that those people are willing to follow the directives of their leaders. Without willing followers, the person leading the transformation would not accomplish anything (Found and Harvey, 2007).

To lead, leaders of organisations have to shape the overall environment; chart the path of where the organisation should go; develop the values and vision for the organisation; and take ownership of organisational initiatives, and communicate their values, vision and strategies within the organisation. In addition, they have to ensure that these are integrated into the daily work of their employees (Senge, 2006). Critical to this is that leaders should prioritise getting the right people on the right jobs and the wrong ones off (Collins 2001). Collins (2001) says one of the first things that the level 5 leaders whom he studied did when they assumed their positions was to attend to people first by getting the right people on the bus, moving the wrong people off, ushering the right people to the right seats, and then figuring out where to drive the bus+ (Collins, 2001, p. 6). It is the right people at the right jobs who would communicate the purpose, values and vision of the organisation and cascade them down to the bottom of the occupational hierarchy.

Within the context of an organisational transformation initiative, spreading new ideas and practices demands organisation-wide communication. The vision must be communicated to employees with sound and rational reasoning so that staff will ardently want to move the organisation . transform it if need be ÷ +(Lundquist, 2002, p. 38). This is the influence referred to by Found and Harvey (2007).

The criticalness of communication and the ability to influence people is highlighted by (Frisina and Frisina, 2011, p. 30) who point out that People do things better when they are connected emotionally to the mission and vision of the organisation and to its leadership+ as people never buy into their leaders before they have faith in the organisation's mission and vision. Eden, Page and Ackerman (2011) suggest that communicating a company's vision is a social conversation that if not implemented and managed effectively will fail because it would not result in changing the way people think and act.

Found and Harvey (2007) differentiate between successful and sustainable change. They say that while effective leadership and senior management commitment are vital in both cases, successful change depends on leaders who communicate a clear and unambiguous reason for change, who can convince people of the need to change and get employees to buy into the process (Found and Harvey, 2007, p. 43). They argue that sustainable change requires leaders who walk the talk by living the vision, and measuring and monitoring progress while being seen demonstrating the values on the shop-floor.

Leaders who had committed themselves into the new culture play a vital role in depicting the intended and desired behaviours and in embedding them within the organisation's culture. For them to play a similarly vital role in the transformation process, they should have the leadership skills critical to leading the transformation process; communicating the vision of the transformation; and successfully integrating this vision into daily work. Chen, Beck and Amos (2005) and Frisina and Frisina (2011) point out that leaders without the necessary skills are likely to fail. Literature on leadership is, however, proliferated with references to different leadership styles. Some of these styles are referred to in table 3.

Table 3: Characterisation of Leadership Styles	
Leadership Style	Characteristic
Transactional	Controlling and organizing (Tomlinson, 2012). It refers to the exchange process based on the fulfillment of contractual obligations in which the leader typically sets objectives and monitors and controls outcomes (Casida and Parker, 2011).
Autocratic	Disempowering (Tomlinson, 2012)
Transformational	Involves idealized influence, inspirational motivation, intellectual stimulation and individualized consideration (Found and Harvey, 2007; Ohman, 2000). A transformational leader exhibits vision, charisma, risk taking, out-of-the box thinking and an aptitude for motivating others while acting as a role model and mentor and refers to a leader's ability to influence others towards achieving extraordinary goals by changing the followers' beliefs, values and needs; (Casida and Parker (2011)
Distributed or collective	Bottom-up, grass-roots approach that includes the development and enhancement of skills and knowledge of all those in an organisation (Tomlinson, 2012)
Devolved and Dispersed leadership	Refers to spreading the responsibilities of leadership across the organisation where leaders can be developed at every level, rather than having just one leader at the top of an organisation (Found and Harvey, 2007)
Adaptive	Where leadership is adaptive to local conditions and continual improvements (Found and Harvey, 2007)
Laissez-faire	Refers to the absence of a purposeful interaction between the leader and the follower (Casida and Parker, 2011). Absence of leadership.

These leadership styles are, however behaviours for managing organisations and are not necessarily competencies for leading organisational transformation.

2.4 Criteria for Successful Transformational Change

2.4.1 Critical Leadership Competencies for Effective Transformation

A transformational initiative is by definition about changing something from one form to another. In addition to believing in the initiative, having gone through the transformational process themselves, organizational leaders driving the process must possess the skills necessary for facilitating the process throughout the organization.

However, such an organisation might still have to meet its obligations within a non-static external environment. Because of this, those leading the transformation should have the temperaments to stick to the transformation objectives and processes, possibly at the cost of foregoing opportunities perceived to have a potential to derail the transformation process, while keeping the organisation functioning effectively. Such a situation demands utilising different leadership behaviours which may be demanded by differing circumstances as the qualities needed in a leader depend to a large extent on the situation that the leader and followers are operating in, and a leader has to be able to diagnose the situation and adapt his or her style accordingly (Found and Harvey, 2007, p. 41). A degree of flexibility in adopting different styles of management must be appropriate for the task at hand (Cawelti, 1979).

A transformational initiative has a number of strategic stages. Kotter (1996) identifies eight steps which he considers as critical in leading sustainable change. These are:

1. Establishing a sense of urgency;
2. Creating the guiding coalition;
3. Developing a vision and strategy;
4. Communicating the change vision;
5. Empowering broad-based action;
6. Getting short-term wins;
7. Consolidating gains and producing more change; and
8. Anchoring new approaches in the culture.

Central to leadership competencies necessary for ensuring an effective transformation is the presence of behavioural skills in a leader. These are skills associated with relating to people. Frisina and Frisina (2011) point out that many successful leaders end up failing to achieve their goals due to their lack of behavioural skills rather than technical skills. They suggest that due to the strategically oriented role of senior leadership, success is dependent on these behavioural skills. Saville (2010) notes that people could react negatively to organisational change if it is not properly coordinated.

Buller (1984) asserts that managers tend to focus more on analytical tools for addressing technical requirements of businesses than on the basic needs of employees such as training and development. He adds that an organisation's structures, people and processes should be properly aligned to the company strategy to effect a successful change management process.

It is these behavioural skills that enable leaders to influence people to connect and embrace the mission and vision of the organisation and to its leadership. Behavioural skills also enable leaders to become concerned for the people they seek to join their transformational initiative and seek to understand what their fundamental needs and desires are as part of the transformation Stevens (2011). Behavioural skills include the capacity for listening and understanding so as to get insights into the fundamental mental models of their executives and staff regarding the transformation process. Stevens (2011) sees this as critical if people are to commit and take ownership of the transformation process. In order to ensure that the transformation satisfies people's needs and that the driver of the transformational initiative was perceived to have helped create an understanding of how the transformational vision satisfied those needs (Stevens, 2011).

One of the behavioural skills critical to a transformational initiative is the transformational leadership competency. Boga and Ensari (2009) and Tomlinson (2012) suggest that leaders who can exhibit transformational leadership are able to motivate and inspire their teams. Transformational leadership is characterised by charisma, intellectual stimulation, individualised consideration which attracts followers by instilling confidence, institutionalising long-term solutions, and creating enthusiasm in sharing common goals and vision (Boga and Ensari, 2009, p. 237).

A transformational leadership competency is, though critical in this process, one of the competencies a leader in the process of transforming an organization should have. Found and Harvey (2007) define two strategic transformational stages where different styles of leadership could be used: the *what* and *why* stage requiring transformational leadership where goals and policies are clearly defined; and the *how* and *who* decision-taking stage where responsibilities are allocating and strategies for goal attainment are developed. They suggest that the style of leadership at this stage should be *dispersed* and adaptive leadership.

These stages, which loosely correspond to Kotter's first two steps, suggest that different leadership *styles* can be applied to attain a successful transformational initiative. The suggestion is further supported by Casida and Parker (2011) who point out that an aspect of transactional leadership called *contingent reward* adds more value to the transformational leadership objectives.

Bryant (2003) notes the technology that led to the development of the Apple Macintosh computer came from Xerox but Xerox leaders lacked transactional leadership culture which would have had the structures and systems in place to capture the knowledge output of its employees. He says Steve Jobs of Apple Computers was able to harness this knowledge due to his exhibition of both transactional and transformational leadership qualities. Ngcobo (2010) notes that her study, which identified people with the greatest influence in two schools she studied, exhibited adaptive leadership styles that depicted both transformational. She found that no single leadership style worked all the time.

Cummings and Worley (2009) are skeptical about the ability of organisational executives to effect transformational initiatives. They suggest that externally recruited executives *are* three times more likely to initiate a transformational initiative as *existing* executives may lack the talent, energy, and commitment to undertake these tasks (Cummings and Worley, 2009, 508). One of the talents that externally recruited executives with Organisational Development and Transformation expertise in the ability to diagnose systems. *Diagnosis* is the process of understanding systems' current functioning and involves collecting information about current operations, analysing data and drawing conclusions for potential change and improvement. When done well, it points the

organisation toward a set of appropriate intervention activities that will improve organisational effectiveness+(Cummings and Worley, 2008, p. 12).

At the core of a sustainable transformational initiative is the embedding of the new culture. The failure to have the culture embedded in the organization is tantamount to the failure of the initiative as transformation means changing from one form to another different form. Embedding a new culture implies the destruction of the old one and is an essential competency of a leader, particularly one engaged in a transformational initiative (Ngcobo, 2010). Gerstner's (2002) experiences attest to the difficulties of changing organizational culture, particularly in an organization with many people. He says that the hardest part of his transformational initiative was changing the organizational culture including people's mindsets and instincts.

Clampitt and Berk (1996) identify three stages in the implementation of change initiatives, %contextual analysis+, %audience analysis+, %strategic design+ and %tactical preparation+. They argue that %the contextual and audience analysis naturally leads to the development of a strategy+(Clampitt and Berk, 1996, p. 8) which should look at the correct forms of communication, messages as well as channels of communications.

They suggest that %audience analysis+ looks into who the different groups in the organisation are and %how they will be impacted by the change+and %contextual analysis+ as %an attempt to anticipate possible resistance points+(Clampitt and Berk, 1996, p. 8). They suggest that information gathered from these two processes would assist in formulating strategy.

Senge (2006), suggests that while the executive leaders must shape the overall environment and take ownership of the initiative, line leaders must integrate the initiatives into daily work while network leaders must help and spread new ideas and practices throughout the organisation (Senge, 2006). This is to ensure that the transformational initiative is communicated widely and gets embedded within the organisation. To facilitate this process, both line and network leaders must acquire the set of skills and competencies that would enable them to communicate persuasively to encourage

behavioural change. These competencies include the capacity for listening and understanding (Stevens, 2011).

In addition to developing abilities to listen to people, in order to understand their concerns, line leadership, tasked with cascading the vision and ethos of the transformation throughout the organization should develop systems thinking abilities to ensure that they do not focus only on those issues they are measured and rewarded on (Altman, Y, 1998).

The challenge of implementing organisational transformation initiatives becomes exponentially difficult when implemented over an extended period and involves many people as Gerstner's (2002) experiences indicate. Chen, Beck and Amos (2005) suggest that, in such situations, a leader with insufficient leadership training might become exhausted in trying to achieve organisational goals. In turn, the leader might burn out, and dissatisfaction among subordinates might increase (Chen, Beck and Amos, 2005, p. 375).

2.4.2 Roles to be Played at Different Levels of Leadership

Of the 8 steps for effective transformation of organisations identified by Kotter (1996) the first three steps: establishing a sense of urgency; creating the guiding coalition; and developing a vision and strategy can largely be ascribed to the top leadership though they have a role to play throughout the rest of the steps. Role modeling and embodying the values and aspirations of the organisation ascribes credibility to the process (Senge, 2006). Tomlinson (2012) on the other hand, adds that the role of modeling inspires followers and develops a collective identity. A collective identity is an important part of the formation of a shared culture which a transformational initiative is intended to create.

Kotter's (1996) fourth step communicating the change vision applies to both the senior executives, line and network leaders who should integrate, test the efficacy of the change initiatives, credibly and rationally deepen conversations and build a common sense of organizational destiny (Senge, 2006 and Lundquist, 2002).

Once communications has cascaded throughout the organisation, it is easier for all staff members to be part of the process, particularly if they have been empowered in playing their various roles. Throughout the process, the role of the executive leaders is paramount

in living the vision of the transformational initiative. However, they should also create clear agreements with those who are expected to lead various parts of the change (Maurer, 2005, p.31) and deal with structural impediments to innovation which may include misaligned measurement and reward systems (Senge, 2006).

2.4.3 Types of Successful Transformation Leaders

Maurer (2005) says the last phase of a change project is making sure that the change is sustained. In a situation such as mining where the failure of the initiative is literally a matter of someone's life or death, the sustainability of a transformational initiative is critical and could be compromised by declaring victory too soon and neglecting to anchor changes firmly in the corporate culture (Kotter, 1996). This could result in the reversal of the process particularly where the process was seen as an act of compliance to rules and regulations. For an organisational transformation initiative to be firmly anchored in the organisational culture, people must no longer do what you inspect and not what you expect, as Gerstner (2002) points out, but do what is expected in alignment with the embedded culture. Such a culture should be systematic in that organisational systems, including career paths and performance measurements should be aligned to the transformational objectives.

Literature on leadership (Casida and Parker (2011), Tomlinson (2012), and Found and Harvey (2007)) is rich with the topic of leadership styles. Such literature portrays leadership styles as leadership characteristics rather than as leadership behaviours. Casida and Parker (2011) point out that in their study on leadership styles and outcomes, new nurses tend to be more comfortable in using transactional leadership style while expert nurses use transformational leadership regularly and are more adept at switching between the two given the situation. They, however, add that experience and continuing leadership training influences transformational leadership. This alludes to the developmental nature of leadership which Barret (2006), in discussing the full-spectrum consciousness leader, says could be learned through education, experience and training, as stated by Casida and Parker (2011).

Leading an organisation going through a transition differs from leading one which is not in transition. Leading an organisation going through a transformational process with one

leadership style is unlikely to achieve the required results as the process essentially transforms the organisation into a different entity with a different culture and behaviour patterns. The transformational process requires leadership behaviours that are receptive to learning how to adapt and generate.

Altman (1998, p. 45) defines adaptive learning as %concerned with developing capabilities to manage new situations by making improvements and amendments+ whereas %generative learning focuses on developing new perspectives, options, possibilities and definitions+.

Barret (2006) suggests that successful leaders operate from %full-spectrum consciousness+which enables them to respond appropriately to challenges and threats.

This finding is further corroborated by Hofman, Hofman and Guldemond (2001) who suggest that %contingency theory approaches the effectiveness of organisations from a contextual point of view, and claims that the effectiveness of an organisation depends upon the fit of internal structural factors of an organisation and situational factors+ (Hofman, Hofman and Guldemond, 2001, p. 115).

Table 3 outlines the different levels and their attributes which are necessary to attain %full spectrum consciousness+.

Table 4: Barret's seven levels of leadership consciousness.		
Level	Motivation	Leadership
7.	Service	Wisdom/visionary: service to humanity and the planet
6.	Making a difference	Mentor/partner: strategic alliances and partnerships, mentoring, and coaching
5.	Internal Cohesion	Integrator/inspirer: Developing a strong cohesive culture
4.	Transformation	Facilitator/influencer: Adaptability, continuous renewal, learning
3.	Self-esteem	Manager/organizer: High-performance systems and processes
2.	Relationship	Relationship manager/Communicator: Relationships that support the organisation
1.	Survival	Crisis Director/Accountant: Pursuit of profit and shareholder value.
Recreated from Barret's (2006) seven levels of leadership consciousness Table 7-1		

Collins (2001) five leadership levels which he tables as attributes that could take a company from good to great and achieve sustained greatness compare favorably with Barret's seven levels. He notes that a level five leader requires the capabilities of all the five levels of leadership to lead effectively.

Table 5: Collinsq(2001) Five leadership Levels

Level	Definition	Attribute
5	Executive	Builds enduring greatness through a paradoxical blend of personal humility and professional will
4	Effective Leader	Catalyzes commitment to add vigorous pursuit of a clear and compelling vision stimulating higher performance standards
3	Competent Manager	Organizes people and resources toward the effective and efficient pursuit of the predetermined objectives
2	Contributing Team member	Contributes individual capabilities to the achievement of a group objectives and works effectively with others in a group setting
1	Highly Capable individual	Makes productive contributions through talent, knowledge, and good work habits.

2.5 Conclusion

The role played by leaders of organisations going through transformational processes is critical in ensuring that the right people are at the right jobs doing the right jobs (Collins, 2001). Leaders of organizations cannot do everything in the process of transforming their organizations. However, there are critical roles that they have to play to facilitate a successful and sustainable transformational process. One of such critical roles is influencing people. Found and Harvey put this very succinctly, %leadership is the property of the relationship between leaders and followers, not simply that of the leader+; (Found and Harvey, 2007, p.41) it %implies the ability to influence people and, therefore, leadership need followers who are willing to comply, as without these, a leader can do nothing+(Found and Harvey, 2007, p.40).

Influencing people, however, would not be enough if operational obstacles which makes it difficult to comply with the expressed organizational objectives exists. Senge (2006) suggests that executive leaders should also deal with structural impediments to innovation, such as poorly designed measurement and reward systems.

Organisations are functioning entities which are influenced by both internal and external disruptions such as changing political, economical, social, technological, environmental or legal circumstances (Cummings and Worley, 2009). These disruptions have a major impact on social groupings in such organizations and affect the relationships within such entities. Both Wöcke and Sutherland (2008) and Booyesen (2007) point out that South Africa, in the aftermath of the official end of apartheid in 1994, experienced similar disruptions which demanded the creation of shared institutional values and cultures in organizations if those organisations were to function as single systems rather than as enclaves of diverse groupings operating within a single entity.

Such a change demanded radical changes in how members (of organizations) perceive, think, and behave at work+ (Cummings and Worley, 2009, p. 506). To be a success, therefore, a transformational initiative should result in members of organizations perceiving, thinking and behaving differently from how they did before the transformational initiative.

It would be difficult, if not impossible for a leader of an organization to have the skills and the time to carry on his or her normal operational duties and lead a successful transformational initiative at the same time. If influencing people is one of the most important functions of leading people, leaders engaged in transformational initiative must show concern for the people they seek to join their transformational initiative and seek to understand what their fundamental needs and desires are as part of the transformation (Stevens, 2011).

This requires behavioural skills as many successful leaders end up failing to achieve their goals due to their lack of such skills rather than technical ones (Frisina and Frisina, 2011). Such behavioural skills should include professionalism and humility (Collins (2001). Barret says fully developed leaders have vision and wisdom which is complemented by the desire to achieve beyond personal gain and depict the need to be of service to humanity. Such attributes enable leaders to accept their need to seek and accept external assistance where it is needed.

Cummings and Worley (2009) suggest that due to time constraints and shortage of professional skills to effect a successful transformational change, outsiders may be

recruited to lead the change. By definition, outsiders are from outside and therefore may not get the internal reception to get the buy in necessary for a transformational change (Found and Harvey, 2007). This role sits with leaders of the organization who must, among other things, communicate the vision, align reward and institutional constraints, and transform their own behaviours to give the initiative the internal credibility it needs for success.

While external consultants, where they are utilized, can give the initiative the professional boost it needs for success, the critical role of internal leaders and managers will facilitate the process. These are building blocks to ensure that the transformation leads to people within the organization "qualitatively" perceiving, thinking and behaving differently from how they did before the transformational initiative was started (Cummings and Worley, 1996, P. 505).

Organisational change is about doing things differently in an organization while transformational change means changing from one form to another different form. It is difficult, within a short period of time, to be certain that a change that is observed is a transformational change or just doing things differently as it is difficult to see how people think differently. Organisational transformation includes change of values, visions and the culture of the organisation towards the adoption of different behaviours and attitudes. (Early, 2006, p. 245) points out that organisational transformation should start with top management and cascade throughout the organisation to all employees as executive leaders shape the character of the organisation+ (Early, 2006). The sustainable transformation, therefore, can only be determined on the basis of cultural transformation of the organization as a whole and this could only be determined over time.

Chapter 3: Research questions

Introduction

That there is a direct link between the involvement of the leaders of organisations to the success of new initiatives, particularly those intended to transform organizations is covered extensively by literature. For a transformational initiative to be a success, such involvement should include the removal of any structural impediments to the transformational initiative (Senge, 2006).

The Chamber of MinesqMOSH Leading Practice Adoption System was a transformational initiative in which an external consulting firm was used to assist the process. The initiative was intended for implementation into the operations of existing mining companies rather than being developed specifically for the mines implementing the initiative. In addition, the MOSH Leading Practice Adoption System was premised on changing the occupational behaviours and attitudes of specific categories of mine employees in the process of carrying out task which had a potential to cause specific harmful effects.

Given that the transformational know-how for the effective implementation of the initiative largely resided at the Chamber of Mines while mine officials, who were to implement the initiative at the mines, were provided with an instruction manual on how to implement the Chamber of Mines developed transformational model, it is posited here that the degree of success of the transformational initiative would be limited where the leaders of the gold mining companies did not have the transformational skills or expertise to implement the initiative other than what was contained within the manual.

3.1 Purpose of the Research

The purpose of this research is to establish what the role of leaders in the gold mining companies played to facilitate the effective implementation of the MOSH Leading practice Adoption System and whether the role they played was successful in transforming the behaviours and attitudes of underground mineworkers to an extend where safe working practices became embedded in their occupational culture.

3.2 Research Questions and Propositions

This research study looked into the role played by mining company leaders in the gold sector in facilitating the implementation of the Chamber of Mines transformational initiative named the MOSH Leading Practice Adoption in their mines. It sought to establish whether the initiative achieved the results of transforming the occupational behaviours and attitudes of underground mineworkers to ensure that safer and healthier working methods were embedded within their occupational culture. To establish this, the research sought answers to the following questions:

1. To what extent had the culture of health and safety become entrenched in the industry as part of the production process?
2. To what extent have the leaders of mining companies both on the executive and operational level, implemented facilitative changes to provide incentives for the eager adoption of the intended behaviours and attitudes? and
3. Had awareness about the health and safety transformational Initiative reached all the relevant levels?

This was conducted with the proposition that, while the leaders of the mining companies supported and financed the implementation of the MOSH Leading Practice Adoption System, the transformational initiative was unlikely to attain sustainable transformation in individual mines because:

- It was externally driven by the Chamber of Mines rather than individual mining companies;
- Mine managers were accountable to their chief executives for their operations and not to the Chamber of Mines;
- The skills necessary for the transformation resided with the Chamber of Mines which was largely out of sight of the implementation areas; and
- The focus of the initiative was on individual occupational behaviours and attitudes related to eliminating harmful effects in specific tasks rather than a holistic transformation of behaviours.

Chapter 4: Research Methodology

This chapter outlines the approach adopted in this research project and why this was the case. Focus will be made to the method used, the definition of the unit of analysis, the population size and sampling method as well as the research instrument used and the will provide details of how data was collected and the process of analysis. The limitations of this research will be discussed in closing.

4.1 Objectives of the Research

This research study was intended to determine the role of leaders in transformational initiatives with a particular focus on how the leaders of gold mining companies in South Africa assisted in facilitating a transformation of behaviours and attitudes of underground mineworkers so that the underground mineworkers attitudes towards their work would prioritize their health and safety in the conduct of their occupations.

The literature review highlighted the imperative role that leaders of organizations, at various levels, were to play in ensuring that not only did behaviours change but attitudes also changed through the creation of an enabling environment, facilitating transformation by removing impediments, including their own behaviours in the implementation and the development of a new occupational culture through the embedment of the transformational behaviours.

4.2 Research Process

This study was conducted through in-depth semi-structured interviews. As a once-off study, taking place during a specific period, it was a cross sectional study which Zikmund (2000) describes as a snapshot of the current situation where data is collected at a single point in time. The research is qualitative in that it looked into qualities instead of quantities (Zikmund, 2000, p. 133).

4.3 Population

Saunders and Lewis (2012, p.132) define population as the complete set of group members. The population of this research was employees of mining companies who were members of the Chamber of Mines of South Africa participating in the MOSH Leading Practice Adoption System initiative during the years 2008 to 2011.

Interviews for this research were conducted with a sample of underground mineworkers, officials of mining companies who were exposed to the MOSH Leading practice Adoption System, officials of the Chamber of Mines involved in the process, some of whom were Adoption Team Managers.

However, research on amongst officials of mining companies who were exposed to the MOSH Leading practice Adoption System, officials of the Chamber of Mines involved in the process, some of whom were Adoption Team Managers.

The data for this research study was gathered from mine officials, current and former adoption team managers, and underground mineworkers.

Underground mineworkers came from three one area whereas mine officials who had participated in the MOSH Leading Practice Adoption Syem came from different mines in different mining regions. The MOSH leading Practice Adoption System team members worked with different mines in all commodities and therefore had a broad perspective of how the system was being implemented.

4.4 Sampling

There were two groups of strata used for this research. One was the officials of the Chamber of Mines who were involved in the MOSH Leading Practice Adoption System and mine officials who were, at some stage, involved in the system. For this strata, of population subgroup (Sauders and Lewis, 2012) interviewees were selected on the basis of their experiences and the positions they held to get expert information from them. Eight interviews were conducted with this sub-group. The views of these officials provided a high level perception given that they were involved across the mining industry covering all

commodities where the initiative was implemented. A simple random sampling process, described by Zikmund (2000) as a sampling method where every unit in the population has an equal and known chance of being selected, was used to select interviewees for the underground mineworker strata at the mine. Seven of these were interviewed.

4.5 Data Gathering Process and Analysis Approach

The tool used for this research was a semi-structured interview schedule. A semi-structured interview schedule provides a guide for questions but provides a leeway for the researcher to deviate from the structure of the questionnaire in order to probe for clarification. This is in contrast to a structured interview schedule which imposes a limit on allowable responses (Zikmund, 2000). The nature of the semi-structured interview schedule provided the researcher with the flexibility to ask relevant questions to each of the two population stratas as well as asking probing questions to minimize response biases. Zikmund identifies four categories of response bias: acquiescence bias, extremity bias, interviewer bias, and social, desirability bias (Zikmund, 2000). Care was taken to avoid interviewer bias based on the basis of the researcher's experience in conducting focused direct-enquiry interviews.

Interviews were conducted one at a time and ranged between 30 minutes to an hour. For the mine officials and the Adoption Team Managers, audio recordings were made in addition to notes being taken. Following advice that some mine workers might not be comfortable with the audio recording of the interviews, only notes were taken for this category of interviewees. While most of the interviews were conducted face to face, one interview was taken over the audio recorded. In all cases, interviewees were probed for further details where their responses needed to be substantiated,

The analysis of the results of the research were analysed according to the different stratas to assess the different perceptions on the degree and depth of the transformational initiative. Notes were collated and captured on a spreadsheet for analysis of trends and themes. Responses emanating from the discussions, while relevant to the research but not specific to any question were captured as comments in the spreadsheet. Given the number of interviews, only one person analysed the data and thereby limited inconsistencies.

One of the interviews was used to test the flow of the questions as well as to determine the interview approach process.

4.6 Secondary data

In 2007, when the MOSH Leading Practice Adoption System was implemented, Decision Partners (2007) conducted 31 semi-structured interviews by telephone in 6 mining companies as part of diagnostic exercise to establish what impediments to improving health and safety in the mines were and how this could be removed. Cummings and Worley (2009, p. 87) describe diagnosis as a process of understanding a system's current functioning. It involves collecting pertinent information about current operations, analysing those data, and drawing conclusions for potential change and improvement. Five of these were of occupational health and safety group executives in head offices and 26 were leaders in the mines.

This data was to be used to determine what the mental models of mine officials were at the time of implementing the MOSH Leading Practice System and whether the lessons learned at that exercise were used to guide the implementation of the MOSH Leading Practice System.

Additionally, a likert scale survey was conducted by the researcher amongst 29 mining company officials, involved in the MOSH Leading Practice Adoption system some of whom were members of the MOSH Communities of Practice for Adoption (COPAs), on their perceptions of the current impact of the system on:

- The management of people;
- Organizational structures mining;
- How well does management communicated MOSH information;
- How management communicated with employees on MOSH;
- How they rated the impact of MOSH on decreasing management focus on productivity;
- The current impact of MOSH on operational planning in the mining industry;
- The current impact of MOSH on changing management attitudes towards health and safety; and

- The current impact of MOSH on strategic planning;
- How they rated the current impact of MOSH on the image of Mining; and
- How they rated the current impact of MOSH on the business environment of Mining.

COPA members were employees of mining companies who were responsible for the widespread adoption of the leading practice being introduced. According to Stewart, a COPA was made up of:

key persons responsible for adoption of the practice at mines, to facilitate and assist each other in successfully adopting the leading practice at their mine. In addition to its facilitation role, the COPA has the potential to continuously energise the adoption process, and ultimately, to enable the peer group to bring about continuous improvement of the leading practice in question+(Stewart, 2007, Section 1.1 p. 9).

This secondary data was used to inform the development of the interview schedules.

4.7 Research Limitations

4.7.1 Limitation on the number of interviewees

It was previously anticipated that underground mineworkers in three different mines would be interviewed as part of the research to get a spread of perceptions. However, the research was conducted at the beginning of the unprecedented wide-spread strikes that affected many mines in the country including gold mines. As a result of this, mine managers, some of whom had previously agreed to provide access to their mines for the interviews, withdrew their permission. The reason given by mine management was that tensions were already high and such a research study would exacerbate already volatile situations. Consequently, part of this research was conducted at one mine immediately before the wide-spread strikes took place.

4.7.2 Views of Leaders at the Mines

Also as a result of the widespread unprecedented strikes in the mining industry, interviews with officials at the mines who were not associated with the MOSH Leading Practice Adoption System were not interviewed.

4.7.3 Culture Transformation Initiative

In 2008, the Chamber of Mines, organized labour and the Department of Mineral Resources signed an agreement for a culture transformation initiative. This initiative did not form part of this study as it was not aimed at mineworkers themselves but at their leaders to change the culture on the mining industry which would act as a basis for improved relations between mine leaders and mineworkers.

Chapter 5: Research Results

Introduction

This chapter presents the results obtained from data collected in the interviews amongst mineworkers, mine officials and officials of the Chamber of Mines involved in the MOSH Leading Practice Adoption System. Details of the data collection methods used as well as the analysis are presented in the previous chapter dealing with this topic.

The open-ended questions were designed to provide interviewee perceptions which would assist in determining answers to the research questions. Given that the purpose of the research was to determine perceptions that would indicate the degree to which the culture of health and safety was developed in the gold mining industry, interviewees were asked a number of questions which would provide answers to one question at a time. The probing aspect of open-ended interview process assisted to add more substance to the responses to the research questions.

5.1 Research Question 1

To what extent had the culture of health and safety become entrenched in the industry as part of the production process?

Outlining his experiences in implementing a transformational initiative, Gerstner (2002) says that the hardest part was changing the organizational culture including people's mindsets and instincts. Changing organizational culture, people's mindsets and instincts implies the destruction of the old culture (Ngcobo, 2010). The objective of the MOSH Leading Practice Adoption System was the destruction of occupational cultures that led to exposure to harm such as prioritizing productivity over safer working methods.

To get answers to this question, interviewees were asked a number of different questions which were related to establishing their behaviour and attitudes had been transformed to prioritise occupational health and safety behaviours in the mines as part of their daily activities.

This question was also influenced by the findings of the 2007 Chamber of Mines research conducted by Decision Partners (2007) which indicated that respondents at that time had

identified the involvement of workers in culture transformation initiative as one of the imperatives for the success of the transformational process. To establish the extent to which workers were involved in the day-to-day activities of the company in areas related to their work and in the process of safety, they were asked a series of questions ranging from whether they contributed suggestions related to their work and whether these were taken into account. This was aimed specifically at the mineworkers.

Responses to the question on whether mineworkers contributed any ideas into how to improve their work or safety, one claimed that they were given space for contribution and this was well received whereas others indicated that the mine culture was generally top-down with instructions coming from above to be carried out by those in the lower levels. **Some** pointed out that they were listened to though their contributions were only taken if they were in line with the thinking of their team leader or shift boss. One respondent commented that:

When the miner is under pressure from the shift boss, he did not listen to anyone.

One of the objectives of the MOSH Leading Practice Adoption System was that productivity should not happen at the cost of safety and health. Most of the interviewees responded that they met their targets in production and some even claimed that they exceeded them. Interviewees were prompted to explain how their productivity was measured to verify that they met and even exceeded their targets. All of them claimed that they did not know as the measurement was done by the Surveying Department which shared the information only with the miner and the Shift boss who in turn did not tell them.

One of the interviewees expressed suspicion that sometimes the shift boss, who had other sections reporting to him, under-represented their production to make up the numbers in other sections that may have underperformed. Pless and Maak assert that the establishment of trust is one of the preconditions of an inclusive culture.

Most mining companies claim on their websites that health and safety was important to the company and with some indicating that it formed part of their culture or values (Harmony

(2012), Goldfields (2012) and AngloGold Ashanti (2012). A former Adoption Team Manager said in his company, safety was always the first thing on their agenda.

“In our company, care for people is shown through leadership. We say that no one gets to a mine to get injured. Safety features first. Employees can stop work if the workplace is not safe. We have communications throughout the organisation (on this)+

For something that is proclaimed to be important to the company, it should be top of mind to its employees on the list of the top important issues in mining and even to them personally. For safety to be top of mind is also indicative of the entrenchment of such culture within the organisation.

Asked what were the top five issues important in mining today, safety for five of the eight officials interviewed whereas only two of the underground mineworkers cited safety as their first priority. It shared the position with health. When asked whether their superiors would think the same, some indicated that the superiors would put production first. One mineworker commented that:

“First thing is safety. Safety everywhere. Safety first, wherever there are danger signs beware and comply+

For the MOSH Adoption System Managers, all mentioned safety as one of the important issues in mining while productivity and social plans came in second in terms of mentions. This was consistent with their occupations as drivers of the MOSH Leading Practice Adoption System. As one former MOSH Adoption Team Managers it:

“I think if we look at financial survival is a critical one. We’re living in a time where economic woes are many, there’s a massive squeeze on global problems, markets. So that is one of it. The second one is the safety performance. And these are not listed in order of priority, the five of them I think carry equal... so there’s safety and health performance is another one. I think then we have social challenges in the South African context. And social challenges, there a number I can think of+

This interview took place at the time the widespread mining strikes were starting to spread. Asked why he mentioned safety first, one of the Adoption Team Managers responded that:

%safety is a serious issue. Companies are supposed to care for their people. These are pressing issues and could lead to instability as a result of work stoppages and loss of revenue+

Loss of revenue and productivity emerged in a number of responses.

At the time the research was conducted, the MOSH Leading practice Adoption System had been in place for about five years. As the most commonly shared programme throughout the South African Mining Industry, it should by then have been entrenched in the vocabulary of health and safety in the industry. Respondents were asked on what process of managing health and safety in their mine as well as what the most important information about health and safety was.

While some mentioned %safety first+ others did not know. One mentioned the company's own initiative, For mine crew members, the only source of information on safety was the %Monday morning+ meetings. While few respondents claimed to be involved in the safety initiatives, none of the mineworkers interviewed knew what the MOSH Leading Practice Adoption System was.

The MOSH Leading Practice Adoption System's Falls of Ground Leading Practice was %the entry examination and making safe process+ whose prerequisite was the all mineworkers must enter an area, exam in together and sign off on whether it was safe to work or not (Stewart, 2007, Section 16.1, p.1).

Asked about how the crew started its shift, one respondent said:

%Everyday, members of the team enter the work areas with the team leader and search. After searching, we meet again at the meeting place number 2 and make plans on making safe and sign the declaration. If most of us think the place is safe to work and only one, disagrees, majority rules+

This was contrary to the stipulations of the Mine health and Safety Act whose stipulations included the entrenchment of the right to refuse to work in dangerous condition (Mine Health and Safety Act, 1996).

A response to this question from another mine worker was that:

On Mondays we meet at the waiting place from the cage and talk about work and safety and dangers. We discuss the need to work together and look after each other. Monday is safety meeting day. After that we go in to work. Other days we don't meet and just go in and the miner gives work instructions. No one goes first to check if it is safe. You check on your own. The miner comes in later with the book to sign next to your number that you have checked. There is pressure to sign the book that the working area is safe.

Work processes should be uniform throughout an organization. This response suggests that the miner's actions were contrary to legal stipulations. Line leaders, as Senge (2006) points out must integrate the initiatives into daily work while network leaders must help spread new ideas and practices throughout the organisation. It does not seem that this was the case on this incident.

To most crew member interviewees, the most important person on safety issues was the safety representative who was a member of the union. Section one of the Mine Health and Safety Act makes provision for employee participation in health and safety issues through health and safety representatives and the health and safety committees at the mines. In accordance with the stipulations of the Act, safety representatives are chosen by workers amongst themselves. This Safety Representative reports to the union's full time representative and the company appointed safety officer who together report to the company-wide Chief Safety Officer.

Adoption Team members' view was that the mine's departments of health and safety were mainly responsible for safety and that everyone was supposed to be involved in weekly safety meetings with their views receiving appropriate attention. According to one

respondent, %Strategically, it is the Senior General Manager who was driving safety, with the Chief Safety Officer, being responsible+

On the question of who embodied the spirit of MOSH, other than the Chamber of Mines officials, the names cited were those of two senior mining company chief executives and the president of a trade union.

Another interesting outcome of the interviews was that none of the crew members interviewed knew what %zero harm+was. However, some of the Adoption Team members said they had known about %zero harm+for almost ten years. Asked to describe what it meant to them, the responses were very similar, indicating a shared understanding. This knowledge did not seem to have reached the underground mineworkers.

All Adoption Team members interviewed indicated that they had good relationships with the mines they worked with. The degree of understanding and penetration at this level was very high. The fact at this level, there was clearly communication taking place. In response to a question on this issue, one of the Adoption Team members commented:

%In the work I've done the relationship has been fantastic. As we speak, tomorrow I'm driving to a SACMA, meeting somewhere in Limpopo, where they've requested we come and share with them the work that we've been doing or what they've done on this cultural transformation framework. So the support is there, I've been working wonderfully with various structures like the AMSA (Association of Mine Managers of South Africa), that's one structure representing managers in the mining industry, SACMA (South African Colliery Managers Association), I just told you about it, and CEOs themselves. My colleague here tends to attend these bi-monthly meetings like your gold producers meetings, your MCCs (Members' Coordinating Committee . a Chamber of Mines Committee) where really, some of these issues are debated and discussed there, and the collaboration of your CEO in terms of support is also really sought there and CEOs are doing their bit in their respective companies to ensure that this is not just a pipe dream, that we really implement what we committed ourselves to+

This was to be expected as the Chamber of Mines touch-point with mining companies was at this level. The degree of contact with the mine leadership was seen by the Adoption Team managers as the reason why the number of fatalities had declined in the mines over the years. In response to the question on whether the culture of safety had improved or not in the last four years, the decline in the number of fatalities was cited as proof. One respondent noted that numbers don't lie. People are now conscious about safety. It is now affecting bonuses.

According to underground mineworkers interviewed, the mine had two bonus schemes: one was related to productivity and the other of Lost Time Injury Free shifts which rewarded employees where no work was lost due to injuries.

In addition to the general support on the senior level categories, relationships seems to have worked very well between the MOSH Leading Practice System implementers and mine leaders. All but one of the Adoption Team managers referred to the value of personal relationships in giving him access to mine leadership forums where he could talk about the MOSH Leading Practice Adoption System.

The MOSH Leading Practice System was both about adopting technologies that would assist in saving lives as well as to influence a change in behaviours and attitudes. The behavioural changes were through the behavioural change initiative. However, in response to the question on what companies should take into considerations in addition to the MOSH Leading Practice Adoption System, one of the respondents noted:

Look, the other things that should be included or maybe they are there and they need to be spelt out explicitly, I would say workforce education or training around issues of legislation, occupational health and safety legislation. Particularly the right to know not to work in a dangerous area or even to say don't rush getting your bonuses team because your boss says do so. There's work to be done around that. If not that, maybe just understand why would workers bypass, and I think that would also lead to a lot of leadership related things like we're doing this maybe because our leaders were telling us this or that. Or maybe we are not getting enough money, we think that by doing this

we will therefore be able to supplement our wages. So workers voices are important. The question is how do we tap into it. At the end of the day with all these initiatives we are trying to make a difference to that worker at the rock face. So I think we have fantastic initiatives, they're so great. The reception of those, how they have been received, how they have been lived by the worker at the coal face is critically important.

Another interviewee suggested that companies needed to:

Understand their workforce's mental models. They should interview them to understand their mental models. Many companies don't grasp this. Important to have plans to address behaviours to implement MOSH. Only a few are doing this and they are not doing it correctly. There is a need for mindset changes in the mines. We believe that technology can solve issues. That is the type of mentality that technology can work without consulting people.

Asked whether he shared this information with the people he worked with, his response was that understanding the workforce thinking and impediments to healthier and safer working behaviours was one of the key strategic points for next year. This was despite the fact that behavioural changes were an intrinsic aspect of the MOSH Leading Practice System from the beginning

Almost all Adoption Team members cited behavioural communications as what companies should implement.

5.2 Research Question 2

To what extent have the leaders of mining companies both on the executive and operational level, implemented facilitative changes to provide incentives for the eager adoption of the intended behaviours and attitudes?

In discussing the reasons why strategies fail, Gerstner (2002) says people do what you inspect and not what you expect. By ensuring that people were measured against the stipulated transformational objectives is one way of avoiding confusion on the prioritization of transformational objectives and other operational imperatives on which employees are

rewarded for. Senge (2006) suggests that executive leaders should deal with structural impediments to innovation, such as poorly designed measurement and reward systems.

To establish whether the leaders of mining companies had facilitated changes that would provide incentives for their employees to adopt the MOSH Leading Practice Adoption System transformational culture, interviewees were asked what incentive schemes were in place at the mines. Because this question was specific to the degree to which underground mineworkers eagerly adopted safer and healthier working methods, this question was directed to them.

Respondents identified two bonus schemes: the production bonus and the Lost Time Injury Free days bonus. They indicated that the production bonus was paid monthly subject to meeting production targets. Lost time injury free days bonus was paid after four months if the team had not lost time due to an injury of a team member.

Lost time injury free shifts featured prominently in the mining companies' annual reports whereas there was hardly any mention of the MOSH Leading Practice System though some of the terminology of the initiative was used. Of the three major gold mining company reports read by the researcher, only one company mentioned MOSH in its annual report section dealing with health and safety. This mention was specific to two leading practices rather than as a transformational initiative. MOSH was mentioned twice in the report.

Underground mineworkers asked indicated that the production bonus was higher than the lost time injury free days bonus and was clearly their preferred bonus scheme. However, mineworkers were also interested in getting the injury free days bonus. One of the respondents said mineworkers concealed injuries if they thought these were not serious.

One of the underground mineworker interviewees claimed to have been cut by a rusted metal while working underground and had concealed the injury which he had considered to be minor at the time. However, the wound deteriorated and he had to be hospitalized. At the hospital he claimed that he was injured at home to avoid being penalized for concealing the injury. The reason he gave for concealing the injury was that he did not want to lose the lost time injury free bonus. While he had benefited from the shared lost

time injury free bonus, he had actually put himself at risk given that underground metal tends to be rusty due to the toxicity of acid mine water and heat. His lying about where he was injured ruled him out of any potential compensation should the injury have had long lasting effects. He added that:

“If you are injured you hide the injury so that you and your crew can get the voucher. I hid my injury to get voucher but the injury did not heal and had to go to hospital and lied that I was injured at home+”

This assertion was supported by another mineworker who said:

“Most time injury free are false. People hide their injuries so that they can get the lost time injury free bonus. If we met our production targets, how can we do that without injuries working in a mine. People are also afraid of telling the truth about these things+”

5.3 Research Question 3

Had awareness about the health and safety transformational Initiative reached all the relevant levels?

Clampitt and Berk (1996) suggest that the development of communication strategies should be based on appropriate “contextual and audience analysis+”. Found and Harvey (2007) argue that successful change depends on the commitment of senior management and on “leaders who communicate a clear and unambiguous reason for change, who can convince people of the need to change and get employees to buy into the process+”.

The success of the health and safety transformational Initiative in the mines, MOSH Leading Practice Adoption System, depended on the adoption of the intended attitudinal and behavioural changes by the underground mineworkers. To do this, they needed to know, understand, see the benefits of the intended practices, and be persuaded to adopt them.

In all the interviews with underground mineworkers, all respondents did not know about the MOSH Leading Practice Adoption System. Only one referred to a system being used to improve health and safety in the mine and none had heard of the MOSH Leading Practice Adoption System. In addition, none of the crew members knew what the term ~~zero~~ zero harm+was.

Chapter 6: Discussion of Results

6.1 Introduction

The power exercised by unions both at the work place and on government, through their influence on political leadership meant that, to survive, business organisations had to adapt to the new socio-political reality. While government can legislate desired behaviours, they cannot legislate the transformation of organisations, particularly as they can only monitor compliance, as opposed to attitudes. Transformation occurs as a response to external pressures threatening the sustainability of the organisation while operating in a particular manner or can be a proactive strategy to adapt to change before being forced to do so (Cummings and Worley, 2009).

Chapter 6 discusses the findings of the research outlined in Chapter 5 to establish the degree to which they answer the research questions in Chapter 3.

6.1. Research question 1:

To what extent had the culture of health, safety and caring become entrenched in the industry as part of the production process;

The MOSH Leading Practice System as stated in Chapter 1, was established to change the behaviours and attitudes of underground mineworkers to ensure that they worked in a safer and healthier manner. To be able to do this, they were to be encouraged to put safety over and above productivity. The role of mine management in the process was to create an enabling environment by identifying and correcting any of their own practices which impeded the adoption of the intended behaviours by the underground mineworkers who were at the bottom of the pyramid of the mining hierarchy (Senge, 2006).

Therefore, though the ultimate objective of the MOSH Leading Practice Adoption System was the transformation of the behaviours of underground mineworkers, who were the category of the workforce most affected by accidents and occupational diseases, to be successful, line managers had to transform their own behaviours which were the antecedents of the behaviours and attitudes of underground mineworkers to create an

enabling environment. Research was conducted amongst leaders and managers of the mining industry to establish any actual and potential barriers to the adoption of the intended behaviours and attitudes of underground mineworkers in order to develop strategies for the removal of those impediments. The objective was to develop a new culture of working underground which would be underpinned by the prioritization of zero harm mentality. Zero harm was described as ~~an~~ never-ending journey towards the ultimate target of zero fatalities, injuries and diseases+ (MOSH Handbook, section 3.2 p1).

The impetus to do a step change in the improvement of health and safety was given by the realization that technology alone was not enough to ensure that mining companies would meet the health and safety targets set for 2013. Underground mineworkers had to be part of the safety initiatives rather than just recipients of instructions from above. Their behaviours and attitudes had to be vicibly transformed so that they could contribute in health and safety initiatives at the mines. The effectiveness of the MOSH Leading Practice Adoption System could not be measured by the reduction in the fatality figures but by the degree of demonstrable behavioural and attitudinal changes.

To ensure that this was attained, line managers were to enable the process of transformation to the intended behaviours through the visible transformation of their own behaviours.

The first research question sought to establish the extent to which this envisaged culture of health and safety had become entrenched individual mines as part of the production process since the establishment of the MOSH Leading practice Adoption System. To be entrenched, it had to be an intrinsic part of the working behaviours of underground mineworkers who were the most affected. It was envisaged that this behavioural transformation would improve health and safety to an extent that the reduction of fatal accidents would meet the targets set in 2003.

Looking at the number of people who had died while working underground since the inception of the MOSH Leading Practice System, there has definitely been a decrease.

In recognition of this reduction in the number of fatalities in the mines, one of the interviewees suggested that the decline was due to the improvement of the culture of safety as numbers don't lie. However, the improvement could as well be attributed to a combination of compliance to legal requirements, the enforcement of existing rules, regulations and instructions of mine management, rather than as a change in the occupational health and safety culture of the underground mine workers, which was the objective of the whole exercise. Another reason for the decline could have been the introduction of new technology and the use of different mining methods.

What progress we have made during C2010, appears to be partly due to our increased focus on the management of seismicity . including centralised blasting and reconditioning. In addition, we have placed further emphasis on the proactive maintenance of infrastructure, as well as the engineering out of risk and increased underground mechanization+ (Goldfields (2012), Safe Production Management, p. 1, Para 4).

Compliance is related to conformity with existing rules and regulations and in most cases, to the most minimum standards of such stipulations. Laws are often a minimal standard, sometimes representing compromise in their enactment and subject to judicial review and interpretation+(Bartels, Robert, January, 1967)

By complying with the Act, mining companies could avoid punishment which often comes in the form of mine closures as stipulated by Section 54 of the Act which also empowers Mines Inspectors to instruct mine managers to halt operations at a mine, or sections of the mine if the inspector believes that any occurrence, practice or condition at a mine endangers or may endanger the health or safety of any person at the mine+(Mine Health and Safety Act (1996), Section 54.1). It is therefore in the interests of mines that they comply with the requirements of the Mine Health and Safety Act.

Ensuring that rules and regulations of the company are adhered to is part of the role of line managers which the leaders of the companies encourage through relevant reward systems. The stipulations of the Act are translated into operational rules and regulations of the mine to ensure that mineworkers comply with the law as stated in the Act. Innovation critical to health and safety for underground mine workers can only emanate from those

closest to the situation with the encouragement of those higher up in the institutional hierarchy. This is where culture and values comes in. Culture ensures that behaviours are embedded in the organizational processes.

Within an environment where meeting and exceeding production targets had larger bonus payments than the no lost time injury free bonus as was the case at the mine visited by the researcher, it is inevitable that underground mineworkers would seek to meet those targets even at the expense of cutting corners if they were confident that such behaviour would be tolerated by their leaders. Following rules works very well when someone is there to police compliance. However when such a policing figure is out of sight, the potential to bend rules exists, particularly where it is related to tangible benefits. The bonuses in the mines are applicable to underground line managers as well. It can therefore be convincingly argued that line managers would also be interested in getting the production bonuses. It is for this reason that %adoption+ of leading practices was chosen over mere compliance as it would negate the need for people to comply only when they are being policed.

The research which was conducted before the MOSH Leading Practice Adoption System was initiated was also used in this study to establish the basis for the development of plans to implement the MOSH Leading Practice Adopt System. It is on the basis of the findings of this research that the System was formulated. The findings suggested the need for:

- “ Changing the culture of the industry from being top-down instructional to a more participatory one where employees could freely make inputs. This was also related to the Mine Health and Safety Act which provided underground mineworkers with the right to refuse doing dangerous work;
- “ The right to refuse dangerous work also meant that health and safety should be prioritised over productivity; and that
- “ There should be widespread communication that not only told mineworkers what to do but what their role in it was and why what was being done was done (DECISION, PARTNERS, 2007),

To be deemed to have been successful, the MOSH Leading Practice Adoption System should, therefore, have successfully changed the attitudes and behaviours of underground mineworkers towards health and safety. For these attitudes and behaviours to have changed, the occupational health and safety culture in the mines would have changed to an extent that

- “ mineworkers would have been able to contribute towards their work and health and safety programmes;
- “ Mineworkers would be comfortable with refusing to work in what they considered dangerous situations without fear of retributions; and
- “ Due to widespread communications on health and safety, health and safety would be on the list of what they considered to be the top five important issues in mining.

Additionally, because the whole transformational initiative was the MOSH Leading Practice System, both mine workers and officials would be aware of both what MOSH Leading Practice Adoption System and %zero harm+ were. The results of the research as outlined in Chapter five point out that those for whom the MOSH Leading Practice Adoption System was intended to benefit were unaware of the initiative and did not know what %zero harm+ was. The initiative does not seem to have reached the bottom of the hierarchical pyramid in the mines.

Furthermore, research conducted in February 2012 as part of an MBA core course at the Gordon Institute of Business Science reflecting the responses of 29 mine officials indicated that not all mine officials were convinced that mining companies had done enough to facilitate the implementation of safer and healthier working practices. Their responses were (using the highest and second highest scores):

- 12 said the impact of MOSH on the management of people was %minimum+ and 10 said it %changed perceptions+;
- 16 said MOSH had %some+ impact on organizational structures in mining while seven said there was %none+;
- 12 said management communicated MOSH information %slightly well+ and 10 said %not at all well+;

- 14 said management communicated with employees on MOSH %lightly well+ whereas %not at all well+;
- 19 said the impact of MOSH on decreasing management focus on productivity was %minimal+and six said %high+;
- 10 each said %a lot+and %minimal+on their view of the current impact of MOSH on operational planning in the mining industry;
- 14 said the current impact of MOSH on changing management attitudes towards health and safety was %a lot+and seven said %a whole lot+;
- 13 said the current impact of MOSH on strategic planning was %minimal+while 10 said %a lot+;
- 14 said the current impact of MOSH on the image of Mining was noticeable while there were 7 each for those who said %minimal+and %a lot+; and
- 15 said the current impact of MOSH on the business environment of Mining was %high+and 11 said it was %minimal+.

Conclusion

It was of interest that one of the interviewees said that %companies are supposed to care for their people+. The use of the phrase %supposed to care+suggests that he may have not been convinced that companies actually %caared+ enough about their employees at the mines. After four years of implementation, the MOSH Leading Practice Adoption System should be entrenched in the mining industry if its implementation was effective. According to one of the Adoption Team Managers:

%We can't carry on the way we've been doing things whereby workers still have this fear of exercising their right to withdraw working in or refuse dangerous work. So changing the way we do things around here, changing our culture, is very important; creating safer and healthier work places, meaningful work places, and especially now where we have women working in the industry+.

The research results, as outlined in Chapter 5, point out that the MOSH Leading Practice Adoption System was well known amongst the higher echelons of the mine management.

However to be a success, the culture of health, safety and caring should have become entrenched in the participating organisations as part of the production process. It was also important that this culture was entrenched amongst underground mineworkers. This was not the case. Underground mineworkers interviewed by the researcher did not feel confident to contribute to issues of safety and in some cases, were compelled to go with the flow, even to the detriment of their own health because the loss of bonuses was at stake.

Clampitt and Berk (1996) point out that strategies formulated in the implementation of change initiatives, are based on the contextual and audience analysis to ensure that correct forms of communication, messages as well as channels of communications are used. The fact that underground mineworkers interviewed by the researcher were not even aware of what the MOSH Leading Practice Adoption System was or what was meant by %zero harm+ suggests that the leaders in the mining companies had not communicated the transformational initiatives well.

The messages simply did not reach the people for whom they were intended for and therefore there was no behavioural and attitudinal transformation amongst mineworkers. The drop in the number of fatalities could therefore be mainly attributed to compliance, the enforcement of and the introduction of safer mining methods mentioned by the mining companies in their reports

6.2 Research Question 2.

To what extent have the leaders implemented facilitative changes to incentivise the eager adoption of the culture of transformation

Introduction

In addition to shaping the overall environment of the organisation, Senge (2006) says organisational leaders are vital for dealing with structural impediments to innovation. Such impediments include poorly designed measurement and reward systems. For the eager adoption of the culture of transformation, it was important that the leaders of mining companies should deal with issues that discourage the practice of ignoring safety

practices such as the pursuit of production bonuses and those associated with no reportable injuries.

The removal of such impediments could only be made by the leaders of mining companies who had the power and the responsibility to do so. The research conducted by Decision Partners for the Chamber of Mines in 2007 had identified the pursuit of production bonuses as one of the reasons why underground mineworkers took short cuts.

In the research conducted in 2007, as referred to in Chapter 1, some interviewees specifically mentioned the loss of bonuses and/or safety rewards as they relied on the production bonuses to maintain their standards of living. According to the findings of the research 75% of those in the Labor cohort talked about financial impacts on workers, while only 46% of those in the Management cohort raised this topic.

The second research question sought to identify the degree to which leaders had provided incentives, such as the replacement of incentives that encouraged behaviours contrary to the enhancement of occupational health and safety.

What incentives should facilitate changes

For the eager adoption of the health and safety transformational culture, it was important that the structuring of the reward systems throughout the line management value chain should have been aimed at ensuring alignment with the health and safety objectives. Line managers should have been rewarded for encouraging behaviours congruent to the adoption of a health and safety culture within the whole organization. In that way line managers should have provided incentives to promote a safe and healthy working culture without being concerned on its impact on their own bottom lines as well as that of their reportees. Mining companies should also have developed alternative incentives.

In addition to direct financial rewards, demonstration of an understanding, knowledge and promotion of safe working practices should have formed part of the core criteria for upward mobility within organisations. The research found no evidence of this.

To be appointed as an Adoption Team Manager, candidates had to apply from their own mining companies to be seconded to the Chamber of Mines. According to one of the respondents, there were no career incentives upon return to the companies. Therefore there no additional incentives for them to join MOSH if they perceived the potential for upward mobility in their organizations. They also faced the risk of finding thatn they no longer had positions on their return to their organizations. Therefore the Chamber of Mines accepted available people for the position rather than actively choosing what they would consider the best people for the job.

Failure to make health and safety related jobs attractive meant that there were no incentives for top talent to pursue careers in that field. It was therefore not easy for the Chamber of MinesqLeading Practice Adoption System to get right people for the right jobs (Collins, 2001).

On the company level where the MOSH Leading Practice Adoption System was to be implemented, the System depended entirely on the COPAs for implementation.

Complaints from **some of the** MOSH Leading Practice Adoption Team Managers were that there was not enough enthusiasm from members of the COPAs to implement the leading practices as these were voluntary for the mines. It is possible that had there been incentives and encouragement from their senior managers for the implementation, the enthusiasm levels would have been higher.

If, as Gerstner (2002) points out, ~~pe~~ people do what you inspect and not what you expect+, clearly line managers would have ensured that the vision of health and safety was effectively communicated and encouraged as part of the production process had the leaders of the mining companies ~~waspected+~~ their performance on this task. This was further highlighted in the research conducted prior to the implementation of the MOSH Leading Practice Adoption System by both managers and unskilled workers that leaders must ~~w~~alk the talk+.

In presenting the research results, the study pointed out that

É Many interviewees (including most Corporate) stressed the importance of actively demonstrating commitment and engagement . **Practice what you preach+** and **Walk the talk+**(Decision Partners, 2007).

É They believed that **walking the talk+**was necessary to understand and address the needs of employees at all levels, as well as to get buy-in and earn trust. A few interviewees saw this as an opportunity to improve buy-in among people.

É

A few mentioned the need for clear and consistent messages and actions and the need to avoid mixed messages.

- ó **If** the leadership doesn't walk the talk and show people that you mean business and do what you say you're going to do constantly and continuously, you can't expect change to take place effectively+ (Decision Partners, 2007).
- ó **If** you don't continually communicate and show your commitment to the other guys, then you can't expect belief from the workers. You have to practice what you preach and preach what you practice+ (Decision Partners, 2007).
- ó **Do** not say one thing and do another. That is absolutely disastrous, because it shows that the person is not really serious about what they are doing, and then pushing somebody else's idea and not his own. That is typically what happens when you have to do something that is not yours. You will tell people to do something but not be convinced yourself+ (Decision Partners, 2007).

There were, therefore, no incentives to facilitate the changes necessary to transform the behaviours and attitudes of underground mineworkers. It is equally clear, by the active pursuit of existing incentives by underground mineworkers that had alternative incentives been in place, such incentives would have negated the need for concealing injuries in order to receive the injury related bonus.

While union representatives acting as safety representatives were aware of the right to refuse doing dangerous work, as stipulated in the Mine Health and Safety Act (Mine

Health and Safety Act, 1996) they were equally affected by the production bonus incentives.

What incentives were in place

What leaders of organisations reward often reflect what they consider to be important as pointed out by Gerstner (2002). This logic suggests, and on the basis of the research findings outlined in Chapter 5, that the leaders of mining companies were more intent on maintaining and improving productivity than on facilitating changes that would lead to the adoption of the health and safety transformational culture.

The Lost Time Injury Free bonus was paid after four months if the team had not lost time due to an injury of one of the team members. While this might seem like an incentive to encourage crew members to be more careful to avoid injuries that could lead to their not working, this bonus had provided incentives for, at least one underground mineworker to conceal an injury he mistakenly considered minor in order to benefit from the bonus. It is plausible, given the peer pressure of the majority that the bonus could also act as an incentive for other members of the team to pressurize one of their members to hide such an injury.

One of the things that kept coming up from interviewees when asked what was the most important thing in mining to them was more money. Interestingly, the same issue was mentioned in the study conducted in 2007.

"Loss of production, which impacts on our bonus and safety rewards." "Damage to material and, most dear to our hearts, we lose production. Production to us means bonus and if the panel is closed for days the mine loses money and we also lose money." (Decision Partners, 2007)

If money was that important to them, it is logical that they would strive to meet their production targets so that they could earn the bonuses associated with exceeding them. Many of those interviewed said they always met their production targets. Four of the six who responded to this question mentioned money as one of the most important things to them.

Conclusion

From the interviewees and the interview results, it was clear that the incentives implemented did not facilitate changes that would encourage enthusiasm in adopting the intended culture of transformation in the mines. Some of the MOSH Leading Practice Adoption Team Managers cited, as some of their frustrations, the low levels of enthusiasm by COPA members to undertake the necessary changes that would ensure that the transformational initiatives intended to make underground mineworkers adopt safer and healthier working practices were well implemented.

With the production bonus schemes still in place and the Lost Time Injury Free bonus continuing to reward the low reporting of injuries, the changes necessary to provide incentives for the eager adoption of the culture of transformation were lacking. According to one of the interviewees:

Lost time injury free records are false. People hide their injuries so that they can get the lost time injury free bonus. If we met our production targets, how can we do that without injuries working in a mine. People are also afraid of telling the truth about these things.

There was also no special encouragement for those participating in the MOSH Leading Practice Adoption System to go beyond their normal occupations related to health or safety as well as lack of upward mobility incentives related to health and safety performance.

Had transformation taken place to the extent that impediments to the adoption of a health and safety transformational culture were removed, fear of being victimized would also have been removed. Of interest is that all the underground mineworkers interviewed by the researcher refused to be recorded electronically.

6.4 Research Question 3. Had awareness about the health and safety transformational Initiative reached all the relevant levels?

Introduction

Of the 8 steps for effective transformation of organisations identified by Kotter (1996) step number four addresses the need to communicate the change vision. It can be argued that the first three steps: Establish a sense of urgency; Create the Guiding Coalition; and Develop a Vision and Strategy are only applicable to the top leaders of organisations as part of the planning process and the building of the high level alignment of the vision and strategy for the transformational initiative.

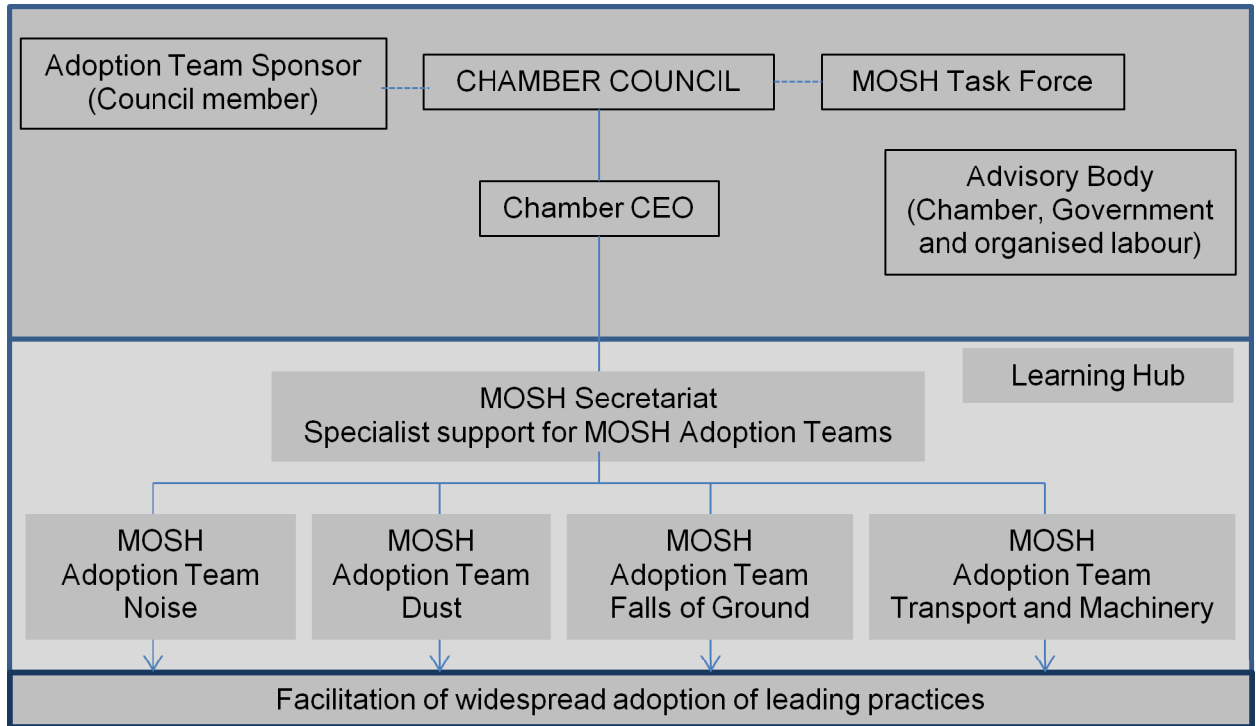
It is this support structure, aligned with the vision and strategy in Kotter's third step that positions the Chief Executive to communicate the change vision. Kotter's following steps, starting with the fourth, can be interpreted as being directed at the rest of the organisation going through a transformational initiative. Research question number 3, 'Had awareness about the health and safety transformational Initiative reached all the relevant levels?' addresses the question of whether the appropriate levels were made aware of the MOSH Leading Practice Adoption System transformational initiative. For the MOSH Leading Practice Adoption System, the most appropriate level would be the underground mineworker for whom the initiative was intended to benefit.

Communication with Leaders

The Chamber of Mines annual report indicates that the Council of the Chamber of Mines is made up of some of the leaders of its members, particularly its largest members. The report further notes that the source of the Chamber's revenues are contributions from its members. If members are funding the activities of the Chamber of Mines, of which the MOSH Leading Practice Adoption System is one, then it could be safely concluded that they were fully aware of what the MOSH Leading Practice Adoption System was and what it was doing.

It is clear that the top decision-making body of the Chamber of Mines, which is its Council, plays an oversight role on the activities of the Chamber of Mines Learning Hub which houses the MOSH Leading Practice Adoption System. Therefore, the Chamber's Council should be aware of the initiative.

The contact with the mining companies for implementation was done through the Adoption Team Managers. In terms of the MOSH Leading Practice Adoption Guidelines, this contact was through the Communities of Practice for Adoption (COPAs) formed to ensure that mining companies adopted the leading practices as identified by the MOSH Leading Practice Adoption System.



According to one respondent, the levels of participation in COPAs differs between the safety side, where COPA members tend to be more educated with rock engineering degrees while those of health tend to be made up more of occupational. As occupational hygienists tend to be graded lower than rock engineers, it can safely be said that the lowest touch-point at a mine for the Adoption Team members is at this level.

Communication with Underground Mineworkers

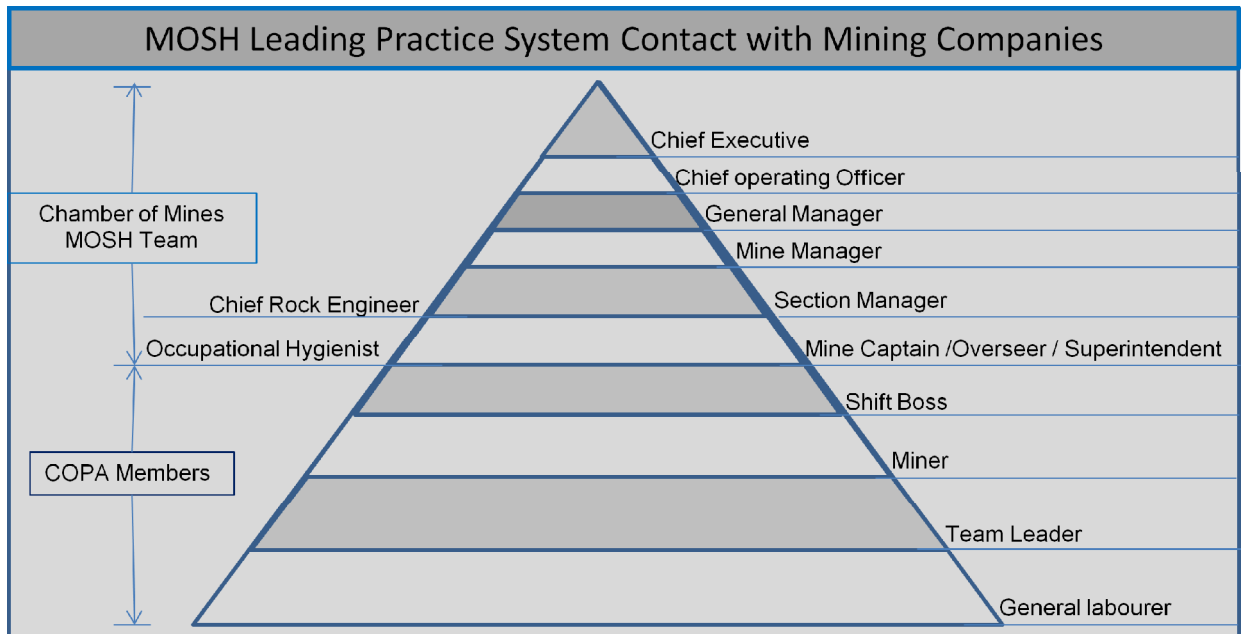
At the bottom of the mine hierarchical pyramid is the underground mineworker who is actually doing the mining work of extracting ore from the rock. The exercise of the MOSH Leading Practice Adoption System was intended to transform the occupational behaviours as well as attitudes towards health and safety of these underground mineworkers. With the expressed level of lack of enthusiasm of the

COPAs in implementing the transformational initiative, it is questionable whether they appropriately communicated the vision, strategy and practice of the MOSH Leading Practice Adoption System transformational initiatives to the four levels below them to general worker. According to the underground mineworkers interviewed by the researcher, the message did not reach this level.

Conclusion

For the awareness of the MOSH Leading Practice Adoption System transformational initiative to have reached all relevant levels, it should have been equally familiar to the general manager as well as to the underground mineworker. This was not the case. Therefore, awareness about the health and safety transformational Initiative had not reached all the relevant levels.

The extent to which COPA members facilitated the adoption of leading practices in the hierarchical structures below their levels depended on the level of their enthusiasm. However, the intervention of the Chamber of Mines, through the Adoption Team Managers ended with their contact with the members of the COPAs. From the COPA member level, communications with the lower levels of the company structures on leading practices behavioural and attitudinal transformations was left entirely at the hands of the participating mines and therefore in the hands of the COPA member participating in the MOSH system.



However, the enthusiasm of members of the COPAs seems to be questionable as one of the interviewees pointed out that he was at times frustrated at the lack of progress made by COPAs and not seeming to take initiatives seriously.

I am sometimes frustrated at the COPAs making no progress and not taking initiatives seriously. There is nothing that I can do as I have no authority except motivate them.

With regard to who was perceived to be driving safety in the mines, many Adoption Team Managers interviewed, including those who had returned to their organisations, pointed out that the Chief Safety Officer drove safety, one commented that safety manager drives safety issues, It should be a line function and driven by people working on the job rather than the safety officer. The view from the underground mineworkers interviewed was that safety was driven by the safety representative in the sections where they worked.

Chapter 7: Conclusion

The research project was started to establish the role played by leaders in transforming their organisations, through the MOSH Leading Practice Adoption System, into a culture where underground mineworkers would transform their working behaviours from over focusing on productivity even where this was done in a manner that put their health and safety at risk of accidents due to falls of ground and acquiring occupational diseases such as silicosis and noise-induced hearing loss. The study focused on the gold mining sector because of its disproportionately high accident rates and therefore being the highest contributor to mine deaths.

What the questions were

To have been successful in transforming their organisations to the extent that the underground mineworkers work in a manner that prioritises health and safety:

- The culture of the mining companies should have become one that prioritised health, safety and caring. This would have been evident in the manner mineworkers behaved and in the language they used;
- Changes in reward systems would have changed to ensure that, in addition for being rewarded for productivity, employees would also be provided with incentives to work in a safer, healthier and caring for others manner and those in supervisory levels would have been provided with incentives to create an enabling occupational environment for this culture; and last
- Awareness about the health and safety transformational initiative, as outlined in the MOSH Leading Practice Adoption Systems, as well as the language used, would have proliferated in the organisations.

What the research established in Response to the Research Questions

The results of the research as outlined in Chapter 5 and discussed in Chapter 6 point out that the none of the of the intended objectives of the MOSH Leading Practice Adoption System seems to have been attained amongst the group of underground mineworkers interviewed by the researcher. A deliberate attempt was made by the researcher to avoid interviewing underground mineworkers where the system was tested as these would have

been the areas where the MOSH Adoption Team Managers would have had direct contact with the underground mineworkers. The reason for this was that the transformational initiative was designed to be implemented by officials of the mining companies rather than by the Chamber of Mines personnel.

The fact that on the MOSH Adoption Team Manager contact level, from the Chief Executive level right down mine personnel charged with implementing the system, were aware of the initiative points to the fact that this was the level where the transformational initiatives driven by the Chamber of Mines ended. There are several reasons why the transformation did not get to the level where it was required most. These could be that:

- Those tasked with implementing the MOSH Leading Practice System did not have the necessary incentives to prioritize the system;
- The companies, and particularly those tasked with the implementation of the system in the mining companies, did not have the organisational transformation skills necessary to create an effective transformation;
- The mining companies perceived the system as an add-on on what they were already doing with regard to health and safety and used the system to learn whatever lessons they could get to add to their own existing systems.

In the annual report of the major mining companies, while reference is made to some of the wording embedded in the Mining Industry Occupational Safety and Health Leading Practice Adoption System Handbook, there is no mention of the Chamber of Mines initiative. The aspects of the transformational initiative undertaken by the companies were company specific rather than industry specific. Therefore, the MOSH Leading Practice Adoption System seems to have been used partly as an indication of effort towards reducing occupational health incidents and the deaths of mineworkers resulting from accidents.

This conclusion is further supported by the fact that companies did have their own internal initiatives towards this end but the Chamber driven one seems to have been used as an indication of effort while the individual health and safety transformational initiatives were being conducted outside the glaring eyes of the media, the public and regulatory authorities.

What Leaders Did

The MOSH Leading Practice Adoption System features prominently in the Chamber of Mines documentation but is hardly referred to in the documentation of the mining companies for whom it was intended. Whether by commission or omission, it seems that the leaders of the mining companies did not know how to implement the system in their operations and simply opted to what they were comfortable with:

- They knew what the problem was;
- They know what needed to be done; they also had the incentive to do it which was to improve the image of their industry tarnished by high fatality rates as well as avoiding the costly shutting down of mines by regulatory authorities following the mine deaths;
- The pressure to be seen to be doing something visible to improve health and safety in the mines.

There is therefore very little to support any perception of not wanting to improve health and safety in the mines even if it was only for ethical reasons. The fact that they did institute initiatives after the implementation of the MOSH Leading Practice Adoption System to achieve this objective suggests that they either wanted to use it as a smokescreen because they did not trust the system or they simply did not know how to implement it in their operations.

However, the fact that some of aspects of the MOSH Leading Practice Adoption System, particularly those related to technology and equipment were implemented while the behavioural transformation aspect was largely not done suggests that the leaders of the mining companies may not have known how to implement the behavioural and attitudinal transformation aspect of the MOSH Leading Practice System.

What They Should Have done

Literature on organisational transformation initiatives, amongst other things, points out to the fact that for transformation to be successful and therefore sustainable, it has to be driven from the top by the leaders of organisations who should also do the talk and

walk the talk+. As far as the Chamber-driven behavioural and attitudinal transformation initiative is concerned, the leaders did not %walk the talk+.

The other necessary ingredient for a successful transformational initiative is that leaders must communicate the strategy throughout the organisation. The underground mineworkers did not know about the MOSH Leading Practice Adoption System and they were also not aware of what %zero harm+ was despite the proliferation of the term in the industry amongst individuals on the management level as well as its wide usage in the annual reports of the major mining companies including the ones where the research was conducted. This provides further support that the leaders of mining companies simply did not know how to implement the system.

Changing behaviour and attitudes is however acknowledged as an important component of attaining %zero harm+ by the mining houses.

Why They Failed to Do What They Should have Done

While it was clear that the leaders of the mining companies did not know how to drive the implementation of the behavioural and attitudinal transformation of the MOSH Leading Practice Adoption System within their own organisations, it is arguable whether they did not want to. In 2009, a year after the implementation of the MOSH Leading Practice Adoption System, the South Africa Institute of Mining and Metallurgy in conjunction with Association of Mine Managers of South Africa (AMMSA) launched the annual Hard Rock Safety Conference which among other things was intended to

%assist in passing on best practice from safe rock leaders, and best practice operations will share how they have managed to change people's attitudes and behavior, have applied technological improvements and systems, thus managed to reduce risks, and resulted in the reduction of their (Lost Time Injury Frequency Rates (LTIFR) fatalities, and inherent risks. Portions of the conference will also specifically deal with improving the health of mineworkers as well as reducing the negative impact on the environment surrounding mine areas+(SAIMM, 2012).

The language of used by the SAIMM comes out of the MOSH Leading Practice Adoption System indicating the intention to adopt the system.

While the leaders of the mining companies and the mine managers in those companies seem to have adopted the objectives of the MOSH Leading Practice Adoption System, but have largely failed to implement its behavioural and attitudinal transformation aspect, arguably the most difficult part given the profession of mining with its focus on breaking rocks, the mining companies also faced pressure for compliance with a plethora of regulatory demands at about the same time.

In addition to having to comply with the terms of the agreement to reduce occupational health and safety agreed to in 2003, the mining companies also had to contend with complying with:

- The Mining Charter, signed in October 2002, whose objectives were to;
 - ó Promote equitable access to the nation's mineral resources to all the people of South Africa;
 - ó Substantially and meaningfully expand opportunities for HDSA's including women, to enter the mining and minerals industry and to benefit from the exploitation of the nation's mineral resources;
 - ó Utilise the existing skills base for the empowerment of HDSA's;
 - ó Expand the skills base of HDSA's in order to serve the community;
 - ó Promote employment and advance the social and economic welfare of mining communities and the major labour sending areas; and
 - ó Promote beneficiation of South Africa's mineral commodities.
- The Mineral and Petroleum Resources Development Act, 2002.
- The electricity crisis of 2008;
- The Global Financial Crisis of 2008.

The implementation of the MOSH Leading Practice Adoption System was competing for the attention, time and resources of the mining companies with these other compliance demands.

Recommendations on Doing an Industry Initiative

The MOSH Leading Practice Adoption System, while a worthy and commendable initiative whose success would provide reputational, ethical and compliance benefits to the mining companies implementing it, was driven by the Chamber of Mines which is a member-based voluntary association of the mining companies. The Chamber of Mines depended on subscription fees from its members for its existence and therefore had no enforcement powers to compel them to adopt its initiatives. Compliance with the the MOSH Leading Practice Adoption System was therefore voluntary and members had the option not to implement the leading practices it recommended or in the manner in which it recommended. Consequently, companies adoption the system chose aspects which they perceived to be useful and largely ignored those it did not consider critical. As a result, the behavioural and attitudinal transformational aspect of the MOSH Leading Practice Adoption System went largely ignored.

The fact that the mining companies acknowledge that need for behavioural and attitudinal transformational gives credence to the fact that they saw this as a necessary component of achieving their zero harm+ objectives. The question therefore is whether the MOSH leading Practice Adoption System would assist in this process can best be argued on the basis of whether the system was in alignment with internationally accepted transformational process. Comparing the MOSH Leading Practice Adoption System with Kotter's 8 steps for transformation (Kotter, 1996) points out that the MOSH Leading Practice Adoption System was congruent with that of Kotter. It can therefore be concluded that, had the MOSH Leading Practice Adoption System been implemented on a company by company basis, it would have attained the desired results.

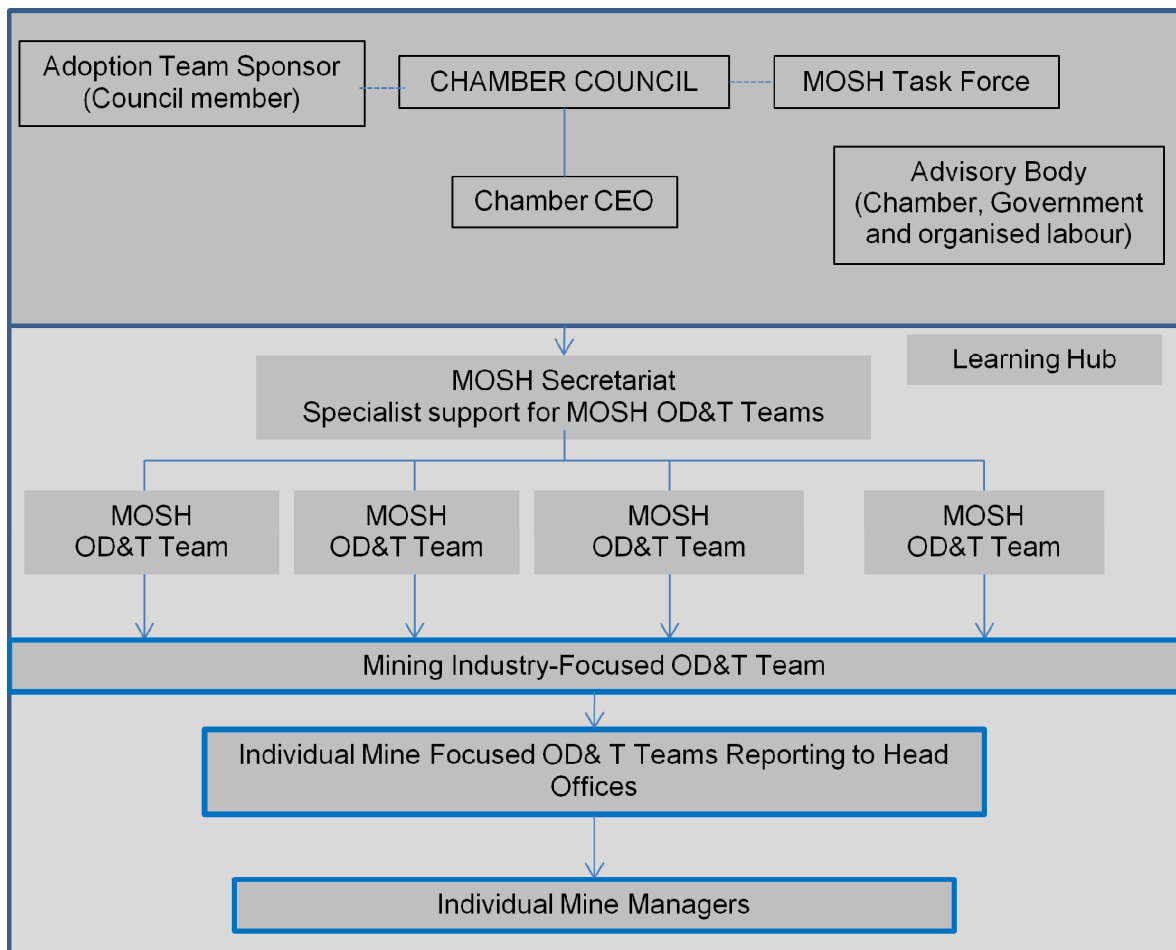
Comparison of the MOSH Leading Practice System with Kotter's Eight Steps (Kotter, 1996)		
Step	Kotter's Theory	MOSH System
1.	Establish a sense of urgency	Failure to achieve the safety targets created urgency to do something differently
2.	Create the Guiding Coalition	The creation of the MOSH Leading Practice Adoption System
3.	Develop a Vision and Strategy	The Vision of %Zero Harm+was developed throughout the industry
4.	Communicate the Change Vision	Industry-wide communication was developed and implemented on the MOSH Adoption System and its objectives
5.	Empower Broad-based action	A model for improving health and safety was developed and Communities of Practice established throughout the industry
6.	Getting short-term wins	Industry performance and individual safety milestones were communicated widely at officials meetings and by health and safety conferences
7.	Consolidating Gains and Producing more Change	Stakeholders invited to participate in developing leadership culture change to create a holistic approach
8.	Anchoring new Approaches in the Culture	Culture Transformation involving unions and government established

That Cummings and Worley's criteria for a transformational initiative. This is outlined below.

Comparison of Cummings and Worley's Transformational Criteria with the one Deployed by the MOSH Leading Practice Adoption System		
	Cummings & Worley	MOSH Leading Practice Adoption System
1	Change is triggered by Environmental and Internal Disruptions	Government, union and public intolerance on mine deaths as well as the costs involved following mine deaths triggered the initiation of the transformation initiative
2	Change is aimed at Competitive Advantage	Partly due to the shutting down of mines following an accidents and safety related work stoppages, South Africa has lost its status as the world's leading gold producer in 2006 and in 2012 was ranked number five after China, Australia, United States and Russia.
3	Change is Systematic and Revolutionary	The MOSH Leading Practice Adoption System encompasses the whole industry and is the first and largest initiative of its kind.
4	Change Demands a New Organizing Paradigm	The initiative aims to change behaviours and attitudes towards health and safety and has introduced new roles in the industry to address this issue.
5	Change is Driven by Senior Executives and Line Management	The MOSH Leading Practice Adoption System was established by the Chief Executives of the South African mining industry for implementation by their line management
6	Change Involves Significant learning	The initiative involves addressing behavioural patterns and has to be implemented by people whose primary functions have in the past been focused only on the technical aspects of production.

It is concluded above had the MOSH Leading Practice Adoption System been implemented on a company by company basis, it would have attained the desired results. The MOSH Adoption System was intended as an industry-wide initiative. It had therefore had to be applied to different companies with their different sets of cultures as an outside-in initiative. Therefore the MOSH Leading Practice Adoption System had a very little chance of being successful in the manner it was designed.

This raises the question on whether a company-wide organisational transformation initiative is possible. Though literature on transformation focuses on company specific initiatives, it is possible that the MOSH Leading Practice Adoption System would have succeeded if structured differently. A different structuring of the MOSH Leading Practice Adoption System which would have stood a better chance of succeeding.



It is suggested that, to be successful, the transformational initiative driven by the Chamber of Mines should be tailored specifically to each mine rather than on the basis of leading practices as a culture transformational initiative. This would position the initiative within the company starting on the level of the mine manager. The Organisational Development and Transformation (OD&T) team focused on the mines should have their own Communities of Practice to share challenges rather than in the current system where the COPAs are employees of different mines. The industry-wide shared experiences through the OD&T teamsqCOPAs, would then cascade the lessons learned throughout the organization with

the active participation of the mine manager who has gone through the transformational journey him/her self to ensure that they live the vision+

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Appendix 1

Question
How long have you worked at this mine
Can you tell me a bit about your role in the mine. What is your position?
Can you please let me know what your management structure is like: who report to whom?
Who do you report to?
How many people report to you?
How many other people report to the same person?
What are their functions?
How many people report to you?
What are their functions
What language do you use in communicating with those reporting to you
How do you communicate instructions to them?
How do they provide you with feedback
Other than carrying instructions that you give them, do they contribute towards their work
Do your reportees ever fail to meet their production targets
How would you describe your relationship with the person you report to?
How are work instructions communicated to you?
Do you feel that your contribution are taken seriously
Other than carrying out instructions that are given to you regarding your work, do you make any contributions that you feel can improve your work or the environment at your work place
Do you ever fail to meet your production targets?
When this happens, how is that received.
If you are to list the top five issues important in mining today, what would those be?
What would your superior, in your own opinion, think the top five important issues are
1. Do you know about the MOSH Leading Practice Adoption System
2. What process of managing safety do you practice at this mine
3.
4. What is the most important information about safety do you receive
5.
6. Are you involved in this safety initiative

7.
8. What is your involvement
9.
10. What targets do you have in your normal day's work
11.
12. How are these measured
13.
14. Are you rewarded for achieving these targets
15.
16. Do you have safety targets
17.
18. How are these measured
19.
20. Are you rewarded for achieving safety targets
21.
22. Who comes to your mind as being the driving force on health and safety
23.
24. How are safety principles communicate



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- e) I did not allow and will not allow anyone to copy my work with the intention of presenting it as his / her own work.
- f) I did not make use of a "ghost-writer" to compile the written assignment on my behalf.
- g) I state that any company information contained herein that is not already in the public domain has been obtained with the permission of the company, and that the company has given permission for the disclosure of all this information

Signature

24 April 2012

Date