Enhancing Management Competence through Business Simulations.

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Gosling and Mintzberg (2004, p. 19) purport that "management is neither a science nor a profession, nether a function nor combination of functions. Management is a practice – it has to be appreciated through experience, in context. Management may use science, but it is an art that is combined with science through craft. They argue that Business Schools, whilst having much expertise in management, miss the opportunities for creative learning by adopting inappropriate educational strategies that are of little relevance to practicing managers. Burns (1995, p.284) identified simulations as a mock up of real situations and are generally far more complex than role-plays, Wolfe and Roberts, 1993 describe simulations as valid representations of the "real-world" issues facing managers and that such contexts created within simulations are amongst the most realistic available in training and development. Hunsaker (2007) supports the use of simulations stating that they are a cost effective way of developing and evaluating leaders assisting them to develop the skills necessary to make effective decisions in turbulent environments. Adobor and Daneshfar (2006) suggest that a realistic simulation is a reasonable abstraction of the real world. They also suggest that a simulation should also be sufficiently complex to emulate the challenges faced by managers in the business world, but not so complex that participants are unable to make such links and as a consequence see the simulation as a game rather than a learning activity. This paper reports on the effect of a management simulation designed by one of the authors as a means of enhancing participant's competence as practicing managers. Its educational strategy is linked to the input competency movement characterised by the approaches of Boyatzis (1982); Pedlar et al. (2001) Quinn et al. (2008) and Goleman et al. (2002). Participants are given the opportunity to reflect n their behaviour and at crucial times during the simulation. At the conclusion of the activity an valuation form is provided which asks the participants to again reflect on the simulation and how the activity enhanced their with an emphasis self awareness as a means of increasing their competency to managing others

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Introduction

Boyatzis (2004) suggests that a common mistake in management education is to assume that simply acquiring more information will automatically lead to becoming a more effective manager or leader. He suggests that the development of competencies lead to outstanding performance and these include cognitive or intellectual ability, self-management or intrapersonal abilities and relationship management or interpersonal abilities. Furthermore he suggests that self-directed learning is an effective method of achieving sustainable change in

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in behaviour. Moreover he emphasises that people can develop the competencies that lead to outstanding performance which Goleman et al. (2002) describe as emotional intelligence. These include social awareness, self-awareness and self-management. The importance of self awareness and understanding the self is also supported as fundamental to effective management development in the management and leadership development model as advocated by Pedlar, Burgoyne and Boydell (2001); the management competency model advocated by Hellriegel (2002), Whetten and Cameron (2007) and as identified above in the most recent emotional intelligence model as described by Goleman, Boyatzis and McKee (2004). Thus the importance of self-awareness as a means for the development of competence is well established. This paper will examine the effectiveness of management simulations as a vehicle for encouraging competency development. It will present literature review that considers the merits of simulations as learning environments and report on participant experiences with a recent simulation conducted as part of a Masters of Business Administration course in Managing People.

Literature Review

Gosling and Mintzberg (2004, p. 19) purport that "management is neither a science nor a profession, neither a function nor combination of functions. Management is a practice – it has to be appreciated through experience, in context. Management may use science, but it is an art that is combined with science through craft. In other words managers have to face issues in the full complexity of living, not as compartmentalized packages. Knowledge may be important but wisdom- the capacity to combine knowledge from different sources and use it judiciously- is the key" Gosling and Mintzberg (2004) argue that Business Schools, whilst having much expertise in management, miss the opportunities for creative learning by adopting inappropriate educational strategies that are of little relevance to practicing managers.

They put forward several tenets upon which they believe true management education should be built which included; management education and practice should be concurrent and most importantly that the key to management learning is thoughtful reflection and that it must be an interactive process (Gosling and Mintzberg, 2004). The use of experiential learning and reflection as a learning strategy can be seen as addressing this shortcoming of most MBA programs.

According to Boyatzis, (1982, p. 33) a skill, by definition, is "the ability to demonstrate a system and sequence of behaviour that [is] functionally related to attaining a performance goal". In order for an individual to become competent at any skill, conceptual and behavioural understanding needs to be achieved, e.g. the why and

how and the behaviour will need to be practiced so that a degree of expertise can be achieved. This implies an environment in which mistakes can be made safely is a necessary part of the learning process. It is also essential that participants receive feedback on how well they are performing so that further developmental requirements can be identified. This application of these principles in the teaching and training of individuals has become known as the experiential approach or adult learning techniques (Johnson and Johnson, 1975, pp. 8-10).

Kolb (1984) has developed a model that encompasses most of these adult-learning dimensions emphasising that the acquirement and development of behavioural skills comes from observation and practice.

He has identified that comprehensive learning encompasses four elements:

1. Concrete Experience: the active participation in a new experience
2. Reflective Observation: the considered examination of that experience
3. Abstract Conceptualisation: the integration of conclusions based on the new experience into workable theories, and
4. Active Experimentation: the application of the theories to new situations

The learning of skills is therefore maximised when participants and students get the opportunity to combine watching, thinking reflecting and doing (Latham and Saari, 1979; Manz & Sims, 1981; Decker, 1982; and Clark et al. 1985). Thus in order to develop a wide range of skills, a complex rather than simple activity which simulates the working organisation, is one way to give participants an organisational experience, the opportunity to learn as adults and develop critical management skills. The process of reflection must be seen as a critical step in the learning process as individuals need to time to think back on the experience and try to make sense of action and casual links between behaviour and performance. Brookfield (1995, pp. 22-6) puts forward six reasons why reflection is important;

1. it helps practitioners to take informed actions,
2. it assists in the development of a rationale for practice,
3. it avoids self-blaming,
4. it grounds practitioners emotionally,
5. it enlivens the learning environment, and
6. it increases democratic trust.

In so doing, critical reflection urges the creation of conditions in which each person is respected, valued, and heard.

Management Simulations as a Learning Context

Burns (1995, p.284) identified simulations as a mock up of real situations and are generally far more complex than role-plays, Wolfe and Roberts, (1993) describe simulations as valid representations of the "real-world" issues facing managers and that such contexts created within simulations are amongst the most realistic available in training and development. Hunsaker (2007) supports the use of simulations stating that they are a cost effective way of developing and evaluating leaders assisting them to develop the skills necessary to make effective decisions in turbulent environments. Adobor and Daneshfar (2006) suggest that a realistic simulation is a reasonable abstraction of the real world. It is one where participants can identify the relationship between their decisions and actions and the consequences on themselves and others involved. They also suggest that a simulation should also be sufficiently complex to emulate the challenges faced by managers in the business world, but not so complex that participants are unable to make such links and as a consequence see the simulation as a game rather than a learning activity. Jennings (2002) and Lane (1995) also highlight that management simulations allow participant to make strategic decisions, depending on the nature of the simulation, thus allowing the application of theory and principles studied in the classroom. Senge (1990) identifies that the micro world, as represented by the simulation, allows the learner to practice new behaviours without danger to the real product or consequences of something goes wrong. Numerous studies have identified that participants in simulations experience considerable realism and involvement (Yusko and Goldstein, 1997; Streufert and Streufert, 1968) and that as such provide an effective mechanism for training leaders to effectively handle difficult situations.

Zantow, Knowlton & Sharp (2005) examined the effectiveness management simulations suggesting that generative learning occurs at all phases of the simulation from participants conceptualisation of the activity to the reflective post simulation process where participants review their own performance. They cite Wittrock's (1985, p. 124) definition of generative learning as the process of generating relationships, or structure among the components, or parts, of the information one is trying to comprehend, and as the process of generating relationships between one's knowledge and the information one is trying to comprehend"

Critically debriefing must occur to enable members to discuss, evaluate and rethinking the issues and solutions and enable them to integrate these experiences with their previous knowledge and practice. Furthermore the nature of simulations requires engagement and participation, unlike other educational methods

such as lectures or case studies where the learner is a passive participant (Burns, 1995). The simulation places the responsibility for learning with the learner through active participation. Sherrell and Burns (1982) state that this active engagement increases the learner's motivation to understand the theories and concepts that underpin the action thereby increasing self-efficacy, which is the capability to develop and implement action that is linked to goal and task (Bandura, 1997, p. 3). Thompson and Dass (2000) consistent with Burns (1995) concur stating that found that simulations result in significant higher improvements in participant self-efficacy compared to other forms of training and development such as case studies.

Binsted (1986) notes that simulations promote learning through independent discovery and exploration. This is also similar to the Kolb (1984) learning cycle described above. Fripp (1993) has highlighted significant advantages and outcomes stemming from the use of management simulations:

- Motivation. Users reported that simulations were stimulating and enjoyable, a clear prerequisite of learning.
- Team working. Frequently, simulations are a valuable basis for the demonstration and development of team working skills. This is particularly true where the teams involved are natural working teams drawn from the same organization.
- Experiential learning. Simulations can provide quick and unmistakable feedback and allow people to see the consequences of their decisions.

Musselwhite (2006) highlights that simulations allow people to learn by doing, consistent with adult learning principles. He cites the Agyris discovery learning that promotes double loop learning that inturn promotes behavioural changes. Musslewhile refers to the "a-ha" or gestalt moment that is produced during debriefing sessions that make simulations so effective. He also highlights that simulations are valuable because that contribute towards emotional intelligence in particular he identifies that development of relationship skills competencies as critical for management development.

Lincon (2003) suggests that lasting behavioural change in managers is more likely to result from re-interpretation of experiences, the process of reflection. However he suggests that they lack the opportunity to engage in formalised experiential systems designed to develop this ability. Brockbank et al. (2002) point out that as managers work in a social context, so to must their learning be achieved through "reflective-learning-with-others". This seems to support Senge's (1990) concept of management simulations as micro worlds recreating not only the economic complexities of organisations but also their social ones. The

process of reflection is also critical to enhance double and treble-loop learning that Lincon (2003) purports is the key to management development.

Simulations and Double and Treble Loop Learning

Agyris and Schon (1974) distinguish between single, double and treble loop learning. In single loop learning the participant uses existing knowledge and skills to identify problems and generate solutions. They suggest that whilst skills and knowledge can be enhanced, this process does little more than enhance the status quo. In double loop learning, they identify that the reflection process enters the learning process that that managers consider and challenge their own perspectives. As a result evolutionally or transformative learning can occur enabling meaningful change. Treble-loop learning is a further enhancement of the learning process and it occurs when managers become aware of the how learning occurs in individuals and how they can enhance their own learning through socially constructed contexts. At this stage personal transformation can occur and be maintained. The participant's ability to engage in reflection determines the extent to which they can learn from their own experiences (Boud et al., 1985) and therefore reflection provides a meaningful way for leaders to gain genuine understanding.

According to Dewey (1933, p. 12), such reflective thinking is distinct from other forms of thought because "it involves (a) a state of doubt, hesitation, perplexity, mental difficulty in which thinking originates, and (2) an act of searching, hunting, inquiring to find material that will resolve the doubt, to settle and dispose of the perplexity." The main objective for integrating reflection in leadership development programs is to maximize individual potential by allowing students to evaluate the significance of their experiences from a leadership perspective.

The Simulation

The simulation used in the MBA course, Managing People, was designed by the principal author of this paper recreates the core sections of organisational structure from executive to operating core personnel and requires participants to utilise a range of knowledge and experience including; strategic management, marketing accounting, supervisory and production techniques and to be responsive to the changes in the environment in product design. In this way it can be seen as consistent with the observations in the literature review o a sufficiently complex micro world that parallels organisation. Participants self select key roles and are given free rein on decision-making and interaction with the environment. Depending on the number of participants, two or three companies are established thus generating a competitive

environment. Each is allocated similar resources of paper, sellotape, scissors and a design template and the objective is to use these to physically create a model of gas ovens, which they then sell to a number of buyers, who inturn provide feedback on quality and price. If the company cannot sell sufficient units of production, once cash reserves are depleted, workers will clearly not work for any pay, and the company's survival is threatened. This allows participants to make strategic decisions as identified by Lane (1995) as strength of simulations. Several other features are established to simulate the real workplace including working a specific time on and time off periods to reflect a working week, the issuing of cheques by the accounts to workers each fortnight as salary etc. Each participant is given a role that provides a context for the activity but little guidance on how to play the role, thus the behaviours that emerge are those of the participant or their expectation of what behaviours are appropriate to a particular role.

In order to facilitate reflective practice, two reflection periods are built into the simulation; one at roughly half way some 2 hours into the activity and the other at end of the activity. This is consistent with the concept of "reflection-in-action" proposed by Schon (1983) which is a more reflective and intuitive approach to dealing with complex and problematic matters. It involves reflecting during the practice or activity and seeks to exercises a practitioners' knowing-in-practice. A critical factor in this form of reflection is that it occurs in the "action-present", or more aptly described as the zone of time in which a change in action can still make a difference to the situation" (Schon, 1983, p. 62.) This is consistent with the points made by Lincon (1995) regarding learning and reflection. The express purpose of the first reflection is to assist participants to become more self aware about their own behaviours. A specific question asks them what they could do differently to enhance effectiveness of the (simulated organisation) task.

In this particular simulation conducted in March 2009 with MBA students, two companies were formed in competition each with similar resources. During the planning phase Company A established a cooperative approach between managers and workers with a socio-technical or team based approach to the production process whereas Company B established a more mechanistic structure with a production line system and hierarchical reporting lines.

Methodology

29 participants completed an evaluation form that sought their opinions regarding their experiences with the simulation. The evaluation form consisted of eight questions of which five were qualitative in nature allowing students to record and comment on

their learning's whilst the first three asked participants to rank or compare the experience relative to other learning contexts.

Participant Reactions

The general response from participants was positive both n terms of the learning experience and the enjoyment of the activity. Comments taken from the evaluation forms included:

- "Understandable, complete, interesting and practical"
- It's quite useful to watch the managers behaviour and response to issues in the simulation"
- We can see the importance of good leadership and