EMPLOYEE INVOLVEMENT

‘How do coal mines in Queensland utilise employee involvement processes?’

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ABSTRACT

Many Australian businesses compete in the global marketplace, and companies seeking a competitive edge in this business environment consider the engagement of their people in the business to be a strategic advantage. This 'engagement of people' strategy utilises participatory or collaborative management practices that can be collectively considered under the umbrella term 'employee involvement' (EI) and considered desirable from both a management and employee perspective. Yet EI appears as an organisational paradox, that is, while management want EI and employees want EI it should be effective and work well. However, often EI does not deliver in full for both management and workers.

The Queensland coal mining industry is one such industry that competes in the global marketplace and many companies within that industry seek to improve their competitive positions by directly involving their employees. This investigation looks at how coal mines in Queensland utilise Employee Involvement processes. In doing so the investigation seeks to understand EI as a concept, as well as a practice, and to determine influential factors for effective EI at BHP Billiton Mitsubishi Alliance (BMA) mines—the major coal mining company in the Queensland coal mining industry.

This investigation was undertaken using a case study methodology based on in-depth, semi-structured interviews. People were interviewed from various organisational levels at four BMA mines and BMA's corporate office. The investigation findings establish that EI, as a concept, is best understood by its application. Also the key common attributes of EI that were evident are involvement of actual crews, information sharing, the opportunity to influence decisions and that EI in safety management is considered mandatory.

BMA does utilises formal EI practices. However, embedded in these formal EI practices are informal EI practices that involve more people and have greater organisational breadth in their acceptance and impact. While EI was recognised as a management initiative, it was management's commitment to establishing and maintaining the supportive environment which fostered an EI program that was more critical for implementing an EI culture than the mechanistic formal EI programs utilised by BMA. In establishing the importance of informal EI practices over more formal EI practices, the role of the supervisor is considered vital in creating a supportive environment that both fosters the employees sense of management commitment and their sense of personal value.

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CERTIFICATION OF DISSERTATION

I certify that the ideas, experimental work, results, analyses and conclusions reported in this dissertation are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award, except where otherwise acknowledged.

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Signature of Candidate Date

ENDORSEMENT

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Signature of Supervisor/s Date

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LIST OF ACRONYMS AND ABBREVIATIONS

BI	Business Improvement
BMA	BHP Billiton Mitsubishi Alliance
CPP	Coal Preparation Plant
EI	Employee Involvement
EIP	Employee Involvement Practice(s)
HIWP	High Involvement Work Practice(s)
HPWP	High Performance Work Practice(s)
HR	Human Resource(s)
HRM	Human Resource Manager
OE	Operating Excellence program
Open & Cut	Mining technology using surface mining techniques for coal extraction, eg. draglines and truck and shovel fleets.
PIRK	An employee involvement model built around Performance Information, Reward and Knowledge modules.
SoN	State of the nation address, a presentation made to the workforce, generally by the mine manger, on overall mine performance, competitive position and the mines' future plans.
SDA, SDB, SDC, SDD, SDG	Secondary documents from mines A, B, C, D and general documents attained from sources other than from the mine.
TT	Toolbox talk(s), a meeting held between the workgroup and their immediate supervisor held in their place of work.
Underground	Mining technology using underground mining technology for coal extraction, eg. longwalls and continuous miners.
USQ	University of Southern Queensland
Workunit/team	Small group of employees (normally about 8-10 people) with direct workplace responsibility, eg. Coal Preparation Plant production shift, underground continuous miner crew, or a field maintenance crew. These groups can be a complete shift in an area or embedded within a shift.

1.0 INTRODUCTION

This investigation seeks to establish how Queensland coal mines use employee involvement practices (EIP) at their mines as a management strategy to improve their overall performance. The investigation will review literature to establish employee involvement concepts and types of EIP, review some of the basic building blocks of EIP, and establish some of the major influences that impact on the implementation of those practices. A multi case study investigation at Queensland coal mines is undertaken to explore how they understand and utilise EIP and to determine how these practices are implemented, thereby leading to consideration of strategies for improved implementation of EIP at Queensland coal mines.

This chapter will present the background to the investigation, the research question and research issues for the investigation. A justification for the investigation will also be given, as well as an overview of the research design adopted. Limitations of the research and the potential for generalisation of the research outcomes will also be highlighted.

1.1 BACKGROUND TO RESEARCH PROBLEM

In the global market place in which many Australian businesses compete, the drive for economic performance and competitiveness is a never-ending process upon which the very sustainability of the organisation depends. The Queensland coal industry is illustrative of this drive (Bromby 2002; Pinnock 2001). This global business environment can be very volatile and requires businesses to be adaptive, flexible and responsive in their strategies to achieve economic performance and competitiveness.

One approach chosen by companies in this business environment is that of employee involvement (EI) (Bryson 1999; Delaney & Huselid 1996; Freeman & Kleiner 2000; Kling 1995). This research undertakes an investigation into how Queensland coal mines conceive EI, the types of EIP utilised at Queensland coal mines, the factors that influence choices employees make to become involved in EI programs, and the impact those

choices have on the implementation of EI programs. This investigation will focus on coal mines owned by BHP Billiton Mitsubishi Alliance (BMA), the largest mining company in Queensland.

Many organisations have chosen the EI approach to improving economic performance (Freeman, Kleiner & Ostroff 2000; Guthrie 2001; Mariapa 1998). Despite this approach by many organisations, the impact of EI on the economic performance of business remains unclear (Freeman, Kleiner & Ostroff 2000; Kling 1995; McNabb and Whitfield 1998).

There is a wide variety of EI schemes in business (McNabb & Whitfield 1998; Mariapa 1998). These include, just to name a few, quality circles, gainsharing, targeted, recruitment, TQM, information sharing, and grievance management. The one common theme that binds these practices is employee-relations practices that are designed to encourage employee participation and commitment to business goals and improved business performance, thereby leading to the success of the business (McNabb & Whitfield 1998; Mariapa 1998).

McNabb and Whitfield (1998) and Mariapa (1998) have categorised the basic elements and schemes of EI. From their perspectives, the key aspects of an EI scheme can be derived as:

(a) Degree and type of involvement

This describes the extent to which employees can affect or influence the final decision and this can be reflected in the type of practices utilised. For example, a low influence scheme is where information flow is essentially downward from management, whereas a higher influence scheme involves two-way communication.

(b) Extent and impact of that involvement

This will reflect whether the type of interaction between management and employees is:

- Direct, where interaction is between management and individual worker;

- Indirect, where interaction is between management and representatives of the works;
- Formal, where the interaction occurs through formal EI programs, e.g. quality circles; and
- Informal, where the interaction occurs without any formal EI process.

(c) Active managerial involvement

This refers to the management level at which active EI of workers takes place, i.e.

- Within the work group;
- Within the work group lead by the supervisor; or
- Moving through the organisation's hierarchy up into the organisation's most senior ranks.

(d) Information sharing

This describes the type of information shared, i.e. individual performance, workgroup performance, organisational performance, organisation's future plans and the process used to share that information.

(e) Financial participation

This reflects the type of financial connection other than wages or salaries between the organisations performance and the employee's total financial reward. Examples of these include profit share, gain share, bonus, share participation or options.

These aspects will be further developed during the literature review.

The global environment places great pressure on businesses to remain competitive and, in part, being competitive is a reflection of business success. As managers look at improving their businesses, all business inputs, processes, systems and technology utilisation are reviewed to seek areas of improvement or competitive advantage. A key input for any organisation, indeed a common feature through all processes, technology utilisation and systems, is people (Edwards & Wright 2001; Freeman, Kleiner & Ostroff 2000; Guthrie 2001). In seeking to gain business

improvement and competitive advantage, a focus on effective people utilisation will often result in gaining greater performance from people. This has lead many organisations to consider EI programs in their drive for business success.

While EI programs have been available for a long period the contribution of EI programs to the economic performance of organisations remains inconclusive (Edwards & Wright 2001; Guthrie 2001; Vandenberg, Richardson & Eastman 1999). Despite this lack of clear evidence, such programs continue to be popular.

Collins (1998) believes EI systems in business are inevitable in democratic societies, based on their ethical superiority over authoritative management systems. McNabb and Whitfield (1998) and Vandenberg Richardson and Eastman (1999) suggest that EI is a bundle of strategies and the position of EI in the context of the environment and culture of the organisation should be considered when assessing their impact on business performance. This investigation will seek to determine how the Queensland coal industry perceives EI and utilises EIP to improve organisational performance. It will also determine the factors that influence the choices employees make when deciding to apply their discretionary effort toward the EIP utilised in Queensland coal mines.

When considering economic success for a business, the measure of profit, which at its very basic level is a function of revenue minus expenses, is generally accepted. If this is accepted, then measuring such issues as sales generation, cost improvements, productivity increases and reduced employment turnover rates can be used as indicators of economic success (Delaney & Huselid 1996; Guthrie 2001). Yet to view the organisation from a shareholder perspective, there is the additional consideration of wealth creation represented by share price. Once again, to oversimplify, share price is not only a function of profit and asset backing, but also a perception of the business future (future cash-flows) and its ability to sustain and increase profit. Therefore, issues of economic success from shareholder

profit perspective incorporate the sustainability of the business, competitiveness, management competence, technology and workforce capability (Edwards & Wright 2001). Not all organisations are profit based, yet when the profit measures above are viewed from a non-profit based organisation perspective it can be seen there are many similar measures between profit and non-profit organisations. Hence, it may well be more appropriate to focus on organisational effectiveness as opposed to economic success, which is primarily a derivative of successful organisational effectiveness (Delaney & Huselid 1996). In general, organisational effectiveness has been measured by focussing on productivity and turnover as surrogates for improved business performance (Huselid 1995; McNabb & Whitfield 1998). This approach will be developed in this investigation to determine if there is a correlation with EI and improved business performance.

1.2 OVERVIEW OF LITERATURE

The correlation between EI and business performances has been generally established as marginally positive (Freeman, Kleiner & Ostroff 2000; Guthrie 2001; Huselid 1995; Kling 1995; McNabb & Whitfield 1995; Pascale & Millermann 1997; Vandenberg, Richardson & Eastman 1999), however, the mechanism for that correlation is not largely understood. Indeed the strength of that correlation has varying degrees of support.

Huselid (1995) links 'sophisticated' human resource management practices with EI and this link is supported by Edwards and Wright (2001) and Guthrie (2001). Huselid (1995) adapts work from Delaney, Lewis and Ichniowski (1989) into thirteen items of contemporary High Performance Work Practices (HPWP). These items cover the areas of personnel selection, performance appraisal, incentive compensation, job design, grievance procedures, information sharing, attitude assessment, labour management participation, intensity of recognising efforts, annual average number of hours of training per employee, and promotion criteria. These basic elements of EI are supported in the literature by Bryson (1999),

Freeman and Kleiner (2000) and McNabb and Whitfield (1998). Guthrie (2001) further extends this view to link High Involvement Work Practices (HIWP) to EI programs and business performance. Morrow (1993) highlights that closer inspection, high involvement and high commitment team concepts and systems are based on participative decision making and a feeling of mutuality of responsibility between management and workers. It is proposed in this investigation to combine HPWP, HIWP, collaborative and participatory practices into the one description of Employee Involvement Practices (EIP).

From the above, it is contended that the mechanism for the correlation is based on the employees' perception of EIP in the context of the organisation, and that this perception will influence their choice to the degree the employee participates in EIP. It is this contention that will be explored through the literature review and developed through this research proposal.

Models and issues developed from the literature will be considered when developing the data collection methodology. Examples of this include Huselid's (1995) work on establishing that investments in EIP are correlated with lower employee turnover, greater productivity and improved corporate financial performance. Huselid goes on to attribute tangible results based on a one standard deviation increase in EIP over the mean of the firms studied. This, along with McNabb and Whitfield's (1998) work in the United Kingdom, has resulted in body of work, which is referred to when supporting the claim that the application of EIP leads to improved corporate financial performance. The work has limits, not the least of which is the age of the data analysed. For example, McNabb and Whitfield's (1998) work is based on analysis of 1993 data and while its application to the rapidly changing business environment of today may be constrained by this passing of time, the correlations are significant. McNabb and Whitfield (1998) also report on EIP being considered more as bundles of practices, as opposed to discrete practices, due to the interaction of one practice with another, for example, performance appraisal system and decision making involvement.

This link between the bundles of human resource management practices that form EI programs and business performance has emerging empirical creditability (Delaney & Huselid 1996). However, it is the very nature of the interaction, the breadth of the bundles and employee perception that create a very complex dynamic that makes testing difficult and, in part, supports an investigation by case study technique.

Despite the claim to a broad correlation, there is an emerging body of literature that urges restraint on the assertion of the correlation between EIP and corporate financial performance (Edwards & Wright 2001; Freeman, Kleiner & Ostroff 2000).

The key concerns raised by these authors are:

(a) the evidence is ambiguous;

(b) measurement of EIP constituent components is unclear;

(c) causal mechanism that link EIP and outcomes are not established;

(d) meaningful outcome mechanisms are not clear;

(e) EIP have not been demonstrated to produce outcomes; and

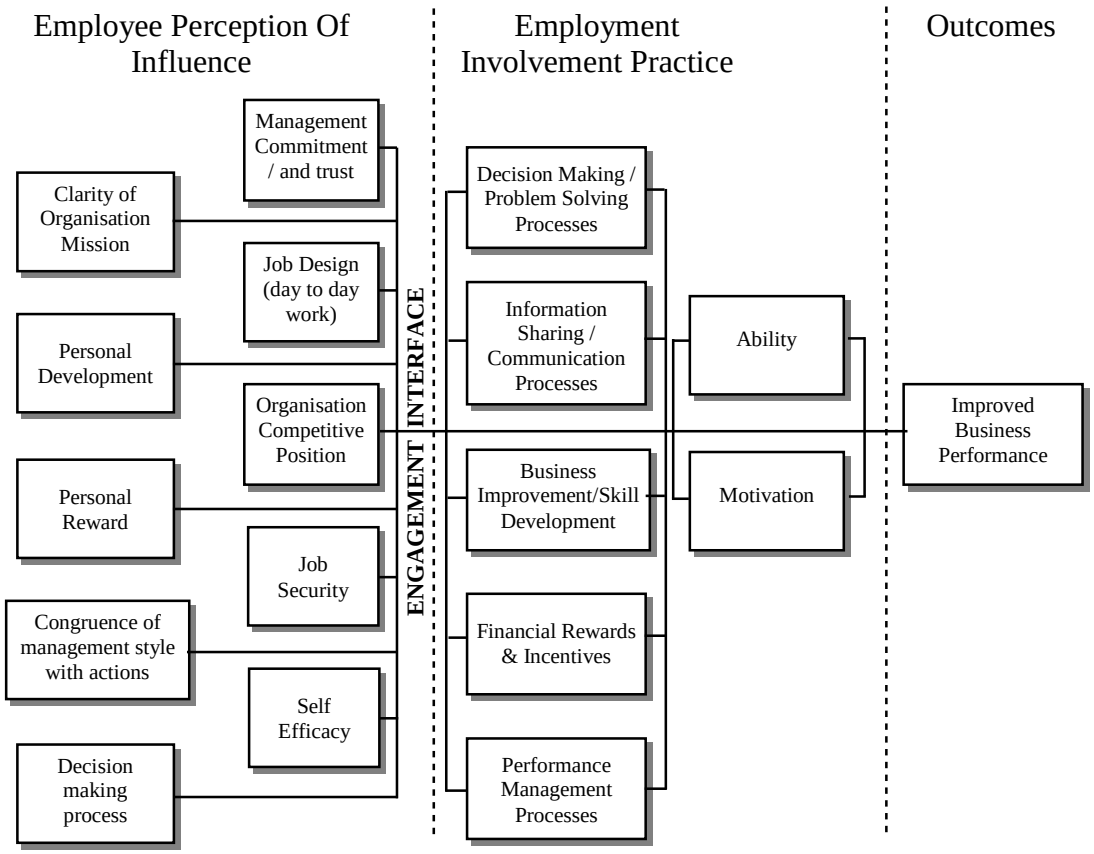
(f) the nature of EIP is poorly specified.

From these constraints, Edwards and Wright (2001) argue that EIP, leading to high performance, may well be the result of high performance companies who can afford costly Human Resources (HR) practices associated with EIP. As these high performance companies generate the resources to be able to implement EIP it is, to a degree, self perpetuating. The view that EIP leads to high employment costs is supported by Guthrie (2001). Ichniowski, Shaw and Prennushi (1997) claim that it is good managers that introduce EIP and hence it is the quality of management that account for outcomes, not EIP. Fernie and Metcalf (1995) also highlight the possibility that apparent EIP effects reflect the quality of the workers.

This apparent disagreement over whether EIP is the direct cause, or whether its presence is an indicator of high performance, may well be associated with the choices employees make on discretionary effort associated with EIP. It is this potential association which will form the basis of the hypotheses development and the exploratory research phase. The focus of this development will be to identify factors that influence employee choices on actual involvement and commitment to EIP and from this process the barriers that stop employees from actively participating in EIP. The development of this discussion will be important in determining whether the high performance of organisations is due to the presence of EIP, or the climate that allows employees to participate actively in their effective implementation.

Some authors (Edwards & Wright 2001; Ichniowski et al. 1996; Tesluk, Vance & Mathieu 1999; Vandenberg, Richardson & Eastman 1999) argue that EI resulting in improved business performance is the result of situational or organisational context issues such as recruitment practices that select workers amenable or receptive to EI, managerial commitment and a culture of valuing people. This research will seek to identify some of the organisational context issues and determine what, if any, influence they may have on EIP implementation and sustainability. The model proposed to explore these issues is shown in Figure 1.1.

Figure 1.1: Schematic of the Proposed Relationships Within EIP



SOURCE: Developed for this dissertation.

To date, most of the literature reviewed has been based on studies and analysis undertaken in the USA or UK. Consideration of the Queensland context will be undertaken. However, this may also take the path of direct discussions with Queensland participants to gain information, as literature on the above aspects appears limited.

1.3 INDUSTRY SETTING FOR THE INVESTIGATION

The Queensland coal industry was chosen for this study due to its exposure to the global market and its dependence on its competitive position in the global market for its business success (Bromby 2002; Pinnock 2001; Yamamoto 2000). The coal industry has faced great volatility and pressure due to the Asian economic downturn of the late 1990s, and the more recent events of September 2001 have further enhanced market price and volume

volatility resulting in increased producer anxiety (ICR 2001; ICR 2002; Loughbrough 1999; Yamamoto 2000).

Yamamoto (2000) indicates the transformation that the coal industry has undergone to respond to these events. Yamamoto (2000) gives recognition to the inherent advantages of the Queensland coal industry such as its quality of coal, its ease of mining and the proximity of its mine to the coast. However, exploitation of these advantages is constrained by labour productivity issues. This was previously recognised by the Australian Coal Association in their position paper, 'Winning Coal' in 1994, calling for improved work practices.

Yamamoto (2000) reports that the Australian Productivity Commission study of 1995 compared Australian labour productivity with USA productivity and found that, even after factoring in technological and resource variations, USA labour productivity was 30% higher than Australian labour productivity. The coal industry has responded to these competitive pressures by significant restructuring (Bromby 2002; Pinnock 2001; Yamamoto 2000). The responses undertaken looked at a wide range of issues such as freight costs, ownership structures, technology, government charges and the management/labour relationship.

Significant among these was the ownership restructure that saw the industry ownership centre on specialist mining companies, instead of oil companies (Pinnock 2001; Yamamoto 2000). The focus of these mining companies was a belief in the profitability of coal through utilising and understanding of coal technology and labour management issues (Yamamoto 2000). The impact of this has been a significant improvement in both cost structures and labour productivity, such that Queensland coal mines are now considered world leaders (Bromby 2002; Yamamoto 2000). Despite this, there is continued recognition of the need to improve cost and productivity positions further (Bromby 2002; ICR 2002; Pinnock 2001; Yamamoto 2000).

Pinnock (2001) and Yamamoto (2000) see a significant contribution from the focus of mine management in establishing an 'alliance-conscience' with employees toward the companies that are seeking alignment between employee goals and business goals. Yamamoto (2000) has attributed a 50% increase in productivity to this focus. This alignment of people's goals and business goals has lead to a focus on collaborative work practices, such as:

(a) incentive payments;
(b) collaboration;
(c) recruitment practices;
(d) focus on leadership;
(e) mutual decision making;
(f) job planning;
(g) work distribution;
(h) cost management; and
(i) safety practices.

(ARCO 1995; Pinnock 2001; Yamamoto 2000)

As has been established in Section 1.2, there is strong commonality between these practices and those identified in the literature as EIP.

BHP Billiton Mitsubishi Alliance (BMA) is an Australia mining company owned by BHP Billiton (50%) and Mitsubishi (50%). It is a specialist mining company that acquired its Australian operation by merging the individual coal mining interests of each company into a single entity in 2000. BMA operates six coal mines in Queensland (refer Appendix A.1) which cover both major mining practices of dragline open-cut operations and longwall underground operations. BMA's total coal production was 44.1 million tonnes in 2002, of which 34.0 million tonnes was hard coking coal (BMA 2002).

BMA is considered representative of the Queensland coal industry as its operations use both major mining technologies, has both mature and new operations, and produces 63% of Queensland's hard coking coal which

represents 28% of the world seaborne hard coking coal market (BMA 2002). BMA is exposed to global markets and has a continuing focus on improving its competitive position through labour management relationships (BMA 2002).

1.4 RESEARCH QUESTION AND RESEARCH ISSUES

As management continually strives to improve performance and raise workforce productivity, many organisations have moved toward, or directly into, EIP (Addison & Belfield 2000; Kling 1995; Rowland 1998). Management has also seen volatility and rapid changes in the market place and seeks to adapt to them by building flexibility into their organisations to be more responsive to changes while focussing on competitive positions and sustainability of the business (Delaney & Huselid 1996). EIP, therefore, is seen as an appropriate strategy within this context and the following research question is proposed:

'How do coal mines in Queensland utilise employee involvement practices?'

The purpose of the research is to investigate how coal mines in Queensland understand the concept of employee involvement as it applies to improving organisational performance and their competitive advantage. From this understanding, the investigation will establish how coal mines in Queensland apply this understanding of EIP in their workplace. As stated in Section 1.2, from this understanding factors that influence the implementation of EIP and the sustaining of EIP within the organisation will be identified. The position that will be argued is that effective implementation of employee involvement practices is dependent on elements of individual motivation, organisation culture and individual perception of management commitment. At its core, effective EIP result from individual's decisions to commit their discretionary effort toward organisation goals by engaging EIP, and how the organisation seeks to foster and sustain their engagement.

A brief review of the literature of EIP and models has developed the following key research issues which will be expanded in the literature review.

RI 1: How does BMA perceive the concept of employee involvement?

(i.e. How people within BMA perceive EI and seek out any common themes)

RI 2: What EIP are utilised at BMA?

RI 3: What are the critical factors that influence the implementation of EIP at BMA?

(i.e. What people believe are factors that are critical for them to engage in EIP and seek out common themes)

RI 4: How does BMA sustain effective EIP?

(i.e. What people believe is currently done within BMA that allows them to be involved in the business)

RI 5: What strategies do BMA adopt to enhance effective employee involvement?

The research issues nominated above will be used to focus a more detailed literature review.

1.5 JUSTIFICATION FOR THE RESEARCH

This research investigates how Queensland coal mines understand and implement EIP. This research can be justified by four major means: a gap in the literature, the significance of the coal industry to the Australian economy, the research methodology used, and the utility of the findings.

Firstly, while there is a body of knowledge on what EIP are and studies have reviewed evidence for and against the benefits of EIP to the organisation and the employee. However, there is a gap in the literature with limited studies on the issues that impact on effective implementation of EIP. This study will contribute to the existing knowledge on the understanding of EIP and their implementation by seeking to establish the degree of alignment between theory and the application of EIP in Queensland coal mines.

While EIP has been studied for many years, a large number of these studies have focussed on defining the financial benefits to both organisations and employees (Huselid 1995; McNabb & Whitfield 1998). Studies investigating how EIP is conceived and utilised in workplaces and why employee may engage EIP concepts are limited, hence there is a wide scope for theory development.

Secondly, this research investigates EIP in the Queensland coal mining industry. This Queensland industry is a significant industry as it supplies 18% of the world's hard coking coal seaborne trade (BMA 2002) and generates revenue flows in excess of $1.5 billion from this production directly into the Australian economy (BMA 2002). The volatility of the world coal trade has placed increased pressure on the Queensland coal industry's competitive position (ICR 2001; ICR 2002; Yamamoto 2000). The exposure to the world markets and pressure on the industry's competitive position from the volatility in prices and exchange rates has required coal mining companies to respond to ensure market position, market access and revenue streams are maintained or enhanced (Bromby 2002; Pinnock 2001; Yamamoto 2000). This research throws light on EI as a response to the challenges faced by this significant industry.

Thirdly, previous studies evaluating EIP implementation effectiveness and organisational performance are mainly quantitative studies and while providing hard data, do not explore underlying issues associated with EI implementation. This study will utilise a qualitative research methodology based on a case-study strategy using principally in-depth interviews. This approach will allow underlying issues associated with EI utilisation and implementation and, in part, seek to fill the gap in research methodology (Eishenhardt 1989; Perry 1998).

Fourthly, there is the utility of this research. Yamamato (2000) recognises the impact that capital investment in the coal industry has had on productivity and the relative advantage that Australia held in its international competitive position as a result. This relative competitive

advantage has eroded under the pressure of lower world prices, with a reduction in favourable mining conditions driving costs up as the more accessible low-cost open-cut mines are depleted. Productivity improvements driven from capital investment have plateaued and increased the focus of mine operators on the productivity improvements available under revised work structures and practices in essence increasing the return on human capital (ICR 2000; ICR 2001). This study seeks to explore one response (that of EI) to the deteriorating relative competitive position through understanding influences and issues around the effective implementation of EIP at Queensland coal mines.

1.6 RESEARCH DESIGN AND METHODOLOGY

Research design is the process by which the logic of the investigation is designed such that the research question is answered (Berg 1999; Neuman 1997; Zikmund 2000). The research methodology is initially planned through consideration of the research question posed, the nature of the research issues, the control the researcher has over the actual behavioural events and the current state of knowledge (Janesick 1994; Morse 1994; Yin 1994).

In this investigation, the context is the interaction or relationship between the employee and the organisation when the employee exercises individual choice on participation, or not, in EIP program. Hence, it is the employee's perception within the organisation culture that is of primary interest and the understanding of the factors that influence this perception that will lead to inductive theory building on employee choices about participation in EIP programs.

Paradigms are important in setting the foundations of the research process as they define the relationship of the researcher to the investigation. Guba and Lincoln (1994) state that a paradigm is a set of beliefs that guide the investigation context. In determining the research paradigm for this

investigation, consideration of the research problem and issues under investigation was given along with the following contextual factors:

(a) EIP are varied in nature and dependent on the organisational context for their definition within that organisation; therefore they do not exist clearly within precise pre-determined boundaries;

(b) the benefits of EIP in organisations are not clear and there is a contemporary management debate on whether the benefits exist or not;

(c) if benefits do exist, the extent and contribution of the benefits to business performance are also unclear;

(d) in this sense, there is no clear reality for EIP; it is a complex interaction of individual values and motivations set in an organisation culture and generally observed only in discrete parts, i.e. productivity measures or financial outcomes that are generally limited to small timeframes; and

(e) EIP, while clearly known for their utilisation within organisations, are dependent on the relationship of the employees with intrinsic and extrinsic motivational factors within the organisational context.

These issues will be further developed in Chapter 3.

This complexity predicates a reality that is not clear and EIP boundaries that are imprecise. Also this complex reality can only be viewed by observing components of EIP processes. Due to the complexity of EIP and interaction of relationships, the researcher's basic values can impact on the objectivity from which EIP is studied. This latter point is important and results in increased importance of data verification, reliability and validity tests which are discussed in Section 3.7.

From the above, the critical realism paradigm is considered the most appropriate for the research design proposed as:

(a) there is no single reality for EIP;

(b) the reality that does exist is complex and dependent on situational factors, e.g. organisational culture;

(c) the reality can be observed by its components parts, e.g. individual EIP, productivity measures; and

(d) the researcher's interpretation of the situational factors and relationships may affect how reality is observed.

As stated, the primary scientific paradigm selected for the investigation is critical realism. This is thought appropriate as, while there is a reality that exists, it is imprecise and dependent on the situational context that cannot be easily observed (Trochim 2000). Perry (1998) and Yin (1994) also state that when the research problem is more a 'how do' rather than 'how should' question and searches for inductive theory building, the nature of the research investigation is qualitative. This view is supported by Zikmund (2000). Neuman (1997) and Yin (1994) state qualitative research is more aligned with the critical realism paradigm as it adopts assumptions about social life, relationships and objectives that are not precise and contained in discrete boundaries. Healy and Perry (2000 p.120) nominate features such as complex model interdependences and an explicit allowance for some measurement error in unobservable constructs as advantages of the critical realism paradigm. Given the nature of the research problem and the interdependence of the complex influences this is considered an appropriate paradigm and will be developed further in Chapter 3.

The proposed research methodology is by a case study within a critical realism paradigm as defined by Perry (1998, p.786) as 'a research methodology based on interviews…involving a body of knowledge'. As Perry (1998) citing Yin (1994) states, it involves the investigation of a contemporary phenomenon within the phenomenon's actual environment where the boundary between the environment context and the phenomenon is not apparent. Perry (1998) extends this application of critical realism to the research on contemporary areas of business that are likely to be pre-paradigmatic, and case-study methodology provides for research objectivity with the capacity for triangulation, as well as allowing for common measures of reliability and validity.

At the commencement of the investigation, the research design was exploratory in nature with the purpose being to 'clarify and define the nature of the problem' (Zikmund 2000, p.102). With regard to the investigation at hand, the purpose of that phase was to understand the factors that influence employee choices that impact on EIP implementation. This phase was primarily a literature search to determine the factors and critical influences in the areas highlighted in the research issues. Once this process established these influences, the research investigation moved into an explanatory investigation to determine the relationships between the influences and EIP implementation (Kumar 1996).

The investigation will be of the Queensland coal mining industry, namely BMA, with a number of relatively discrete operations in Queensland. Each operation functions with an overarching corporate mission and value statement (the BMA Charter) generally stating the value of people and each operation having profit responsibility. The operations function within the globally competitive environment and have domestic competition as well (i.e. competing for labour). This focus on implementation of appropriate business strategies for EIP to achieve sustainable business success has been recognised as being applicable across industry sectors (Hesselbein & Cohen 1999; Lawler, Mohiman & Ledford 1995) and, hence, understanding the factors that influence peoples choices to commit discretionary effort has a broader application beyond the Queensland coal mines investigated. From this type of 'how do', research question and the qualitative nature of the investigation a case study research strategy has been selected.

The first phase of the investigation is a literature review to establish the current body of knowledge and identify any gaps in employee participation concepts, decisions by people to engage EIP and EIP's relationship to business performance. In essence, the literature review will provide the focus for the data collection phase. This will form Chapter 2 of the dissertation.

From this phase, the influences on employee choices to participate in EIP was determined. These views were tested in an unstructured manner with a number of experienced human resource specialists for the veracity of the identified influences and literature review findings. The information gained was integrated into the literature review findings and is presented in a graphical model of influences, as shown in Figure 1.1.

As the proposed research methodology involves gaining an understanding of factors that influence employees' choices of the degree of participation in EIP programs, in essence it seeks to gain an understanding of employee's perceptions of EIP and their relationships with the organisation sponsoring the EIP program. Hence, it is proposed to utilise in-depth interviews as the primary data collection technique (Yin 1994; Zikmund 2000).

A major disadvantage of case study research is that all cases cannot be easily compared (Perry 1998). It is proposed to mitigate this disadvantage by:

(a) utilising prior research to establish a research protocol and interview guide for the interviews (Perry 1998) (refer to Appendices C.1 and C.3);

(b) confirming interview protocols with a pilot study; and

(c) utilising operations as discrete case studies that are under the one overarching corporate structure, hence triangulation of results can occur.

Perry (1998) advises that, while the literature review delivers the research issues, they are ignored at the start of the data collection and the case study interview should invite the interviewees to relate their experiences about the area of interest. However, that is not to say in this unstructured environment that some probe questions about the research issues will not be available, so that if the interviewee does not raise them in the first instance, the issues can be explored. The analysis of the data will be by comparisons with the prior expectations developed through the literature review.

In managing the case study data collection and analysis, the six quality criteria outlined in Healy and Perry (2000) will be applied, viz.

(a) Ontological appropriateness	- Generally a 'how' or 'why' research problem.
(b) Contingent validity	- Theoretical and literal replication used with emphasis on understanding why issues are present.
(c) Multiple perceptions of participants and of prior research	- Multiple interviews, unstructured questions used before probes.
(d) Methodology trustworthiness	- Description of case study procedures and interview procedures, plus use of the case study database provides an audit.
(e) Analytical generalisation	- Research issues identified prior to interview protocol development.
(f) Construct validity	- Use of prior theory and triangulation.

This overall process is shown in sequential step format in Appendix A.2.

1.7 RESEARCH OUTCOMES

The outcomes of this investigation contribute to the understanding of the influences on successful implementation of EIP and business performance. The study establishes the influences on successful EIP implementation and, in the context of the Queensland coal mines industry, discusses the influences in their order of impact on organisational outcomes.

The study outcomes support the previous research findings in establishing the importance of the organisational environment for employee practices to be effective and the need for EIP to be focussed on the employees' direct day-to-day work activity. This study extends that work to highlight the impact of informal EIP for engagement of people in the workforce and the vital role played by the supervisors in setting the organisational environment at the workplace that allows employees to develop positive workplace experiences.

The outcome is significant as Australian businesses function in an increasingly global competitive environment and the Queensland coal mining industry adds significantly to national wealth generation. Success in this environment is vital, not only to the sustainability of business, but also to Australian wealth creation. An improved understanding of the links between organisational effectiveness and successful EIP implementation will allow businesses to develop better management structures and philosophies that will lead to their sustainable success.

1.8 RESEARCH LIMITATIONS

The study will focus on one section of industry in Australia, namely the Queensland coal industry and, while this limits the findings of the investigation, they can be extended to other workplaces with a degree of caution due to its focus on employee perceptions and the generic nature of EIP.

While making the above statement it is acknowledged that:

(a) Other workplaces, while having similar EIP, the method of EIP implementation may be different due, for example, to employee educational background or workplace technology which may change the critical actors that influence EIP implementation.

(b) Other variables may come into play that impact on business performance, viz. management change, national economic performance or organisational restructuring.

(c) As one of the business performance measures is competitiveness, it is considered problematical that employees interviewed were able to give an overall accurate response on this matter.

Many HR practices involved in EIP are generic, allowing some generalisations of the results to be made. It is felt that the generalisation of the findings of this study will be constrained by the focus of this investigation on one industry sector.

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

In the global market in which many Australian businesses compete, the drive for economic performance and competitiveness is a never-ending process upon which the very sustainability of the organisation depends. This global business environment can be very volatile and requires businesses to be adaptive, flexible and responsive in their strategies to achieve economic performance and competitiveness. If organisations are to respond to these challenges, it is more than just the manipulation of capital and technology that will be required to be successful in this business environment. The rate of change is also a significant challenge to the behaviour of organisations that seek to be competitive in the global environment (Alhbrandt, Leana & Murrell 1992; Bablonka 2001). Business survival dictates critical attention to the competitive realities of profits, competition and people resources be given.(Bablonka 2001).

Many organisations have chosen the Employee Involvement (EI) approach to improving their organisational performance in response to these challenges (Freeman, Kliener & Ostroff 2000; Guthrie 2001; Mariapa 1998). These organisations have adopted a variety of strategies that range from quality circles, customer specifications, participatory decision making, teamwork, collaboration, re-engineering, consultative committees, total quality management, quality of work life, plus many more. These responses are used either singularly or in combination (Edwards &Wright 2001; Huselid 1995; Pfeffer 1995; Wood 1999). The key prerequisite to these strategies is the willingness of managers and their people (employees) to change the ways in which their work has traditionally been undertaken. Businesses that adopt the 'business as usual' approach are adopting a prerequisite for business failure in the context of the global business environment.

A common theme throughout these responses from businesses is that of EI. This is, the belief that employee involvement practices (EIP) contribute to business success in this challenging business environment (Freeman, Kliener & Ostroff 2000; Guthrie 2001; Mariapa 1998). This response has led to an increased and continuing interest in the forms of inclusive and collaborative people (employee) practices and processes utilised by organisations (Vandenberg, Richardson & Eastman 1999).

While EI programs have been available for long periods of time, their contribution to improved organisational performance has not been clearly understood or recognised (Guest 1999; Vandenberg, Richardson & Eastman 1999; Wood 2000). Yet, at the same time, EIP continue to be popular.

Management theory through the 1950s and 1960s was based around Tayloristic management concepts and applied to a mass production context where employees performed a defined manual task, often requiring little skill. People were considered as interchangeable parts within the production process (Vandenberg, Richardson & Eastman 1999; Wood 1999). Turnover and absenteeism were reportedly high and this was attributed to the high specificity of the job design and employee control. Motivation of employees to perform productively was reported to be low and this was compensated for by close monitoring, supervision and control to ensure output was maintained (Burke & Litwin 1989; Dunette 1998). Buffers of utility workers were used to compensate for the adverse production impacts of absenteeism (Macduffie 1995).

This literature review will look at some of the definitions of EI and overview some of the theory that underpins EI. It will also review common EI models and seek to discuss these models from the perspective of the willingness of the employee to engage in an EI program. From this discussion, issues will be derived that relate to the factors that influence the decision of an employee to commit to an EI program. These issues will form the basis of the research proposal.

2.2 THE NATURE OF EMPLOYEE INVOLVEMENT

Robbins (1998) defines EI as a participative process that utilises the entire capacity of employees, and encourages their increased commitment to organisational success. Robbins (1998) distinguishes between employee participation and EI on the basis that EI is more encompassing and seeks to engage the entire capacity of the individual focussed toward organisational success. This view is supported by Cotton (1996, p.219) who defines EI as 'a participative process to utilise the entire capacity of workers, designed to encourage employee commitment'. Employee participation, on the other hand, does not necessarily seek that degree of individual commitment and is seen rather as a subset of EI (Robbins 1998; Shadur, Kienzle & Rodwell 1999). For example, employee participation can be limited to participation in quality circles and only the outcomes of the quality circles, whereas EI would link the outcomes of quality circles to organisational success and can, therefore, be considered more strategic.

Mariapa (1998) considers EI as a term that describes management practices that encourage the commitment of employees to managerial goals and enterprise success. Mariapa (1998) outlines the four basic components of EI as the degree of involvement, the form of involvement, the organisational level at which involvement occurs, and issues encompassed by the involvement. Mariapa (1998) defines the degree of involvement as the extent of influence the employees have over the outcomes.

McNabb and Whitfield (1998) also define EI as four components based around communication channels and the extent of involvement. These are:

(a) upward problem solving;

(b) direct/downward personal communication;

(c) joint consultative committees/representative participation; and

(d) financial participation.

Neumark and Cappelli (1999) suggest that EI is work practices that transfer power to employees. This concept of EI as an organisational power transfer is supported by Pascale (1997) and Vandenberg, Richardson and Eastman (1999). However, Pascale (1997) relates it to the employees' perception of their ability to influence organisational performance and likens the effort to revitalisation of the organisation by incorporating employees. Pascale and Millemann (1997) cites Sears and the US Army as examples of the process.

Leana and Florkowski (1992) believe EI programs integrate psychological theory and management practice research. They believe the focus should be on three approaches:

(a) psychological - EI affects employee's attitudes and beliefs;

(b) management - benefits to employee job performance and work processes; and

(c) labour - union commitment, employee relations.

Dale and Cooper's (1992) view that EI does not have one set form, but can take a variety of forms attempting to satisfy any one of the four principles of humanisation at work, namely; security, equity, individuation and democracy. Indeed EIP can also be seen in this perspective as attempting to meet one or more of the above humanisation principles.

Shadur, Kienzle and Rodwell (1999) recognise the variety of EI, however, they distil the work of Eccles (1993) into three types of involvement, namely:

(a) suggestion involvement - employees contribute ideas;

(b) job involvement - better ways of organising and undertaking tasks; and

(c) high involvement - developing better decision making pathways.

Workers in the past were not expected or encouraged to think about the job but to follow rules, methods and procedures set by management. Performance was measured and controlled by management (Schermerhorn 1986; SIOP 2002). In contrast, flexible production concepts have recently been developed which put the worker in a more central or influencing position. Problems are identified and, where possible, are resolved at the workplace by the workers. A range of knowledge varying from problem solving and communication skills through to process understanding is needed to achieve this. However, these multiple skills and conceptual knowledge in this flexible organisational approach are of little value if workers are not motivated to contribute beyond the physical effort. This added application of mental or intellectual effort is labelled as discretionary effort (Edwards & Wright 2000; Macduffie 1995).

EI has a variety of definitions encompassing power sharing, participation, use of performance based rewards and information sharing. Kizilos and Cummings (1996) cite Lawler, Mohiman and Ledford (1995) as characterising EI as the use of practices for sharing power, information, rewards and knowledge with employees at all levels of the organisational hierarchy. This has been formalised into the PIRK model by Vandenberg, Richardson and Eastman (1999). This model was used and expanded on by Edwards and Wright (2000) and Kizilos and Cummings (c.1996) to focus on the concept of discretionary effort as a helping behaviour directed toward an organisational stakeholder. This discretionary effort description means that the effort is neither required, nor explicitly rewarded. In this sense, unlike motivation or attitudes, this discretionary effort should be directly observable.

In recent years, employee involvement has been widely debated (Edward & Wright 2001; Freeman, Keleiner & Ostroff 2000; Wood 1999). This debate has revolved around the definition of high commitment management, high performance work practices, high performance work systems, high involvement management and human resource management (Guest 1997). At their core, these definitions are all based on achieving improved

organisational performance, which in turn is focussed on value adding, or maintaining or improving competitive advantage (Shadur, Kienzle & Rodwell 1999).

In considering the EI definitions and attributes, it is clear that all have as their base a collaborative and inclusive approach between management and employees. For the full expected benefits of EI to be gained, both parties (management and employees) need to commit to the EI approach. In considering an EI definition, for the purpose of this study, the Robbins (1998) approach with the addition of aspects of Edwards and Wrights' (2001) view of discretionary effort captures the main elements referred to above, and the following definition, adapted from Robbins (1998), will be adopted:

EI is a management process that engages the entire capacity of the individual such that their discretionary work effort is committed to both their success and aligned with that of organisational success.

This definition recognises that EI programs are initiated by management and therefore an employees' decision to engage in the EI program is a foundation for the program's success, along with the application of discretionary effort by the employee. In essence, it is to motivate people in the workplace to fully commit their discretionary effort toward the organisation's goals. It is the effort above what is required to just undertake the prescribed workplace tasks which will result in EI program success. It also recognises that EI programs have a 'mutuality' about them, that is, both the employee and the organisation must perceive a gain from the EI programs.

In any EI program, the interface between the employee and the EIP is vital. How the employee sees that interface and then chooses to commit to participate in the EIP, and the degree to which the employee is willing to commit effort once participating in an EI program, is crucial to the success of EIP. Many factors will influence the way employees see EI programs not

the least of which is the congruence between the EIP, the organisational climate and the business context (Willcoxson 2000).

2.2.1 EI Summary

From the proposed definition of EI and Robbin's (1998) view of EI, the concept emerges of engagement of the individual toward organisational success. This leads naturally to the basis of individual motivational characteristics as building blocks for understanding how the degree of engagement, or employee decisions around the application of their discretionary effort, contributes toward organisational success. EI has its genesis from the fields of individual motivation (Ivancevich & Matteson 1987; Weston 1996; Wood 1999), and social relations in the workplace (Kizilos & Cummings 1996; Lazonick 1979; Shadur, Kienzle & Rodwell 1999). From these fields, EI programs were designed in their fullest sense to unlock individual potential and promote employee commitment toward achieving organisational outcomes. In essence, EI programs seek to motivate people in the workplace to fully commit their discretionary effort toward the organisation's goals.

Berg (1999) and Lawler, Mohiman and Ledford (1995) believe EI enables attitudinal reactions in employees to influence organisational performance and suggest EI increases the following attitudes:

(a) satisfaction;

(b) motivation;

(c) communication within and across functions;

(d) willingness to engage in problem solving; and

(e) enhanced acceptance of new work practices.

If EI is viewed as a strategy in terms of developing core business competencies, as opposed to the traditional business, markets and product strategies, then the focus of the strategy is driven down to the individual. While the definition given above captures the essence of EI from the

literature, there is a question about how the concept is actually perceived in the research field of practice targeted by this study.

This leads to the first of the research issues, namely:
'How does BMA perceive the concept of EIP?'

2.3 EMPLOYEE INVOLVEMENT PRACTICES

While no unified or single approach to creating involvement or inclusive practices has emerged (Guest 1997, Vandenberg, Richardson & Eastman 1999), there is a proliferation of terms used to cover employee involvement approaches to management that are different from the control-orientated traditional approach. For the purposes of this study, Employee Involvement Practices (EIP) is referred to as an umbrella term to encompass all these practices and will be used to cover both single and multiple employee involvement practices. Each of these approaches has the core belief that employees, through a collaborative and inclusive approach, have an enhanced contribution to make to the effective functioning and sustainability of the organisation. EIP will cover both the formal and informal approaches to employee involvement.

EI concepts are generally operationalised as:

(a) selection and recruiting;

(b) training program;

(c) performance appraisal;

(d) incentive compensation;

(e) job design;

(f) grievance procedures;

(g) information sharing;

(h) attitude assessment;

(i) labour-management participation;

(j) promotion criteria;

(k) gain share/profit share; and

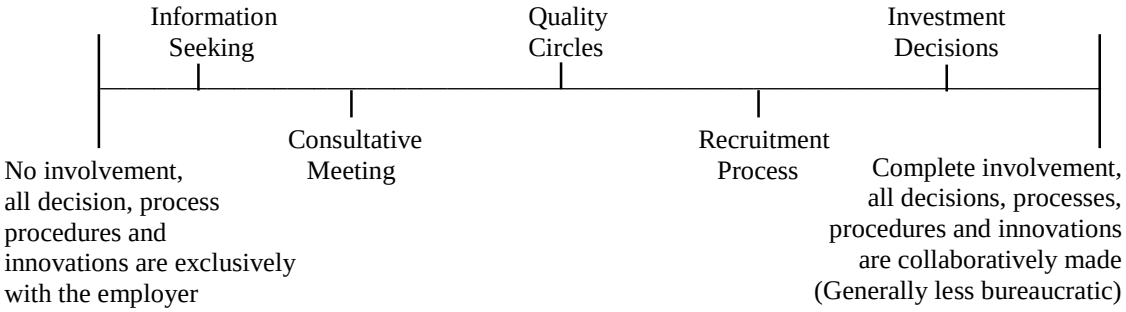
(l) decision making process.

(Huselid 1995; Ichniowski et al. 1996; Lawler, Mohiman & Ledford 1995)

In essence, as has been previously outlined, the concepts above have commonality with those associated with human resource management (HRM) concepts. The key difference is to what strategic aim they are applied to, and whether the application of practices is integrated together to achieve that aim. Indeed, there may be no difference between HRM and EIP, dependent on the organisational context. By using the term EIP, this covers the gambit of inclusive practices and policies such as those listed above, but it is by no means an exhaustive list.

There is, in all of these involvement practices, a belief that high performance has, by inference, high involvement practices. Yet there is limited evidence readily available to support this as high performance can also be achieved without high involvement practices (Brown & Reich 1997; Edwards & Wright 2001). Also in this context there is the paradox of high performance concepts which are directed toward attaining high performance and not that of attitudinal change. Nevertheless, high involvement is the people side of competitive strategies such as Porter's cost minimisation and quality/innovation categories (Wood & Albanese 1995; Wood 1999). Therefore, this wide group of involvement practices can be seen as a continuum representing a variety of practices that are contingent on the organisational context for their effect as shown in Figure 2.1 (Shadur, Kienzle & Rodwell 1999; Tesluk, Vance & Mathieu 1999).

Figure 2.1: Continuum of Involvement Practices



SOURCE: Developed for this dissertation

There is much debate as to whether the above approaches are viewed as either a univariate approach (one best practice) or a contingent approach (one of best fit) (Wood 1999). The general view in the literature points to the importance of situational and organisational aspects in EI which would favour the contingent approach (Shadur, Kienzle & Rodwell 1999; Tesluk, Vance & Mathieu 1999). A lack of longitudinal research inhibits this debate.

The widely supported PIRK model (Vandenberg, Richardson & Eastman 1999) suggests the synergistic nature of inclusive practices will be greater when the EIP are complementary (Lawler, Mohiman & Ledford 1995). From this point of view individual core concepts of EIP should be treated as a collective set of mutually reinforcing attributes (Delaney & Huselid 1996; Guest 1997; Vandenberg, Richardson & Eastman 1999).

Vandenberg, Richardson & Eastman (1999) have demonstrated that there is a set of practices that are antecedents to EIP. Practices such as direction setting, training opportunities, work design, flexibility and incentive practices, further supporting the situational or contextual framework for EIP.

2.3.1 Employee Involvement Links with Organisational Performance

EI outcomes have been represented as a panacea for a variety of workplace problems ranging from absenteeism, poor quality and high costs to inefficient production process (Leana & Florkowski 1992). While management practices such as gain sharing, quality circles and participative decision making have been present for many years, their acceptance or contemporary popularity is based on the keystone belief that EIP has a positive effect on organisational performance (Vandenberg, Richardson & Eastman 1999; Wood 2000).

The correlation between EI and business performance has generally been established as marginally positive (Freeman, Kleiner & Ostroff 2000; Guthrie 2001; Huselid 1995; Kling 1995; Pascale & Millermann 1997; Pfeffer 1995; McNabb & Whitfield 1998; Vandenberg, Richardson & Eastman 1999). However, the mechanism for that correlation is not largely understood. Indeed the strength of that correlation has varying degrees of support.

Huselid (1995) has gone on to attribute EI with tangible improved financial results based on a one standard deviation increase in financial performance over the mean of the firms studied. This, along with McNabb and Whifield's (1998) work in the United Kingdom, has resulted in a body of work which is referred to when supporting the claim that the application of EIP leads to improved corporate financial performance.

Guest (1997) states that there is no theory about EI's performance impacts. However, the approach taken to performance will be influenced by the disciplinary perspective adopted, i.e. production, economics or psychology. The key question posed by Guest (1997) and Leana and Flowkowski (1992) is, 'Who are the stakeholders of performance'? Guest (1997) constrains the view of performance to the dominant criterion of organisations that of financial performance. Given that this criterion is a determinant of resources that can be applied to other non-financial areas of the organisation

such as the ‘soft’ areas of training and development, this can be readily accepted. Also, without achieving satisfactory financial performance the organisation’s survival over time is doubtful. Yet to be sustainable other non-dominant criteria, such as environmental performance, may be vital. Hence the ‘balanced scorecard’ approach has been developed (Kaplan & Norton 1992).

Economic success for a business was outlined in Section 1.1 and it is not proposed to restate that discussion. Surrogates for improved business performance, such as productivity and attendance measures, will be considered indicators of organisational effectiveness and indicators of business performance.

Dyer and Reeves (1995) discuss EI outcomes as represented by organisational effectiveness as a group of stages shown below:

(a) human resource outcomes - absenteeism and turnover;

(b) organisation outcomes - productivity and quality;

(c) financial outcomes - Returns on Assets and Return on Capital Employed; and

(d) stock market outcomes - share price/earnings per share.

Dyer and Reeves (1995) see a sequential link in these stages so that EI impacts on human resource outcomes first, then organisational outcomes and, eventually, stock market outcomes. This suggests that in viewing EI effectiveness the first outcomes observed are human resources outcomes, followed by productivity outcomes, before improved financial returns are observed. This supports the view that human resources and productivity indications are more than just surrogates for EI effectiveness measures, but indeed are achievement milestones along the path to improved financial performance. It also implies any commitment to EI programs for improved financial outcomes needs a long term focus.

Edwards and Wright (2001) believe there is difficulty in measuring the performance changes due to EI as causal links are not clear and there is a variety of EIP to which outcomes can be attributed. This view is supported by Becker and Gerhardt (1996) who seek to determine EI outcomes using traditional measures like return on equity. Wood (2000) believes this problem in measurement is due to the difficulty in measuring labour effort. Using these indirect methods leaves the outcome open to interpretation and to the outcome being influenced by other factors such as capital improvements and technology change.

EI is an approach often targeted at enhancing or retrieving the competitive position of an organisation. To this end, it is generally associated with aspiring to high performance (Wood & Albanese 1995). The use of the word high implies the practice is aimed at inducing a performance greater than that achieved by the control-orientated practices of traditional approaches (Tesluk, Vance & Mathieu 1999).

Neumark and Cappelli (1999) suggest that EI is a work practice that transfers power to employees and adds to the body of literature that sheds doubt on the positive correlation between EI schemes and organisational results. They also demonstrate, from survey data, that economic benefits from increased productivity are offset by increased employee compensation costs that are inherent in EI programs.

2.3.2 Summary

EI involves a wide variety of operational practices which can be common to a range of approaches from HRM, high performance and high involvement. The involvement practices associated with these approaches can be seen as a continuum, from information seeking through to involvement in investment decisions, dependent upon the organisational context. No univariate approach to the concept of EI is apparent, although EI viewed through its practices and attributes can be considered a set of mutually dependent and reinforcing attributes and practices.

The wide variety of EIP can be summarised into five main schemes namely:

(a) Information sharing / communication processes;

(b) Decision making / problem solving processes;

(c) Business improvement/individual skill development;

(d) Financial rewards and incentives; and

(e) Performance management processes.

(Huselid 1995; Lawler, Mohiman & Ledford 1995; Vandenberg, Richardson & Eastman 1999; Wood & Albanese 1995)

The link between EI and performance is considered marginally positive, however, given the complex nature of work practices, capital investment, technology, management competency and worker competence, it is difficult to establish, without challenge, the degree of performance improvement due to EI. Yet at its base, the outcomes of human resource practices and organisational performance are the antecedents of financial outcomes by which overall organisational effectiveness is judged. While no correlation is directly and clearly established between EI and performance, EI as an approach is directly focussed on the areas of human resource practices and organisational effectiveness and is, therefore, considered worthy of being linked.

It is on this basis that establishing the form and nature of EIP utilised in an organisation will provide insights into the extent and nature of the EI approach, and on what performance goal it is focussed. This highlights the second of the research issues:

'What EIP are utilised at BMA?'

2.4 MODELS OF EMPLOYEE INVOLVEMENT

Models of employee involvement have been developed based upon whether the models' proponents view employee involvement as driven by processes that affect employee attitudes and behaviour (the humanist approach), or whether employee involvement is driven by management processes that

improve employee relations and job performance (the cognitive approach) (Locke & Schweiger 1979; Wood 1999). These approaches have been categorised in the literature as:

Humanist Approach - aspects associated with attitudes and behaviour, i.e. motivation.

Cognitive Approach - knowing the work processes and having the knowledge on job performance.

(Guest 1997; Locke & Schweiger 1979; Wood 1999)

EI programs have also been categorised by Ichniowski et al. (1996) as either 'work harder' (emotional approach) or work smarter types (cognitive approach). Berg, Appelbaum, Bailey and Kalleberg (1996) claim that the work smarter approach is more important than any changes that make work more interesting or enjoyable due to the utilisation of information that management lack and self co-ordination in the workplace both of these attributes have a direct impact on day-to-day work of employees. Guest (1999) supports this view by breaking down HRM strategies that use inclusive approaches into the hard approach (work smarter) and soft approach (work harder).

In extending these approaches Leana and Florkowski (1992) consider four models of employee involvement, namely:

(a) human relations;
(b) human resources;
(c) workplace democracy; and
(d) instrumental management.

Features of these models are summarised in Appendix B.1.

From these models, two views of EI emerge. Firstly, EI as a process of gaining greater acceptance of organisational objectives and secondly, EI as a counter balance against management's power. The EI models above highlight the dichotomy of EI in practice. That is, who benefits the most

employee or employer? Hence, the objectives of an EI program must be clear on who is entitled to benefit the most and how the benefits of EI will be shared, if at all, to ensure negative behaviours do not materialise as a result of unfulfilled expectations.

Leana and Florkowki (1992) classify extrinsic EI models such as gain-sharing, production bonus and profit share as being practical solutions to economic problems, as opposed to an application of psychological or political theory. Yet there is a strong link to motivational models and, therefore, the human relation and human resource models although in considering the application of extrinsic models it appears their design is not based on a theoretical underpinning of EI defined by Robbins (1998). Extrinsic models therefore can be considered an economic contract and not a psychological contract. The literature is not clear on which contract has the more powerful impact on job performance and situational factors that support one contract above another. Yet intuitively it is felt if extrinsically orientated EI programs are to be sustainable they will also need to be based on intrinsic factors.

Extrinsic models of EI have been based on Lawler's (1986) work that asserts people will not be fully motivated to work until they are financially, as well as psychologically, committed or integrated into the organisation (Lawler & Finegold, 2000). Leana and Florkowski (1992) also suggest that the impact of EI programs on employee attitudes and behaviours are greater if monetary rewards are incorporated into the program. They go on to report that it is the monetary reward that is the primary driver and that intrinsic outcomes are secondary or incidental. The importance of reward is supported by the PIRK model of EI described by Vandenberg, Richardson and Eastman (1999). This model will be expanded on in Section 2.6.

Extrinsic models of EI are founded in motivational theory such as equity, reinforcement and expectancy theories that are outlined in Section 2.5.1. This is not to say that intrinsic aspects are ignored as it is those cognitive elements, aligned with the incentive or monetary reward, that derive

behavioural outcomes. These are recognised in the linkages shown in Figure 2.4.

Gainsharing schemes have been reported by Hammer (1988) to require the presence of participation and a wage-effort link to deliver positive organisation outcomes. In this sense the extrinsic EI mediates potentially valuable outcomes with positive feedback and the employees' perceptions that they do make a difference. It is this feedback link from the rewards to individual job performance that reflects outcomes that would be an additional feature of Figure 2.4.

2.4.1 Impact of EI Practices

There has been considerable debate as to whether the organisational impact is due to the single application of an EIP element or whether the impact is attained with the application of bundles of these elements (Lawler, Mohiman & Ledford 1995; Pfeffer & Veiga 1999). Pfeffer (1996) states it should also be seen in the context of the organisation's strategic direction, core organisational values and structure. Internal fit or congruence between application of the elements and the organisation's context should also be considered, otherwise organisational ambiguity may occur. This can result in confusion and conflict contributing towards EIP implementation failure (Delaney & Huselid 1996; Guest 1997; Wood & Albanese 1995).

Jackson and Schuler (1995) have reported that various conceptual frameworks such as general systems theory, role behaviour theory, institutional theory, resource dependency theory, human capital theory and agency theory have been used as links between EIP (as represented by progressive HRM practices) and organisation level outcomes. Delaney and Huselid (1996) believe these models all converge on the view that the management of people through human resource management practices are all important in the determination of both employee and organisational outcomes. Delaney and Huselid (1996) distil this down to HRM practice

impacts on employee skills, ability, motivation and work processes. This view is supported by Marchington and Grugulis (2000).

While there has been advocacy for the application of the HRM practice as bundles to get synergistic benefits, there are those such as Wood (2000) who argue against that view. Wood (2000) contends that if the benefits of the HRM practices are so clear then partial, or incomplete, implementation of bundles of HRM should also lead to benefits. He also argues that the supporting research is inconclusive as the scope of the research is variable or limited. Some studies ignore job design and performance pay, which can lead to misleading prescriptions on how to increase organisational effectiveness (Berg 1999; Guest 1997). Indeed Wood (2000) argues that practices based on Taylor's theories may be appropriate in some circumstances, however, he does not specify those circumstances. His point is that it cannot be assumed that EIP will automatically result in improved performance.

Conger and Kanungo (1988) view employee empowerment as a motivational construct and link empowerment to the self efficacy of the goal setting motivational theory. They extend this to four cognitive dimensions that reflect an employee's perception of their work, namely: meaningfulness, competence, choice and impact. From this work it can be suggested that the employee's choice to be involved is an extension of empowerment practices.

2.4.2 Summary

Models of EI range from a humanistic approach to the cognitive approach, work smarter and work harder strategies, economic contracts and psychological contracts, and models around workplace power and democracy. In assessing the validity of these models, consideration of the impact of the EIP associated with the models, can contribute to understanding the models' application. In this sense, what immediately stands out is that no one EIP on its own has an impact. For impact, EIP

need to be considered for the interaction of bundles of congruent EIP integrated within the unique context of the organisation.

Despite the extent and variety of EI investigations, the cause or mechanism by which EI brings about the benefits claimed is still unclear (Marchington & Grugulis 2000). The simplest likelihood is that the employees get what they need from EI programs, satisfying their motives and thereby gaining job satisfaction (Locke & Schweiger 1979).

The impact of EI practices on people is not the actual EIP, but more that the employee perceives they are valued by the organisation. Hence, the actual EIP practices can be considered, to a degree, irrelevant if the impact of the EIP is that the employee perceives they are valued.

2.5 INFLUENCES AND FACTORS ON EIP IMPLEMENTATION

When considering organisational effectiveness, there is a general consensus that productivity measures can be used (Huselid 1995). However, trying to ascertain the major determinants of these measures is complex. In addition, determining how these measures are associated with individual effort and how they can be differentiated from the impacts of technology and capital is quite difficult. This area is not fully covered in the research (Cotton 1996; Edwards & Wright 2001; Macduffie 1995; Wright 2000).

Guest (1997) and Ichniowski et al. (1996) also report on the difficulty of isolating a single causal mechanism that produces effects on the organisation's economic performance. This difficulty occurs as EIP utilises clusters, or bundles of practices, generally associated with organisational change approach (Macduffie 1995). Ichniowski et al. (1996) contend that the introduction of these changes also produces structural changes that improve performance that are largely independent of the effects of individual motivation and effort. While Ichniowski et al. (1996) produce little evidence to support this position, effective structural changes are still dependent on the willingness of people to accommodate these changes

within the organisation and work within new structures. The cumulative effect on organisational performance of structural change and people motivated to apply discretionary effort to these changes would be expected to be greater than the improved performance from just the structural changes alone.

In essence, this highlights the difficulty of clearly identifying and measuring organisational improvements due to EIP. This difficulty is also recognised by Bellamy and Torsell (c.1999) and Berg (1999) with regard to assigning increases in job satisfaction to work social relations, job design attributes or intrinsic reward. This difficulty is due in part to employee personality variables that interact with relationship dynamics between the employee and the organisation and other employees which impact on the effective implementation of EIP (Bellamy & Torsell c.1999). Berg (1999) also states that this relationship dynamic influences, and impacts, on work roles, job definition and the employee-management relationship.

Research from Marchington, Wilkinson, Ackers and Goodman (1994) demonstrate the view that employee perception appears to be a significant influence in the success of employee involvement programs. They go on to postulate that this perception relates to organisational climate and its interaction with EIP. The role of the individual in organisational performance and how they perceive that role is then of vital concern when considering the effectiveness of EIP.

2.5.1 Theories of Motivation

It is essential in reaching an understanding of EI and organisational performance to appreciate the links between individual motivation, job performance and organisational outcomes. Individual performance is the basis upon which organisational performance is founded (Ivancevich & Matteson 1987). It is from this premise that understanding the drivers of individual performance is vital for setting and attaining organisational success.

Motivation is the concept used to make sense out the behaviours that are observed so behaviours can be predicted (Ivancevich & Matteson 1987). Motivation theory attempts to explain and predict how individual behaviour is stimulated, started, sustained and stopped (Ivancevich & Matteson 1987; Robbins 1998). Motivation has been studied for many decades and is a complex concept, with no all encompassing theory clearly established. Most workplace motivation theories are based on a concept of needs which are described as sensations of deficiencies employees feel at any point in time. These needs are the triggers or energisers of behavioural responses (Ivancevich & Matteson 1987; Weston 1996).

The needs are considered to be:

(a) physiological needs, e.g. food;

(b) psychological needs, e.g. personal growth; and

(c) sociological needs, e.g. affiliation.

Ivancevich and Matteson (1987) have classified a range of motivational theories into two types, namely:

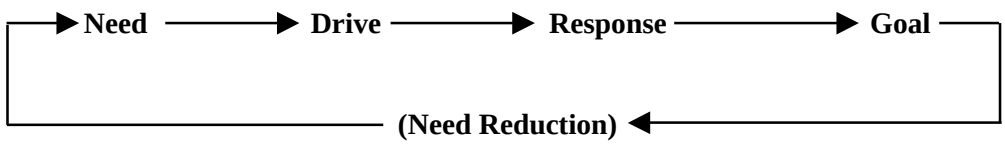
Content Theory: A determination and description of factors within a person that trigger the behavioural responses.

Process Theory: An explanation of how behaviour in energised, directed, maintained and stopped.

An overview of common motivational theories is given in Appendix B.2.

From this overview of some major motivational theories the following simplified model was constructed, shown in Figure 2.2.

Figure 2.2: Simplified Model of Motivation



SOURCE: Coon, 1986

There is no one all-encompassing workplace motivation theory primarily because of the interaction of factors listed below:

(a) all employees are not alike;

(b) situations vary;

(c) desired outcomes linked to desired performance will vary;

(d) systems vary in their degree of equity; and

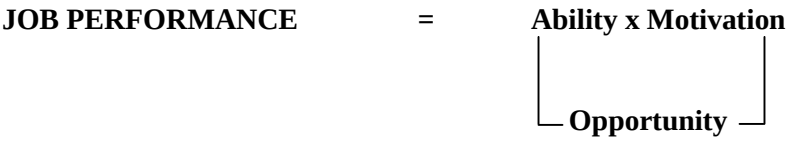
(e) the differing evaluations individuals place on outcomes.

(Berg 1999; Wood 1999)

2.5.2 Job Performance as a Function of Motivation

Ivancevich and Matteson (1987) and Robbins (1998) make the linkages depicted below in Figure 2.3 between job performance, ability and motivation.

Figure 2.3: Job Performance Relationships



Where: Ability: Is the skill and capacity to do the task

Motivation: Is the willingness to exert effort to achieve opportunity

Opportunity: Recognises the individual must have the opportunity to perform the task.

SOURCE: Derived from Ivancevich and Matteson 1987 and SIOP 2002

Ability and motivation with opportunity, as shown in Figure 2.3, result in job performance, but these attributes themselves actually manifest as workplace behaviour. The actual intent of the behaviour is to satisfy personal needs and goals (SIOP 2002). It is this link between the satisfaction of goals and needs with behaviour that is the basis for the

motivational theories of expectancy and goal setting in as much as job satisfaction follows effective job performance. Also, Expectancy Theory is predicated on an individual acting in a certain way based on the expectation that the act will result in a given outcome and the outcome will be attractive to them and result in a reward. In this way that linkages to effort and performance (how hard will I have to work?), and to performance and reward (what will I get if I perform?) are made (SIOP 2002; University of Toronto 1995).

The link between motivation and job performance is supported by Delaney and Huselid (1996) who also cite a number of studies that have established the importance of motivation to job performance. Individual workplace motivation can be defined as the desire, or otherwise, to apply discretionary effort—that is, 'the willingness to exert high levels of effort toward organisational goals conditioned by the effort's ability to satisfy some individual need' (Robbins 1998, p.1-24). Aspects of this are characterised by:

(a) motives of the individual;

(b) individuals differ in their basic motivation;

(c) focussed on organisational perspectives;

(d) effort is a measure of intensity;

(e) quality of effort is important; and

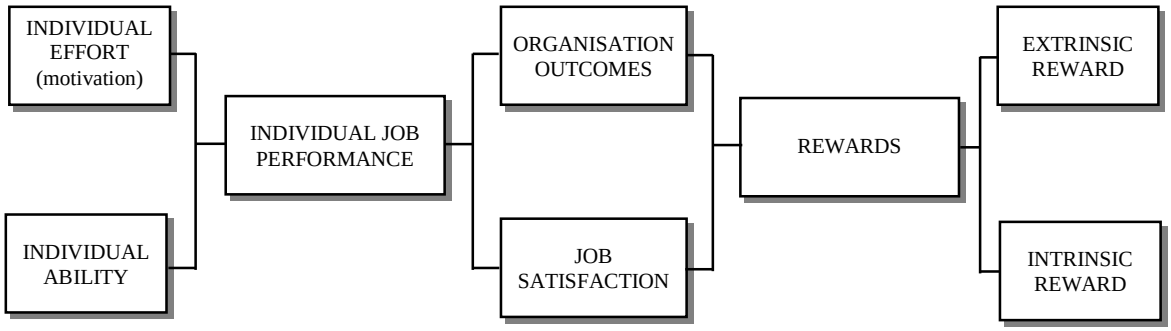
(f) the expectation that the effort will lead to performance, the performance will lead to a reward and that reward is attractive to the individual.

(Locke & Schweiger 1979; Robbins 1998; University of Toronto 1995)

This process pre-supposes a cognitive process whereby the personal outcomes must be such that there is an expected link between expended effort and outcomes. Also, the rewards that flow from that expended effort are attractive to the person in the form of goal attainment.

The extension of these key aspects for organisational outcomes can be shown as:

Figure 2.4: Linking Individual Characteristics to Rewards



SOURCE: Derived from Robbins (1998), SIOP (2002)

Extrinsic rewards can be summarised as pay, bonus, incentives, recognition, etc. The intrinsic rewards can be summarised as including self actualising attributes such as personal worth and job satisfaction.

The intrinsic rewards are powerful when the employee perceives them as being desirable. It is this perception that is a crucial component of motivation, that is, the individual's ability to organise and interpret sensations and observations into meaning (Weston 1996). Robbins (1998) also indicates that how we perceive and assess motivation is impacted on by individual characteristics such as education, gender, socio-economic group and culture.

To summarise the individual and motivation:

(a) motivation is a key driver to individual job performance;

(b) organisational performance improvement is linked to individual performance;

(c) motivation of individuals should be a key concern of organisations;

(d) monitoring of needs, abilities, goals and perception is needed to ensure motivation is managed to optimise organisational outcomes;

(e) challenging tasks with links to personal outcomes are prerequisites for individual motivation; and

(f) creating a motivational climate within the organisation builds the individual's perspective expectations.

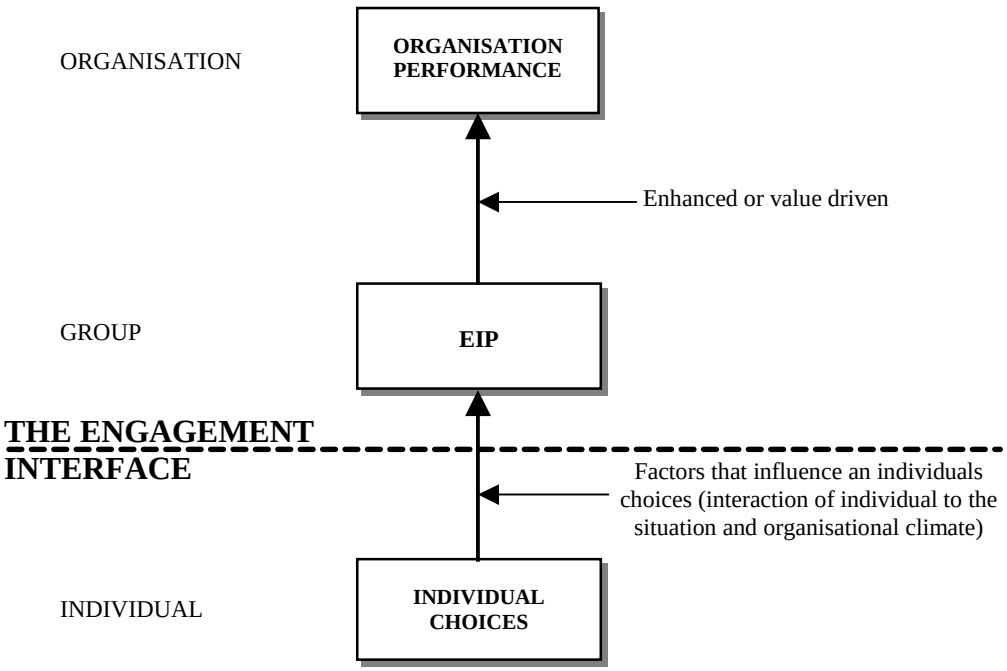
It is from this perspective that models of EI will now be discussed.

2.5.3 The Individual as a Building Block

Robbins (1998) takes the approach of considering organisations as sequential building blocks based on individual, group and organisational level determinants. Robbins (1998) classifies the individual determinants as the personality, values, attitudes and skills, a view also supported by Cotton (1996). Robbins (1998) recognises that people's behaviour when in groups is different from their behaviour when they are alone, which highlights the dependence of the interaction of the individual with the employee's immediate workgroup on organisation performance. Robbins' examples of group level determinants are communication patterns, leadership styles and conflict resolution skills, while overall organisational level determinants reflect work processes, job design, policy and procedures and internal culture.

Robbins' (1998) building block approach is based on the premise that the individual building block is the least complex of the building blocks and moves to the more complex group building block, and then the organisational building block. The major reservation with this approach is Robbins' (1998) inference that individual level determinants are less complex than organisational level determinants. It is postulated that the individual is complex and that the relationship an individual has with the group and organisation level cannot be necessarily regulated or replicated (Ichnioswki et al. 1996; Wood 1999). The following EI model is proposed:

Figure 2.5: The Individual as a Building Block of Organisational Performance



SOURCE: Developed for this dissertation

Beyond the complex interaction of the individual's attributes is the key aspect of the engagement interface. Unless the individual crosses this interface, EIP effectiveness can never be maximised.

While EI programs have, as a foundation block, the individual, they are initiated by management. It is therefore management's perception of EI benefits and management's willingness to initiate EIP that is the first step in any EI process.

2.5.4 EI for a Management Benefit

EI programs achieve organisational performance through mechanisms involving people in aspects of decision making that have previously been the reserve of management (Dyer & Reeves 1995; Rowland 1998). The benefits are represented as:

(a) provision of a greater sense of ownership for people;

(b) greater utilisation of people's knowledge and skills;

(c) greater understanding of how their work can be done more effectively; and

(d) greater appreciation of management's perspective, in terms of business operation and performance.

(Bryson 1999; Freeman & Kleiner 2000; Ichniowski et al. 1996; Lawler 1996; Lawler 1999; Leana & Florkowski 1992)

These EI benefits are essentially intrinsic and are represented in aspects of the Expectancy theory and McGregor and McCelland's Learned Needs theory of motivation. In addition, Guest (1997) and Kizilos and Cummings (1996) suggest the benefits employers gain from EI are generated by those factors listed below which aggregate to result in an overall improvement to organisation effectiveness:

(a) highly motivated workforce;

(b) better relationships between employees and management; and

(c) acquisition of information that will positively improve costs, efficiency, effectiveness and quality.

It is from this belief that EI programs are promoted as providing intrinsic benefits to employees as well as benefits to the organisation's performance that in turn reflect a benefit to management benefit. However, for EI to be implemented the employee first must see a benefit that will be a driver, or incentive, to move through the engagement interface. This leads to considering EI from an employee perspective.

2.5.5 EI for Employee Benefit

While the evidence suggests there is a marginally positive correlation between EI and organisational outcomes, this correlation may be due, in part, to the mutual benefit perception of employers and employees (Guest 1999). Equity motivational theory also suggests that without sufficient sharing of benefit the employees may eventually reject EI if they perceive the only beneficiary of EI is to be the organisation. In this sense, EI

programs must establish in employees a belief they have been meaningfully engaged in terms of the intrinsic rewards, for the expected mutual benefits to flow. This again highlights the vital aspect of individual engagement for EI success.

Macduffie (1995) supports this view and explains that workers will commit their discretionary effort contributions when they perceive that their interests and the organisations interests are aligned, or there is a reciprocal investment from the organisation. Cole (1979) and Dore (1992) define this as the psychological contract. This will be further discussed in Section 2.5.8.

While employers initiate EI programs, employees may well have a different perception of what the EI program is meant to achieve and hence potentially unrealised expectations. It is vital to the sustainability of outcomes and the eventual integration of EI into normal management policies and practices that any mismatch of expectations is resolved (Marchington & Grugulis 2000). Helper, Levine and Bendoly (1999) have looked at a number of approaches to Employee Involvement and their impact for employees. These are summarised in Appendix B.3.

Involvement does not just happen, it is initiated by management action and its existence and continuance must be supported by management commitment and practices. Research into this area is limited and Vandenberg, Richardson and Eastman (1999) suggest the following two factors as contributing to this limitation:

1. practices are examined in isolation from one another and no one practice is likely to result in a significant impact for any organisational level outcome; and
2. a wide range of practices are included without any theoretical justification which reduces the precision of the findings.

Yet despite this, it is clear that the employee perception of management's role and commitment will have an influence on EIP implementation (Marchington & Grugulis 2000).

2.5.6 Benefit From EI or Reward System?

Tesluk, Vance and Mathieu (1999) recognised the inconsistency of research in establishing that EI has a positive impact on organisation outcomes. They identify this difficulty as due, in part, to reinforcement or recognition systems in EI that make it difficult to determine what is actually driving the outcomes, i.e. the EIP or the reward, and the fact EI is generally implemented as a multiple of EIP.

McNabb and Whitfield (1998) recognise the issue of discretionary effort in the context of the principal-agent problem in the employment relationship. They establish that variability of employee effort, co-operation and improvement contribution to the variability of work process inputs. They further state that congruence between the interests of employees and those of their employers is vital. McNabb and Whitfield (1998) see solutions to this principal-agent problem as close monitoring of worker performance deemed as the 'stick' approach, but they view this as costly and leading to antagonistic endogenous worker behaviour. The alternative solution deemed the 'carrot approach' is based on remuneration rewards for individual output. This 'carrot' approach also had some difficulties, such as differentiating individual contribution from group results and synergies that groups can develop. Indeed a focus on individual reward can be a barrier to achieving the synergies of groups. The 'carrot' approach has been extended to utilise group incentives, however, this has a 'free rider' problem inherent in its structure.

McNabb and Whitfield (1998) suggest the best way to overcome the principal-agent problem is to develop an environment based on high-trust relationships and see employee participation schemes as mitigating the inherent problems of the principal–agent problem by establishing more

positive employee-management relationship. Ouchi (1980) supports the view of the need to address positive employee management relationship to address the negativity inherent in the principal agent employment relationship. McNabb and Whifield (1998) also propose that EI schemes, if they are to be successfully implemented, must be linked to a gain-sharing mechanism which reflects and recognises extra involvement and responsibility people undertake.

2.5.7 Employment Involvement Needs a Supportive Environment

Vandenberg, Richardson and Eastman (1999) believe that one of the conditions for successful implementation of EIP is to make EIP worthwhile for individuals to gain benefits and to 'take the steps necessary to developing the perception among the majority of its employees that they are indeed involved in construction of a culture or climate of involvement' (p.328). In so doing this builds the psychological attachment of the employee to the organisation.

Cotton (1996) review of EI programs has identified four key characteristics of effective involvement programs, namely:

(a) a focus on everyday work; not organisational policy;

(b) employees make decisions, not recommendations;

(c) EI is part of ongoing changes; and

(d) changes in job design are substantial.

These key characteristics for successful programs clearly have their genesis in management decisions and the organisational climate a view supported by Lawler (1996) and Lawler and Finegold (2000).

Tesluk, Vance and Mathieu (1999) have also examined the effect of participatory work climates and established that the presence of a participatory climate has a positive influence on employees' attitudes and link this to actual employee performance and organisation effectiveness

(Bellamy & Torsell c.1999; Berg 1999). Lawler, Mohiman and Ledford (1995) and Tesluk, Vance and Mathieu (1999) support the view that top management support for EI is critical in establishing a participatory climate, not the least of which is management's belief that employees have the knowledge and skills to improve organisational outcomes. Equally, top management set the organisation goals, policies, procedures, rewards and expectations that help people interpret and create a sense of imperative that will guide their actions. This latter point is quite vital, as employees establish their perception of EI programs that ultimately influences their behaviour in EIP. Management attitude and actions in this context serve as a sense-making mechanism for people, which is a key attribute in forming employee perceptions that influence their behaviour.

Tesluk, Vance and Mathieu (1999) also believe that employee perception is influenced by the extent to which they are encouraged and supported to participate in EIP. This is the opportunity referred to in Figure 2.3. Berg (1999) also recognises the importance of the opportunity to get involved as being a positive influence on employee perception of EIP. The opportunity is the opportunity to engage the EIP.

2.5.8 Engagement by the Individual

Vandenberg, Richardson and Eastman (1999) cite research demonstrating the strength and powerful influence that subjective beliefs have over individuals and organisational effectiveness, which is greater than any logical assessment. Hence, applying this to the model in Figure 1.1 it is the individual's view of EIP that ultimately impacts or controls the degree of effectiveness of EIP. The employee perception of the engagement interface, and those factors that influence their choice to move through the interface and fully embrace EIP, will control the success of the EI program.

Riordan and Vandenberg (c.1999) have operationalised the individual level attributes that influence EIP to include job satisfaction, organisational commitment and turnover intention. They have called this collection of

attributes employee morale. This link to morale and organisational effectiveness is established, in the view of Vandenberg, Richardson and Eastman (1999), by the motivational model of need satisfaction. This view is also supported by Lawler (1995).

Vandenberg, Richardson and Eastman (1999), from Lawler's work, derived and limit the range of EIP to those that would promote more than one involvement attribute. These EIP are:

(a) work design - EIP as represented by use of teams, 360° feedback, broad banding;

(b) incentive practices - EIP as represented by company, individuals, team, long term and short term incentives;

(c) flexibility - EIP attributes of telecommuting, flexitime, job sharing;

(d) training opportunities - range of training given; and

(e) direction setting - EIP practices such as development plans and individual performance objectives.

In the employment relationship, Capelli et al. (1997) state there is an implicit contract between the employee and employer called the psychological contract. O'Driscoll and Randall (1999) see this contract as having two aspects. The first is of affective commitment in which the employee's values and goals are aligned with the organisation. The second is continuance commitment in which material benefits are represented in essence, the intrinsic/extrinsic reward combination. Shadur, Kienzle and Rodwell (1999) see the psychological contract as represented by the amount of mutual reciprocity present in the implicit contract, that is, the extent of reciprocal investment in each group's wellbeing (Pil & Macduffie 1996; Wood & Albanese 1995). Hence, the greater the mutual reciprocity, the greater the strength of the implicit contract. It is within this framework of the psychological contract the employee's perception of EIP will be formed. It is how the employee gives meaning to the environment, in the context of

their experiences, from which they will interpret EIP and this, in turn, influences their behaviours and forms attitudes (Cotton 1996; Leana & Florkowski 1992; Locke & Schweiger 1979). Therefore, it is contended that a person's choice to move through the interface and engage the EIP will be affected by the psychological contract and their perception of organisational climate. It is the engagement of EIP the commitment of discretionary effort that leads to the improved performance sought.

2.5.9 Summary: Key Factors Influencing EIP Engagement

When viewing the range of EIP practices, then considering employee aspects of EIP and correlating this with motivation concepts, a common theme feature emerges. In essence, when workers perceive they are valued by the organisation and that perception is periodically validated they will form positive work experiences and the EIP utilised becomes immaterial. EI is, at its core, a process that demonstrates people are valued by the organisation.

Many writers highlight the lack of vigorous analysis to determine the impact of EIP on organisational performance and its outcomes (Locke & Schweiger 1979; Wright 2000). This in part may well be due to the variety of EIP, the organisational context, the methodology of application of the EIP in the organisational context and the 'noise' from other organisational changes generally associated with EIP implementation (Vandenberg, Richardson & Eastman 1999; Wood 1999).

At any time, an organisation's position on the EI continuum will be governed by its organisational context, which amongst other things, will be governed by management commitment and the history of the development of the organisation and organisational culture (Berg 1999; Tesluk, Vance & Mathieu 1999; Wood & Albanese 1995).

Yet EIP can only promote and give the opportunity for involvement. Thereby, the potential for organisational improvement is only gained once

the employee decides to engage the EIP. The factors that influence the employee perception, and control the choice the employee makes to move through the interface of participation to physically, intellectually and psychologically engage in the EIP, can be summarised as:

(a) belief in the 'mutuality' of the EIP;

(b) transfer of power is on offer in decision making;

(c) the EIP will actually affect their day-to-day work;

(d) employees have the opportunity to have an impact;

(e) employer's expectations of EIP are grounded in reality and congruent with organisational direction;

(f) organisation direction is clear;

(g) there is congruence between the employee's value system and the organisation's value system in practice; and

(h) employees believe management is committed.

(Berg 1999; Burke & Litwin 1989; Conger 2000; Cotton 1996; Guest 1997; Kaydos 1999; Lawler 1999; Savery & Links 2001; Tesluk, Vance & Mathieu 1999)

These influences are shown in the schematic of 'Proposed Relationships Within EIP' of Figure 1.1.

The third research issue to emerge from this discussion on models of EI and the key factors that influence an individual's decision to engage EIP is:
'What are the critical factors that influence the implementation of EIP at BMA?'

2.6 SUSTAINING EIP

While the EIP approaches can be considered bundles of integrated practices, once the extrinsic aspects of reward are stripped out, the relationship to the general models of EI can be seen that have, as their focus, mutuality and organisational harmony. Additionally Helper, Levine & Bendoly (1999)

illustrate the individual impact of EI on employees which clearly demonstrates that employee benefits are essentially perception driven. This is consistent with motivational models of expectancy theory and goal setting.

From the above and the work of Cotton (1996), Guest (1997), Lawler (1996), Lawler, Mohiman and Ledford (1995), Tesluk, Vance and Mathieu (1999), Vandenberg, Richardson and Eastman (1999) and Wood (1997), the following common workplace elements are identified as being influential in an employee's decision to engage in EIP practices:

(a) involvement in decision making *(power);*

(b) financial rewards *(reward);*

(c) job security;

(d) skill development *(knowledge);*

(e) internal consistency *(information);*

(f) trust in management;

(g) focus on day-to-day activity; and

(h) part of an overall change process.

The parenthesis used above indicate the link to the PIRK model of EI proposed by Vandenberg, Richardson and Eastman (1999), which is predicated on a power transfer from management and workers.

Vandenberg, Richardson and Eastman (1999) propose the PIRK model for EI links, with the five main schemes proposed in Figure 1.1 and Section 2.3.2 in the following manner. Power transfer, the basis of the PIRK model, is represented by the Decision making / problem solving processes scheme shown in Figure 1.1 whereby workers' influence or ability to directly make workplace decision is captured. Information is directly linked to the Information sharing / communication processes scheme of Figure 1.1 which is the basis for effective decision making and problem solving. Reward is directly linked to the financial rewards and incentive schemes. The PIRK's

knowledge element is linked into two schemes of Figure 1.1, namely, the business improvement / skill development scheme, and the information sharing / communication processes scheme whereby knowledge is shared, and used, within the organisation for decision making, problem solving and communication. Of interest is that the PIRK model does not directly address the performance management processes scheme proposed. However, a case could be made to consider this aspect as part of the PIRK model's reward component. Given the breadth of performance management, both individually and organisational, and its impact over a number of the other schemes, it is considered to be worthy of a scheme in its own right. To see performance management only in the light of rewards is considered a narrow focus.

Tesluk, Vance and Mathieu (1999) have found few studies investigating influences on individual work attitude and behaviour. A number of participatory climates, such as management attitudes, communication practices and supervisory style, has been identified as being positively related to individual work behaviour indicators such as turnover and satisfaction. They suggest this is due to the indirect measures used, as well as the lack of organisational cross-level research.

The reported research in the link between individual behaviour and attitudes with organisational outcomes of EI appears limited, primarily due to the difficulty in research of multiple organisations and multiple levels within organisations, which constrains the generalisation of research outcomes. This limitation is also reflected in the difficulty of attempting to differentiate the outcomes of EI from the organisational impacts of other organisational change processes which are normally associated with EIP implementation (Lawler 1996). Most of the available research is based on survey methods which utilise questionnaires. This limits the results to those who respond, the dependence on self-assessed information, reduced opportunity to explore reasons for certain responses, and the survey results represents the respondents' view at one point in time.

To a certain degree, a perceived good attitude to work is characterised as a worker with motivation, good commitment and a good work ethic. This aspect is multi-dimensional and reflects a cluster of facets embodying attitudes and beliefs about positive work experiences, social relations in the workplace, perception of the overall culture and rewards (Hackett, Lapierre & Handsorf 2001; Heffner & Rentsch 2001; Miller, Woehr & Huspeth 2002). These multi-dimensional facets are dynamic in the workplace resulting in simultaneous workplace experiences that create varying levels of commitment. Miller, Woehr and Huspeth (2002) state that these characteristics are not specific to any particular job and are learned and related to attitudes and beliefs that are a motivational construct reflected in behaviour. With regard to commitment, Miller, Woehr and Huspeth (2002) suggest it is affective commitment (hearts and minds) that has more impact than continuance commitment in influencing the degree of engagement choice an individual may make. This view is supported by Heffner and Rentsch (2001) and can be extended to the proposition that affective commitment is a development process regardless of the constituency.

Heffner and Rentsch (2001) also view commitment through a prism of multi-constituencies within the workplace. While the authors recognised multi-constituencies, for example, work team, department, company, union, etc they establish that it is the proximal constituency that employees have that has the stronger influence on affective commitment levels. This supports work by Cotton (1996) and Lawler, Mohiman and Ledford (1995). Tesluk, Vance and Mathieu (1999) also support this by highlighting the application of field theory and the need to have EIP focus on employees' day-to-day activity for increased effectiveness.

2.6.1 Summary

The discussion in the preceding section on the key factors that influence an employee's decision to engage in EIP focussed on attributes that lead to effective EIP implementation. The discussion in this section on sustaining EIP focussed on the multi-dimensional facets of the workplace that lead to positive work experience around those key engagement factors. This

discussion also highlighted the impact of commitment and the strong influence of proximal affective commitment on an employee's perception of the organisational climate. This perception flows through to workplace behaviour and, thus, workplace performance once EIP are established.

This leads to the development of the fourth research issue:

'How does BMA sustain effective EIP?'

2.7 CONCLUSION

The correlation between EI and business performances has been generally established as marginally positive (Freeman, Kleiner & Ostroff 2000; Guthrie 2001; Huselid 1995; Kling 1995; Lawler 1999; McNabb & Whitfield 1995; Pascale & Millermann 1997; Vandenberg, Richardson & Eastman 1999). However, the mechanism for that correlation is not largely understood. Indeed the strength of that correlation has varying degrees of support.

Huselid (1995) links 'sophisticated' human resource management practices with EI and this is supported by Guthrie (2001) and Edwards and Wright (2001). Huselid (1995) adapts work from Delaney, Lewis and Ichniowski (1989) into thirteen items of contemporary EIP. These basic elements of EI are supported in the literature by Bryson (1999), Cotton (1996), Freeman, Kleiner and Ostoff (2000) and McNabb and Whitfield (1998).

From the literature, it is contended that the mechanism for the correlation is based on the employee's perception of EIP in the context of the organisation. This perception will influence their choice on the degree to which they participate in EIP. This perception will govern the choice employees make to engage in the EI program and enter a psychological contract with the organisation based on the mutuality of benefits (Leana & Florkowski 1992; Pil & Macduffie 1996). In this view, the exact EIP used is immaterial, so long as it is congruent with managements approach, both espoused and applied, and validates people's sense of personal value.

Despite the claim to a broad correlation, there is an emerging body of literature that urges restraint on the assertion of the correlation between EIP and improved organisation performance (Edwards & Wright 2001; Freeman, Kleiner & Ostroff 2000). The key concerns raised are:

(a) the evidence is ambiguous;

(b) measurement of EIP constituent components are unclear;

(c) causal mechanism that link EIP and outcomes are not established;

(d) what are meaningful outcome mechanisms?;

(e) EIP have not been demonstrated to produce outcomes; and

(f) the nature of EIP is poorly specified.

In addition, the work of Huselid (1995) and McNabb and Whitfield (1998) is limited by the age of the data analysed and the degree of self assessment of the organisations relative economic performance. Despite this, the correlations are significant and should not be ignored.

Macduffie (1995), and McNabb and Whitfield (1998) report on EIP being considered more as bundle of practices, as opposed to discrete practices, due to the interaction of one practice with another, for example, performance appraisal system and decision making involvement. This link between EIP, overall human resource management, and business performance has emerging empirical creditability (Delaney & Huselid 1996; Guest 1997).

From these constraints, Edwards and Wright (2001) argue that EIP leading to high performance may well be the result of high performance companies that can afford costly HR practice associated with EIP. These companies are able to resource and implement EIP and, therefore, it is to a degree self-perpetuating. Fernie and Metcalf (1995) state that apparent EIP effects may possibly reflect the quality of the employees in the organisation as opposed to the EIP used. Ichniowski et al. (1996) also claimed that it is good managers that introduce EIP and hence it is the quality of management that account for outcomes, not EIP as such. This in turn leads to a view the

performance gains are more associated with the relationship between management and workers not necessarily the EIP (Armstrong 1983). The presence of an EIP is only a manifestation of that relationship. This view in itself indicates that at the heart of EI it is at least two individuals relating the employee and their direct supervisor (management) (Bellamy & Torsell c.1999).

This aspect is supported by the work of Burke and Litwin (1989), Jackson and Schuler (1995), Kaydos (1999), Tesluk, Vance and Mathieu (1999) and Willcoxson (2000) and extend to claim that successful EI implementation is dependent on organisational climate factors. These authors report that it is EIP in the presence of a positive and supporting organisational climate that allows improved performance to develop.

As has been established in the literature, the basic building block of organisational performance is that of the individual performance which, in turn, is a function of individual ability, motivation and effort (Wagner 1994). In terms of high performance, this manifests itself in the individual decision to commit discretionary effort to the attainment of organisational goals. In this sense, the individual fully engages in the EIP for the mutual advantage of the organisation and themselves. It is this potential association which will form the basis of the hypothesis development and the exploratory research phase. The focus of this development will be to identify factors that influence employee choices on actual involvement and commitment to EIP and by corollary the barriers that stop employees from actively participating in EIP. Identifying and understanding these factors that influence the individual's decision to engage the EIP lead to improved organisation performance. The development of this discussion will be important in determining whether the performance improvement of an organisation is due to the presence of EIP or the climate that allows employees to actively participate in their effective implementation.

This then predicates the fifth research question:

'What strategies do BMA adopt to enhance effective EI?'

3.0 RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research design and methodology used to undertake an investigation into EIP at Queensland Coal Mines of BHP Billiton Mitsubishi Alliance (BMA). The data collection methodology used to investigate the research question and the research issues identified in Chapter 2 is also explained.

Research design is the process by which the investigation is planned such that the research question is answered (Kumar 1996; Neuman 1997; Zikmund 2000; Berg 2001). Definitions of research are many and varied. This is demonstrated by the examples given below:

> *'business research as a systematic inquiry that provides information to guide business decisions* (Cooper & Schindler 1998, p.14).
>
> *'the design for a research project is literally the plan for how the study will be conducted...thinking about imagining and visualising how the research will be undertaken (*Berg 2001, p.28).
>
> *'design is the choreography that establishes the research dance'* (Janesick 1994).

A documented research design will also provide a guide for subsequent investigators to reference or expand the study (Yin 1994) and thus this is an important step in the investigation. This chapter will build on the overview given in Section 1.6 of the introduction. Further evidence will be provided to support the appropriateness of the research methodology for the investigation. The chapter will outline the justification for the research paradigm (Section 3.2) and the selected research methodology of case study investigation (Section 3.3). It will also discuss in subsequent sections case selection and the number of cases, as well as outline data gathering, data analysis and tests for data reliability and validity.

The research methodology is initially formed by the posed research question, the nature of the research issues, the control the researcher has over the actual behavioural events and the current state of knowledge (Janesick 1994; Kumar 1996; Morse 1994; Yin 1994). While the research is descriptive in nature, as it seeks to describe EIP in Queensland coal mines, it also seeks to explain how employee involvement practices are utilised and sustained in the Queensland coal industry (Zikmund 2000). The research question and issues posed in Section 1.4 are 'how' type questions and form the basis upon which the research methodology is developed (Guba & Lincoln 1994; Perry 1998; Yin 1994).

3.2 RESEARCH PARADIGM FOR THE INVESTIGATION

Paradigms are important in setting the foundations of the research process as they define the relationship of the researcher to the investigation. Guba and Lincoln (1994) state that 'paradigms are sets of basic beliefs…it represents the world view that defines, for its holder, the nature of the world (p.107)'. In the context of the research, the paradigm contains the rules and standards for generating knowledge and the framework which guides the investigator in viewing the research problem and the investigation process (Perry, Reige & Brown 1999). The paradigm reflects how we interpret the world and the relationship between the inquirer and the known (epistemology). It also defines how the nature of reality is perceived (ontology) and how knowledge is gained (methodology) (Guba & Lincoln 1994; Yin 1994).

Four basic research paradigms have been developed within which researchers may work, explicitly or implicitly. These are summarised in Appendix C.4 (Guba & Lincoln 1994; Perry, Reige & Brown 1999).

The following factors were highlighted in Chapter 1 for this investigation:

(a) EIP are a concept that is varied and dependent on the organisational context for their definition within that organisation. Therefore, EIP, as a concept, does not exist with pre-determined boundaries;

(b) the benefits of EIP in organisations are not clear and there is a contemporary management debate on whether the benefits exist or not;

(c) if benefits do exist, the extent and contribution of the benefits to business performance are also unclear;

(d) in this sense, there is no clear reality for EIP. They are a complex interaction of individual values and motivation set in an organisation culture and generally observed only in discreet parts, i.e. productivity measures or financial outcomes that are generally limited to small time frames; and

(e) EIP, while clearly known for their organisational utilisation, are dependent on the relationship of the employees with intrinsic and extrinsic motivational factors within the organisational context.

The complexity referred to above predicates a reality that is not clear and EIP boundaries that are imprecise. Also, this complex reality can only be viewed by observing components of EIP processes. Due to the complexity of EIP and the interaction of relationships, the values of the researcher can impact on the objectivity from which EIP is studied. This latter point becomes significant and places an increased importance on the verification, reliability and validity of the data tests. These tests are discussed in Section 3.7. Taking the above into account, the critical realism paradigm is considered the most appropriate for this investigation.

3.3 RESEARCH METHODOLOGY SELECTED

An initial discussion on qualitative and quantitative studies will be followed by a justification of the case study methodology chosen for this investigation.

3.3.1 The Quantitative Versus Qualitative Debate

The debate over the relative merits of quantitative research versus qualitative research has been long and extensive (Denzin & Lincoln 1994). At its base, it is the paradigm from which the researcher views the world

and approaches the research problem at hand. The positivism paradigm is associated with the scientific approach as shown in Section 3.2, which is often thought of as 'hard science' and closely allied with quantitative investigations. In direct contrast is the critical realism paradigm which is thought of as 'soft science' and is aligned with qualitative research. The debate generally focuses on the superior nature of quantitative research due to its perceived objectivity and the rigour involved in the common research methodologies utilised by quantitative design, e.g. survey, experiments, statistics (Berg 2001; Denzin & Lincoln 1994; Neuman 1997). This, in part, is also due to the relative ease with which the research is replicated and validated (Dooley 1995).

Denzin and Lincoln (1994, p.2) define qualitative research as 'multi-method in focus, involving an interpretive, naturalistic approach to its subject matter'. In effect, qualitative researchers attempt to understand how people perceive and relate to the phenomena being investigated. Denzin and Lincoln (1994) go on to argue that the researcher in qualitative research is constrained in this interpretation to their overarching paradigm including, in particular, ontological, epistemological and methodological limitations. Denzin and Lincoln (1994) further extend their view by stating that there is no value-free science and all that research is couched in defining paradigms. Within their definition, Denzin and Lincoln (1994) accede that the separate and multiple uses of qualitative research and the methods of interpretive qualitative research make it difficult for researchers to agree on an all-encompassing definition.

The challenges to qualitative research are:

(a) it is considered a soft science as it is perceived as exploratory, personal and full of bias;
(b) it is a challenge to the traditional sciences (physics, chemistry, economics and psychology) in so far as the 'pure' sciences are built on a perception of unimpeachable truth;
(c) it is not easily replicated due to its contextual settings;

(d) data validity and reliability are not established using traditional measures;
(e) its emphasis on processes and meaning is perceived as lacking objectivity; and
(f) due to the contextual nature of qualitative research generalisation of research findings can be constrained.

(Berg 2001; Dooley 1995; Neuman 1997; Yin 1994)

Despite these challenges, qualitative research has developed into a meaningful research philosophy as a multi-method approach used to study and interpret phenomena in naturalist settings by identifying meanings that people give to the phenomena in that natural context. It does this by gathering empirical data and seeking to establish themes, patterns and categories based on the researchers' understanding and interpretation (Huberman & Miles 1994).

Huberman and Miles (1994) in support of the relevance of qualitative research to establish causality state that:

> *Qualitative studies are especially well suited to finding causal relationships; as they can look directly and longitudinally at the local processes underlying a temporal series of events and studies, showing how these lead to specific outcomes, and ruling out rival hypotheses* (Huberman & Miles 1994, p.434).

The research design will emphasise multiple sets of experiences, secondary data, cross referencing to develop a richness of information (breadth and depth) and triangulation to the investigation (Denzin & Lincoln 1994; Janesick 1994; Stake 1994). Given this, the qualitative approach provides an overarching understanding of the research questions and issues in the context of BMA, and is the most appropriate to investigations in grounded theory development (Perry 1998).

The suitability of the qualitative approach to this research is further established by the research question (Yin 1994). The 'how' and 'why'

questions set in contemporary problems lead to the application of the case study approach. This will be further developed in Section 3.2.

It is, however, important to realise that it is not a question of whether quantitative research is better than qualitative research. It is which approach is more relevant to the research question and the context of the investigation (Gable 1994).

3.3.2 Selection of Case Study Methodology

Yin (1994) outlines three key conditions when deciding what type of research strategy to use. These are:

(a) the type of research question posed;

(b) the degree to which the research can exert control over the actual behaviour events; and

(c) the bias toward contemporary or historical events.

Yin (1994) has applied these key conditions to five major research strategies shown in Table 3.1.

Table 3.1: Research Study Strategy Assessment Matrix

STRATEGY	FORM OF RESEARCH QUESTION	CONTROL OVER BEHAVIOURAL EVENTS	BIAS ON CONTEMPORARY EVENTS
Experiment	How, Why	YES	YES
Survey	Who, What, Where, How Many, How Much	NO	YES
Archival Analysis	Who, What, Where, How Many, How Much	NO	YES / NO
History	How, Why	NO	NO
Case Study	How, Why	NO	YES

SOURCE: Yin 1994

In developing the research strategy for this investigation, the three conditions applied are as follows:

(a) **Research Question**

The research question is a 'how' question as it seeks to explain the utilisation of EIP in Queensland coal mines by studying BMA. It also seeks to deal with operational links not frequencies, incidences or quantities.

(b) **Control of Behavioural Links**

Given the research question posed is a 'how' research question, according to the Yin (1994) matrix the available research strategies are experimental, historical or case study. The next distinction is the control the researcher has over, and access to, actual behavioural events.

If there is no control or access this leads to an historical strategy, as there is no relevant person to provide information on events. Experiments can be done when the researcher is able to directly manipulate behaviour such that it can be measured and replicated.

Case studies rely on many of the techniques of the historical strategy with two major exceptions. First is the ability to directly observe events and the second, is to be able to systematically interview relevant participants. The nature of the proposed investigation is such that no manipulation of behaviours is undertaken. The investigation is essentially seeking to understand and explain contemporary behaviour related to EIP.

(c) **Bias to Contemporary Events**

Of the three strategies available, the case study is preferred when investigating contemporary events where the behaviours under investigation cannot be manipulated. Given the contemporary nature of the investigation into EIP in Queensland coal mines, this appears to be the preferred strategy.

Yin (1994, p.9) summarises the overall approach to case study methodology selection as a 'how...question asked...about a contemporary set of events over which the investigator has little or no control'. Analysis of the research question and the contemporary context of the research indicates that the most appropriate research strategy for this investigation is explanatory research using the qualitative approach of a case study.

Ellran (1996) advocates the appropriateness of the qualitative case study approach when the investigation is exploring how or why something is being done, as well as when the investigation is also explaining a phenomenon. Ellran (1996) considers the case study approach to be desirable in those circumstances where the method provides significant depth, insight and richness of data which will allow the investigation to probe the how and why questions, to result in knowledge construction and build theory for further testing.

Eisenhardt (1989) describes a case study as a research strategy which focuses on understanding the dynamics present within a single setting. Ellran (1996) extends this to holistic situations in real life settings and set boundaries of interest. Case studies are also described as providing rich and in-depth information (Ellran 1996; Perry 1998; Yin 1994). These aspects further support the selection of the case study methodology for this investigation.

Stake (1994) further breaks down case studies into either intrinsic or instrumental studies. Intrinsic case studies are undertaken to better understand a particular case and therefore the generalisation potential is limited. Instrumental case studies investigate a particular case to provide insight into an issue or refinement of theory, and the particular case being investigated is of secondary importance. In this investigation, it is proposed to undertake an instrumental case study to provide insight into EIP.

The investigation process involved undertaking a series of in-depth face-to-face interviews principally at BMA's Queensland coal mine sites. The field interview was semi-structured in nature as it involved the interviewer asking prompt or probe questions, listening, expressing interest and recording what was said (Fontana & Frey 1994; Neuman 1997; Yin 1994). Some of the key features of in-depth interviews are:

(a) open ended questions are common, and probes are frequent;

(b) the interviewer and member have joint control over the interview;

(c) social context of the interview is acknowledged and is relevant to the data analysis;

(d) the interviewer adjusts to the member's norms and language usage; and

(e) the interviewer shows interest in responses and encourages elaboration.

(Corey 2001; Janz, Helleruik & Gilmore 1986; Neuman 1997)

Yin (1994) has identified two basic strengths of the interview as a source of evidence. These are focussed directly on the case study topic and it is

insightful in that it provides perceived causal inferences. Fontana and Frey (1994) and Yin (1994) also highlight the primary demerits of the interview as:

(a) bias -due to poor question construction;

(b) inaccuracy -due to poor recording and recollection;

(c) reflexivity -the interviewee responds with what the interviewer wants to hear; and

(d) personal / value judgements which are made by participants.

These demerits were mitigated in the investigation by using a set series of probe questions and tape recording all but two of the interviews and ensuring no commentary was made on the interviewees' responses. The process of case cross-referencing and triangulation was also used to mitigate these weaknesses.

3.4 CASE SELECTION

One of the key issues in case study investigations is to establish whether a single case or multiple case studies should be used (Ellran 1996). Yin (1994) has set out criteria for when the choice of a single case, to investigate a phenomenon, is appropriate. These are:

(a) the case is a critical test of existing theory;

(b) the case is a rare or unique event; and

(c) the case has a revelatory purpose.

In considering the exploratory nature of the investigation and the research paradigm, along with the broad nature of EIP, a single case is considered too constrained to allow for EIP understanding. Perry (1998) states that if Yin's (1994) three criteria cannot be met, then several case studies should be utilised. Multiple cases should be considered as multiple experiments and not as multiple respondents in a survey. Replication logic therefore, and not sampling logic, should be used when selecting cases (Eisenhardt 1989;

Perry 1998). Even though in this investigation the case study approach toward EIP is limited to Queensland and BMA coal mines in particular, four coal mines were investigated.

The multiple case study strategy is aimed at allowing cross case analysis for richer information and inductive theory building (Perry 1998). The cases were not selected necessarily for their representative nature. They were selected for replication of findings (Eisenhardt 1989; Perry 1998; Stake 1994; Yin 1994). This replication will be developed by undertaking two embedded studies within each mine selected (Yin 1994), thus allowing replication and cross referencing to occur within the overall case studies as each case and embedded study is, in essence, a separate experiment (Eisenhardt 1989; Ellran 1996; Stake 1994; Yin 1994). A major disadvantage in this strategy is managing the amount of information generated and focussing on the cases and studies (experiments) such that the holistic position is not analysed but allowed to emerge.

Eisenhardt (1989) states that the research can assume the ideal number of cases has been reached when theoretical saturation occurs that is, the point at which the incremental value of the information becomes minimal. This can only be considered in the field. Constraints of time and resources are also influential in determining the optimum number of cases. Yin (1994) makes the general observation that the more cases investigated, the higher the certainty (validity) of the results, which in turn, is a function of the degree of variation or uncertainty in the contextual setting of the investigation.

3.4.1 Sampling

In selecting the population for an investigation the particular setting is defined by the research question (Berg 2001; Dick 1990). In this investigation, the Queensland coal industry is the setting and within this setting BMA has been selected due to its pre-eminent position in the Queensland coal industry, the diversity of ownership, history of its mines

and its expressed desire to directly involve its employees in the operation of its mines

Berg (2001) outlines four key selection criteria that have also been met viz:

(a) **Entry or access is possible.**
BMA agreed to undertake to host the study.

(b) **Appropriate people are available.**
Mine site management have agreed to make people available.

(c) **High probability that study, process, people, programs, etc. are available to the investigation.**
BMA corporate and mine site people agreed to make people and documents available.

(d) **Research could be carried out effectively.**
BMA mines were readily available and timing was suitable.

3.4.1.1 Sampling Strategy

Sample strategies are based on the premise that by using a sample, inferences about some large population from which the sample is taken can be made. There are two major sampling approaches:

(i) probability sampling;

(ii) non-probability sampling

(Berg 2001; Dick 1990).

Probability sampling for case study research, in particular based on in-depth interviews, is not considered relevant to this research situation. This is due to the amount of data probability sampling would generate, the resources required to manage that data and the ability to access the population sought in Queensland coal mines; probability sampling was considered too unwieldy.

Non-probability sampling is based on:

(a) effort to approach a quasi-random sample; and

(b) what larger group the sample may reflect.

Berg (2001) has identified four of the common non-probability sampling strategies as:

(a) convenience sampling;
(b) purposive sampling;
(c) snowballing sampling; and
(d) quota sampling.

Patton (1990) recommends purposive sampling to select cases with maximum variation as the most appropriate strategy for analytical and general purposes. It is this approach that was used in the selection of the BMA mines and interviewees. Perry (1998) summarises this as selecting information rich cases. The literature gives no precise guide for the number of cases and Eisenhardt (1989) states that cases should be added until theoretical saturation is achieved. Superimposed on this, however, is the restraint of time and resources (Perry 1998). As a reasonable minimum for a serious project Eisenhardt (1989) does however recommend between four and ten cases, Hedges (1985) (cited in Perry 1998) recommends between four and six groups.

In consideration of the above, the sampling strategies chosen to answer the research question were:

(a) Convenience Sampling. This was used for the pilot study to test the interview guide by utilising BMA personnel in Brisbane and experienced human resource people with Queensland coal mining experience.

(b) Purposive Sampling. This was utilised for the major study after discussion with the key informant of BMA, the vice-president of Human Resources. This method of sampling aimed to:

(i) Select the target mines based on their mining technology and operational history.

(ii) Select from the designated mine, work teams and groups and from within those work teams and groups individual interviewees.

This process, facilitated by the BMA key informant and the mine manager, was aimed at providing interviewees who were thought to be knowledgeable about EIP and who were perceived to give a balance between positive and negative behaviour toward EIP.

(iii) The human resource managers of the four mines were also interviewed as key players in the development of EI and the implementation of EIP. This also allowed further development of each mines' contextual setting.

(iv) The four mine site managers were interviewed to explore their views of the concept of EI and to set the current context in which EIP was being implemented.

(v) Two further interviews were also conducted with the BMA key informant and a senior mine manager. The senior mine manager was selected by discussions between the BMA key informant and the researcher to select an interviewee based on EIP knowledge, EIP support and experience and exposure in the position.

The number of interviews also warrants review. Three interviews at different hierarchical levels within the case study interview are suggested by Perry (1998). This recommendation was implemented as is shown in Table 3.2.

Table 3.2: Interview Matrix

	NUMBER OF INTERVIEWS				
POSITION	**MINE A**	**MINE B**	**MINE C**	**MINE D**	**HEAD OFFICE**
Mine Manager	1	1	1	1	1
HR Manager	1	1	1	1	1
Supervisor	2	2	2	2	-
Production	4	4	4	4	-
TOTAL:	**8**	**8**	**8**	**8**	**2**

In addition two interviews were conducted with union officials, one from Mine C and one from Mine D, to further provide contextual settings. These interviews were undertaken after the main field interviews had been completed. Given the four mine cases and the number of interviews, along with the use of probe questions, it is believed this process allowed the development of sufficient information richness from the cases to satisfy analytical integrity.

3.4.2 Sample Application

On the basis of the above discussion each operation is considered a discrete case within the overall organisation being studied. This is a valid approach as while there is a common context, the employee/management dynamics in each operation will be unique to the relationships within that operation. It also sets some control of context to allow cross case referencing. With this in mind, and the view reported by Perry (1998) that there is no precise guide to the number of cases, four operations were investigated. If, as Perry (1998) suggests that cases should be added until theoretical saturation is reached, and it had been found four was not sufficient, then more detailed evaluation within BMA would have occurred. However, it was felt sufficient information richness had occurred from the data harvested from the four mines.

Four mines from BMA's seven Australian mines were selected, giving a range of mining technology, mine maturity (age) and operational history.

This was done to allow greater richness of data to be generated and to allow cross referencing of cases to seek potential replication of data.

As stated for this study, four mines were considered and two operational units within the mine were evaluated. The operational units from each mine were mixed to reflect different aspects of mining technology and age, i.e. underground and open cut and mine maturity. The mines are:

Table 3.3: Selected BMA Mine Overview

MINE	PRINCIPAL MINING TECHNOLOGY	AGE OWNERSHIP HISTORY
Goonyella/ Riverside	Open-cut	In 1988, the mine became a merged operation between Goonyella and Riverside Mine. Goonyella was previously Utah Development Company mine pre 1983, then until the merger a BHP Coal Mine. Riverside was a Thiess Damper Mitsui mine pre 1983, then until the merger a BHP Coal Mine. BMA management consider this operation well developed in EIP.
Sariji	Open-cut	Pre 1983, Sariji was a Utah Development Company Mine, then until the formation of BMA was a BHP Coal Mine. BMA management consider this to have the least developed EIP and to be a marginal operation.
Crinum/ Gregory	Underground	Pre BMA, since its commencement in 1994, the mine was a BHP Coal Mine. Crinum Mine is the underground operation that supplies coal to the Gregory Mine surface processing facilities. Crinum is BMA's only Queensland underground mine. The investigation only focussed on the underground operation. BMA management consider Crinum to have an EIP focus.
Blackwater	Open-cut	In 2001 a merged operation occurred between BHP Coal's Blackwater Mine and Queensland Coal Trust's South Blackwater mine, this occurred in 2001. Prior to the Blackwater Mine merger it was operated initially by the Utah Development Company then BHP Coal. BMA management consider this a difficult mine.

SOURCE: BMA 2002, SDA01, SDG12, SDG13, SDG17

From within each mine, two work units/teams were selected from the operating units, i.e. mining, coal preparation or maintenance. Hence, the total number of work unit/teams was eight. In addition, sets of experience were gained from the mine site manager, human resource manager, Brisbane office and union representatives which gave an organisational strategic context from which to view the mine site experiences and allow further cross reference points for data validation.

As stated, within each mine case interviews with two work unit/teams were selected from the operating areas of mining, coal preparation or maintenance. The work unit/team were not from the same operating area. Three interviews per work unit/team were undertaken, one with the work unit/team supervisor and two with people from the work unit/team who directly reported to that supervisor. Selection of work unit/team interviewed was undertaken by the HR Manager, with the only proviso being that interview participants had worked at the mine and in the work unit/team for a minimum of twelve months. This was done to ensure that they had sufficient time to allow a body of experience from which to harvest data.

3.5 RESEARCH PROCESS

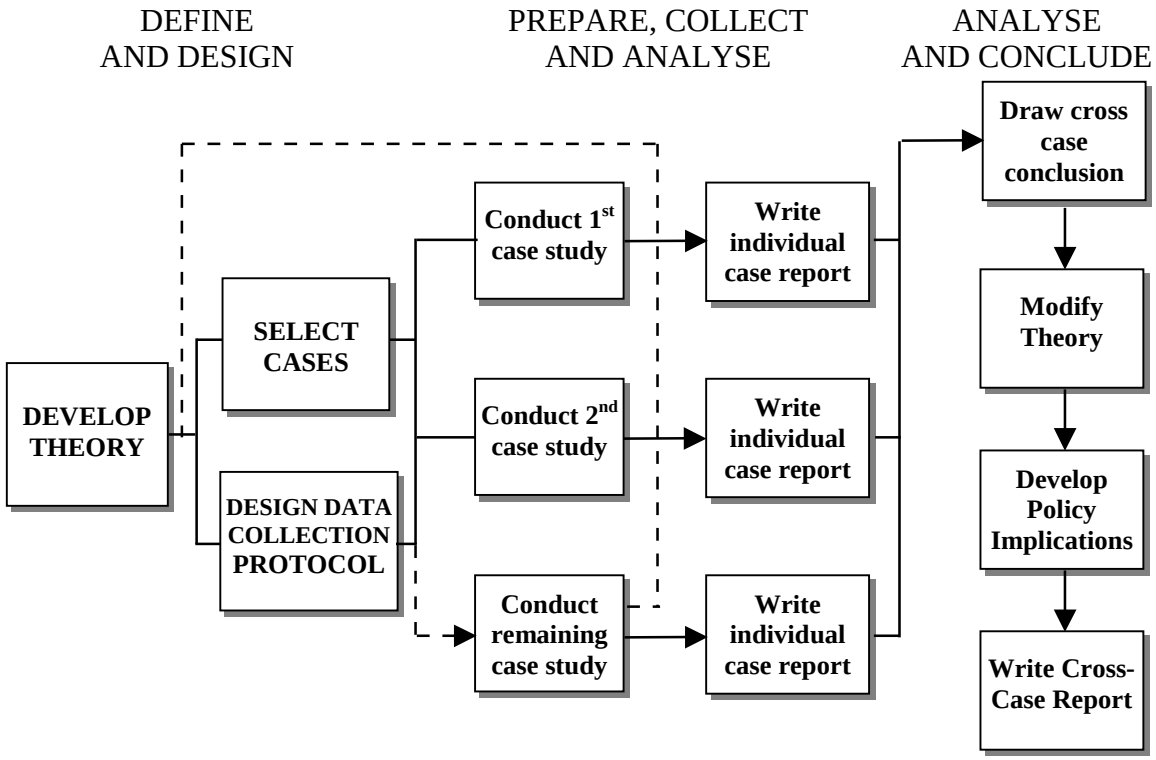
This section will provide an overview of the case study research process used as both a schematic and sequential activity basis. The section will discuss how data gathering was undertaken and the case study protocol developed. The section will conclude with the outline of the pilot study utilised.

Stake (1994) states that for case study methodology the phenomena in the beginning is given (i.e. EIP) and the cases become the opportunity to study the phenomena. Each individual case becomes the principal focus of the research process. Perry (1998) and Yin (1994) also highlight that case study methodology is no different from other research approaches, in so far as, it is a strategy for collecting empirical evidence of the phenomena being

investigated. Yet researchers highlighted that it must be systematic and the process must be defined prior to the data collection.

This process is shown in a generalised schematic form in Figure 3.1 and details the actual steps that Yin (1994) has adapted for case study research.

Figure 3.1: Case Study Method



SOURCE: Yin (1994)

A test of the research purpose with an experienced industry practitioner was undertaken to refine and establish the veracity of the research issues to determine their relevance and the relationships indicated in Figure 1.1. This test was also extended to determine the utility of the research and its impact and applicability to workplaces in Queensland coal mines. Additionally, a pilot study was undertaken to test the case study protocol with regard to data gathering, context analysis and data validity (Nair & Reige 1994; Yin 1994).

Once data was gathered for each set of experiences, each work unit/team was analysed and summarised. At this point summarised sets of experiences were provided to the key BMA informant for a review to

establish the veracity of the reporting and analysis. This is also a step in the ethics protocol that will be discussed in Section 3.8.

3.5.1 Data Gathering

As previously highlighted, data gathering is aimed at harvesting a rich data set on the phenomena being investigated in the real life settings of the case. Data gathering captures its contextual interactions and relationships of the phenomena to allow analysis and cross referencing. The established protocol, tested by pilot study, is a key to this phase as data that are compromised will adversely affect the investigation findings. This is even more vital with multi-case methodology (Stake 1994; Yin 1994).

Accordingly, from the exploratory phase, key influences were determined and their relationship to EIP implementation established. These influences were distilled to broad questions that represented areas of investigation for which probe questions were established that acted as prompts to explore the relationships developed. As stated, a pilot interview was undertaken to establish the veracity of the interview protocol used in the main data collection interviews (Nair & Reige 1994).

Within each case eight sets of experiences, and four further sets of experiences from an organisational context perspective resulted in thirty five interviews. The interview guide and probe questions are shown in Appendix C.1. The probe questions were linked to the research issues prior to the interviews to ensure adequate cover was attained to ensure information richness. This linkage is shown in Appendix C.2. The two corporate interviews were used to check contextual issues and set an overall strategic context. The overall research protocol process is shown in Appendix C.3. Given Perry's (1998) guidelines this process was considered to provide sufficient data. However, Patton (1990) states it is the information richness that leads to the validity and meaningfulness of the investigation, not necessarily the quantity of data.

Secondary data collection was undertaken by a review of selected BMA documents. The purpose was to gain more information for the contextual setting of EIP in the BMA organisation and to test, or compare, information gained in the primary data collection. However, the investigation was dependent on the primary data source of interviews and used secondary data as a source of validation and confirmation of primary data source findings. Use of multi-participants (managers, HR specialists, supervisors and workers) from each work unit/team and two work unit/teams per case and secondary data sources allowed for data triangulation.

The data gained from these sources were maintained in a database for ease of evaluation of validity and reliability criteria (Dooley 1995; Huberman & Miles 1994; Yin 1994). Examples of the table shells used for organising data into the database during the collection and recording process are shown in Appendices D.1, D.3 and D.5. By setting up these tables prior to data collection it ensured, the multi-case data collection, process was consistent and complete. It also was the primary aid in the data analysis and interpretation phase.

3.5.2 Case Study Protocol

In this case study investigation, the in-depth interview is the primary data source. To ensure the investigation was undertaken in a consistent and complete way a case study protocol was developed (Eisenhardt 1989; Ellran 1996; Fontana & Frey 1994; Yin 1994). The case study research protocol used is shown in Appendix C.3.

The applicability and appropriateness of the protocol guide is vital to the case study, especially where multi-cases are utilised to ensure consistent application and to ensure that information richness can be gained. Hence, the importance of the pilot study to test the protocol, and a review by an experienced case study practitioner.

Prior to the interviews, each mine received a letter of introduction and an overview of the study and its intended aims. Also, a commitment to the confidentiality of the participants' responses and sharing of the study findings with the participants was given.

When constructing the interview format, the emphasis was on conducting an interview with a bias toward an unstructured format and utilisation of mainly open questions as prompts (Fontana & Frey 1994; Nair & Reige 1994). This approach was adopted to allow the participants to tell their experiences, opinions and observations without directing outcomes and also allowed the flexibility for the interview process to foster divergent or interesting issues. In other words, this approach would best foster the development of a richness of unbiased information about the research question and issues.

The use of an interview protocol is, nevertheless, a superimposed structure to serve as a guide to ensure replication. The probe questions provided a context and direction to the interview so that the information harvested was in-depth and rich enough to satisfy the investigation and to focus on the research issues of interest.

The interview participants were selected after discussions with mine management and were undertaken on a face-to-face basis with the exception of one HR manager and two union officials who were interviewed over the telephone. Each interview lasted between one hour to one and a half hours and was conducted at the mine site in a convenient office and at a time suitable to the participant and mine operational demands, with the exceptions noted above. Confidentiality of responses was covered in the interview protocol and is discussed in more depth in Section 3.8.

Secondary data sources such as mine site reports, HR policies, training schedules and performance review criteria, were also requested. These documents were reviewed seeking to establish a documented approach to

EIP and a measurement of EIP performance for cross referencing with interview findings.

3.5.3 Pilot Study

Undertaking a pilot case study is strongly recommended (Berg 2001; Dooley 1995; Yin 1994) for qualitative research design as it tests that the design will answer the research question and issues. Additionally, it allows the interview protocol to be verified and the data collection and reporting systems to be tested for their utility (Berg 2001; Janesick 1994; Nair & Reige 1994; Yin 1994). Any concerns can be rectified prior to commencing the body of the field work. The pilot study is a key step in establishing data validity and reliability. If no significant refinements occur, the pilot study data can also be incorporated into the overall research database.

A pilot study consisting of two interviews was undertaken with BMA personnel who were readily available and at a convenient location. One interviewee already had relevant recent mine operational experience (transferred from his operations role less than three months previously) and the other participant had an overview of BMA's overall human resource approach.

These pilot study interviews provided a feel for the contextual consistency between mines, as well as the differences between mines and that of management and employees. The pilot study allowed a better understanding of BMA's approach to EIP and thus gave the opportunity to better focus the interview protocol on those EIP used, leading to enhanced clarity in probe questions. This testing of the interview protocol ensured the interviews addressed the research issues and tested the structural nature and timing of the interview protocol.

3.6 DATA MANAGEMENT AND ANALYSIS

This section will discuss the data management and analysis methods used for the investigation firstly by over-viewing why a data management system

is important, then discussing in detail why the data analysis was undertaken. Also this section will outline the techniques that were utilised to draw conclusions from the data. An overall summary of data management and analysis will then be given.

3.6.1 Data Management

Huberman and Miles (1994) define data management as the processes needed for a systematic, coherent process of data collection, storage and retrieval. They go on to state the purpose of data management as:

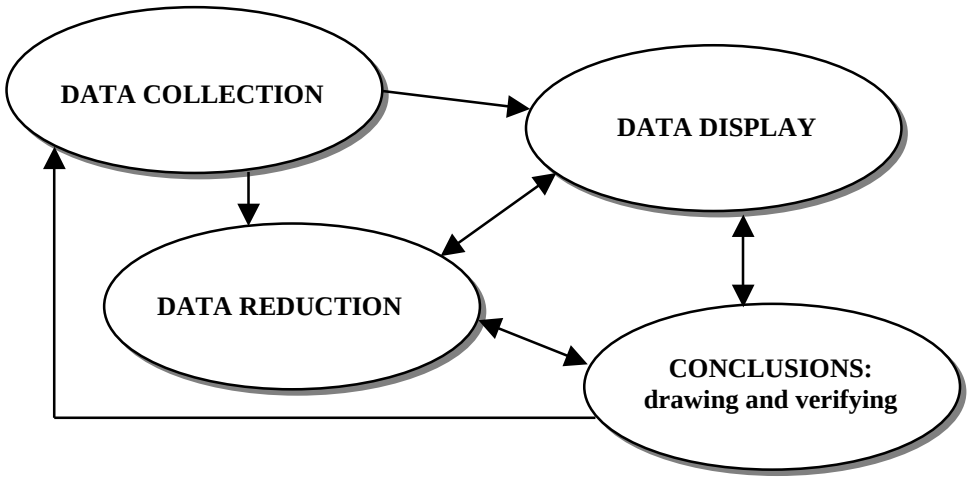
(a) high quality accessible data;
(b) documentation of analysis undertaken; and
(c) retention of data and analysis undertaken upon study completion.

The three key interactive processes associated with data management are:

(a) data reduction;
(b) data display; and
(c) conclusions: drawing and verifying.

Huberman and Miles (1994) suggest a data analysis process such as that shown in Figure 3.2.

Figure 3.2: Components of Data Analysis Interactive Model



SOURCE: Huberman and Miles (1994)

3.6.2 Data Analysis

Data analysis has the function of interpreting the collected data to produce conclusions and also ensure that alternative conclusions are considered. Huberman and Miles (1994) suggest the use of tables, categories, recombinations and patterns to interpret the data to establish meaning to the questions and issues of the investigation.

The key focus of data analysis is guided by the research question and research issues of the investigation (Huberman & Miles 1994). The effectiveness of this phase will also be enhanced if, during data collection, the methodology used to store and receive the codified data is established as routine process (Berg 2001; Neuman 1997). When undertaking this aspect it is vital the data retain meaning and relevance (Yin 1994). This process of codification, storage and retrieval for data analysis must ensure that data are treated without bias. This aspect will now be explored further.

3.6.2.1 Data Reduction

Huberman and Miles (1994) describe data reduction as focusing, simplifying, condensing and structuring the data so that data are managed in units for analysis. It allows the identification of themes and patterns (Neuman 1994; Newman 1997; Yin 1994). Semi-unstructured and open-ended questions, by their very nature, generate large amounts of data. After all the data are considered, data reduction prevents data overload without distorting the validity and richness of the data gathered. The system should be such that cross referencing and triangulation tests can be easily undertaken. Huberman and Miles (1994) recommend the utilisation of summary tables, lists, bullet points, diagrams and concept maps.

3.6.2.2 Data Coding

Data coding is the process by which raw data are organised into conceptual categories and is the basis upon which themes or concepts emerge to analyse the data (Neuman 1994; Neuman 1997; Neuman 2000;

Yin 1994). It is this process that was used to reduce the raw data to a manageable form for analysis. The codes are guided by the research question and issues and are the tags or labels used to give units of meaning to the descriptive and inferential information in the data (Neuman 1997; Yin 1994).

Neuman (1997, 2000) describes the process of coding utilised in this investigation as a three step process, namely:

1. open coding;
2. axial coding; and
3. selective coding.

During these processes, Neuman (1997) suggests analytical memorandums be used to collect comments, notes, data or organisational issues and discussion on thoughts. This approach was also used after each interview and set of experiences. Also included in the process was the recording of observations during the interview, for example, the degree of comfort the participants exhibited when addressing certain aspects and issues. Morse (1994) describes this approach as being consistent with theoretical sampling and as constraining the researcher from collecting excess or unnecessary data.

3.6.2.3 Data Display

Huberman and Miles (1994) describe data display as the process by which data are presented so that conclusions can be viewed clearly, concisely and logically. In this investigation the data gathered from interviews, then cases, were reduced and represented in matrices. An example of the data display matrices used in the investigation is shown in Appendix D.1. The appropriateness of this method was established during the pilot study.

3.6.3 Conclusion Drawing and Analysis

Yin (1994) describes data analysis as examining, categorising, tabulating or otherwise recombining the evidence to address the research question and issues initially postulated. As has been outlined in the 'data management' section, this process commences almost immediately raw data are collected. However, as Berg (2001), Neuman (1997) and Yin (1994) highlight, the efficacy is improved if data analysis is done with a pre-determined strategy.

While Neuman (1997) outlines a number of these strategies they can be condensed in the four dominant strategies proposed by Yin (1994). These are:

(a) pattern matching;
(b) explanation building;
(c) time series analysis; and
(d) program logic.

In this investigation pattern matching was used as the major data analysis strategy with explanation building as a derivative strategy once patterns emerged from the data.

Janesick (1994) outlines this process as inductive analysis whereby themes, patterns and categories are identified using key phrases and comments that are relevant to the investigation problem. Huberman and Miles (1994) caution that while this interpretation from data displays occurs, it must be undertaken with analytical validity.

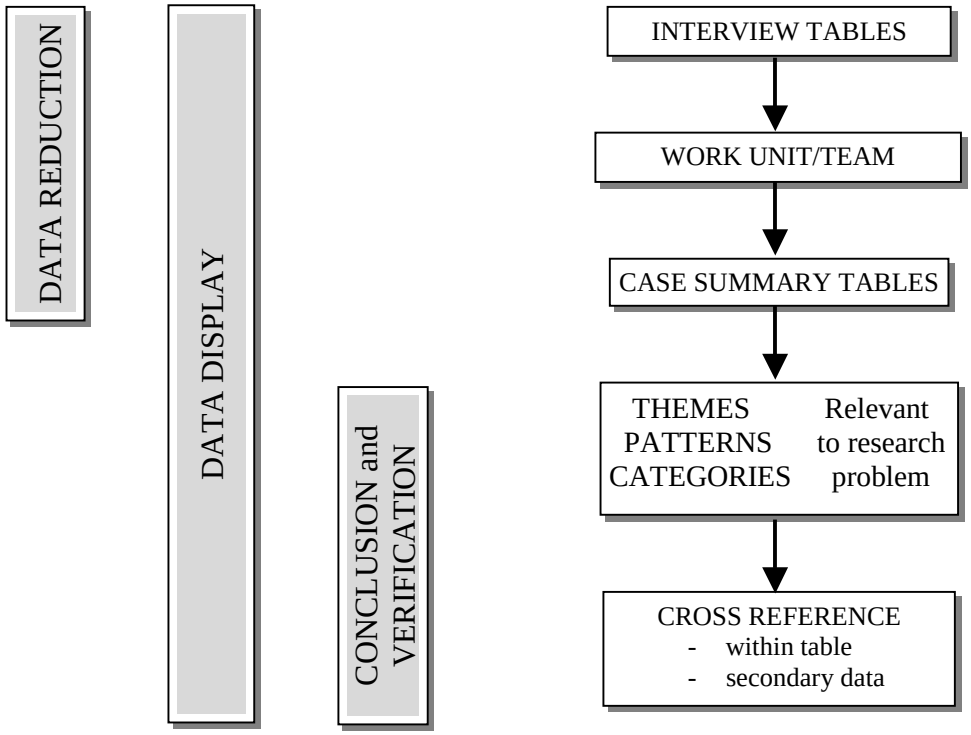
Qualitative investigations strive to describe and explain a pattern of relationships within the context of specific analytic categories (Huberman & Miles 1994). In other words, data analysis seeks to derive meaning to the large amount of data collected during a case study investigation. In terms of the critical realism paradigm being used in this investigation, meaning is being sought by analytical induction in that there are patterns of relationships from the data gathered on the physical and social world being

investigated. Huberman and Miles (1994) have outlined thirteen tactics that can be used to generate meaning.

The use of reviews was enacted at this stage by experienced case researchers and BMA key informants to check for accuracy and non-conformities, and to enhance construct validity (Newman 1997).

The process of data management is summarised in Figure 3.3.

Figure 3.3: Data Management Summary



SOURCE: Derived from Dooley (1995), Eisenhardt (1989), Huberman and Miles (1994), Morse (1994)

In establishing a process to seek patterns, themes and categories, five levels of interrogation for analysis were followed:

Level 1: Questions asked of the specific interviews;

Level 2: Questions asked of the individual case;

Level 3: Questions asked of the findings across multiple cases;

Level 4: Questions asked of an entire study; and

Level 5: Normative questions about recommendations and conclusion.

(Yin 1994)

The research procedures in the investigation followed this process and examples of its application can be seen in Appendices D.1–D.3 and D.5.

3.7 TESTS FOR RESEARCH DESIGN QUALITY

For any research findings to be applied to either support theory, develop theory or contradict theory there must be confidence in the data from which conclusions are drawn. This section will outline the processes to be used to establish the veracity of data from which conclusions were drawn.

3.7.1 Tests for Reliability and Validity

In Section 3.3.1, the challenges to qualitative research and case studies were listed. These can be distilled down to a perceived lack of rigor in the design methodology. The tests that are accepted for establishing the quality of the investigation are construct validity, internal validity, external validity and reliability (Dooley 1995; Ellran 1996; Huberman & Miles 1994; Neuman 1997; Yin 1994).

The consideration of these criteria is woven into each step of the research design. Table 3.4 shows these criteria, their definition and the measures utilised in this investigation to establish the quality of the data.

Neuman (1997) points out that while reliability and validity are complementary concepts, reliability is a necessary condition for validity to occur. Reliability is a vital step and the review and pilot testing of data collection is worthy of significant effort. Construct validity is a key step as failing to establish the correct operational measures will render the investigation invalid (Neuman 1995; Zikmund 2000).

Yin (1994) highlights two steps an investigation must cover, namely:

1. To select the specific types of changes that are to be studied in the context of the research problem; and
2. To demonstrate that the selected measures reflect the specific types of change that have been selected.

Table 3.4: Reliability and Validity Criteria and Study Tactics

RELIABILITY & VALIDITY CRITERIA	DEFINITION	MEASUREMENT PROPOSED FOR INVESTIGATION
CONSTRUCT VALIDITY	Establishing correct operational measures for the concept being studied, i.e. is the measure able to test the research questions and research issues and do the indications operate in a consistent manner?	1. Undertake literature review. 2. Establish key concept EIP definition (converging construct). 3. Use of multiple sets of experience. 4. Established and tested interview protocol with set probe questions. 5. Chain of evidence. 6. Review of draft report by BMA key informants. 7. Analysis of data seeking patterns that can be cross-referenced.
INTERNAL VALIDITY	Establishing causal relationship, whereby certain conditions are shown to lead to other conditions as distinguished from spurious relationship, i.e. was the dependent variable changed by a sole cause?	1. Use of multiple sets of experiences (replication). 2. Analysis of data seeking patterns that can be cross-referenced. 3. Established and tested interview protocol with set probe questions.
EXTERNAL VALIDITY	Establishing the domain to which a study's findings can be generalised to the external environment.	1. Use of multiple sets of experiences (replication). 2. Analysis of data seeking patterns that can be cross-referenced.
RELIABILITY	Demonstrating that the operations of an investigation such as data collection process can be repeated with consistent results.	1. Triangulation • Multiple sources of interviews. • Multiple sets of experiences. 2. Established and tested interview protocol with set probe questions. 3. Data collection and coding protocol established, documented and stored in an investigation database. 4. Review of draft report by BMA key informants. 5. Research design protocol and progress reviewed by supervisor.

SOURCE: Janesick 1994, Morse 1994, Neuman 1997, Yin 1994, Zikmund 2001

This investigation used cross case analysis, that is, analysis between the ten sets of experiences gained. To undertake this type of analysis Huberman and Miles (1994) propose the following strategies:

(a) Replication:

The first case oversees a conceptual framework from which the other cases are compared or new patterns emerge. This approach is also supported by Yin (1994).

(b) Grounded Theory:

Very similar to replication analysis, but builds the framework by induction.

(c) Multiple Exemplars:

Multiple instances from cases are bracketed together and examined for their common elements and components. Potential reordering of these elements and components is also considered.

(d) Forming Types or Families:

Similar to above, but seeking shared patterns or themes.

(e) Variable-Orientated-Approach:

Is used to find themes from which pattern clarification emerges leading to the identification of key variables.

Generally, no one strategy is used, but an interactive and iterative utilisation of strategies is applied. An interactive and iterative approach utilising the strategies of replication, multiple exemplars and forming types or families was used for this investigation.

3.7.2 Data Verification

As has previously been stated, a major criticism of qualitative investigations, in particular case study investigations utilising interviews, is the lack of scientific rigor and objectivity. To mitigate this criticism data verification and tests for data reliability, rigor and data analysis will be used.

In the first phase of data verification Huberman and Miles (1994) nominate a checklist of shortcomings, such as:

(a) data overload in the field;
(b) selectivity or over-confidence in some data;
(c) co-occurrences seen as correlations and evidence of causal relationships;
(d) misuse of base rate proportions;
(e) unreliability of data from some sources;
(f) over accommodation to information that questions emerging hypothesis; and
(g) over emphasis of first impressions or dramatic incidents.

This checklist will be used during the data analysis phase of the investigation.

The most common strategy for data verification is that of triangulation (Huberman & Miles 1994; Janesick 1994; Neuman 1995; Yin 1994). Triangulation is a term that in qualitative research means multi-operationalism or multi measures. Use of multiple sources that establish any themes or features from the data analysis are a trait of the investigation and not associated with the measure or any one source (Huberman & Miles 1994). In this investigation data triangulation (multiple sets of experiences), methodology triangulation (interview and archival) and interdisciplinary triangulation (psychology sociological and organisational) will be used as data verification tactics (Janesick 1994).

While there are a number of structural approaches to data verification, such as validity and reliability (as outlined above), the application is based on a reflective approach to the investigation that predicates a commitment to an ongoing self-auditing process. Huberman and Miles (1994) proposed six levels of audit control questions, namely:

1. **Are the findings grounded in the data?**
   Is the sampling and data weighing appropriate?

2. **Are the inferences logical?**
   Are alternative explanations considered?
3. **Is the category structured right?**
4. **Are investigation decisions and methodological changes supported?**
5. **What is the extent of investigator bias?**
   i.e. premature closure, seeking negative cases, unexplored data or investigator emotional involvement.
6. **What and how are strategies used to increase the creditability of the investigation findings?**
   i.e. peer review, key informants used or second readers.

An audit process addressing these questions during the Data Conclusion phase is shown in Figure 3.3.

The BMA Corporate HR Manager, an experienced HR professional and mine key informants were used as part of the audit process. Neuman (1997) describes four key characteristics of a key informant as:

(a) totally familiar with the culture of the organisation and is in a position to witness events;

(b) currently involved in the field of investigation;

(c) has the time to devote to the investigation; and

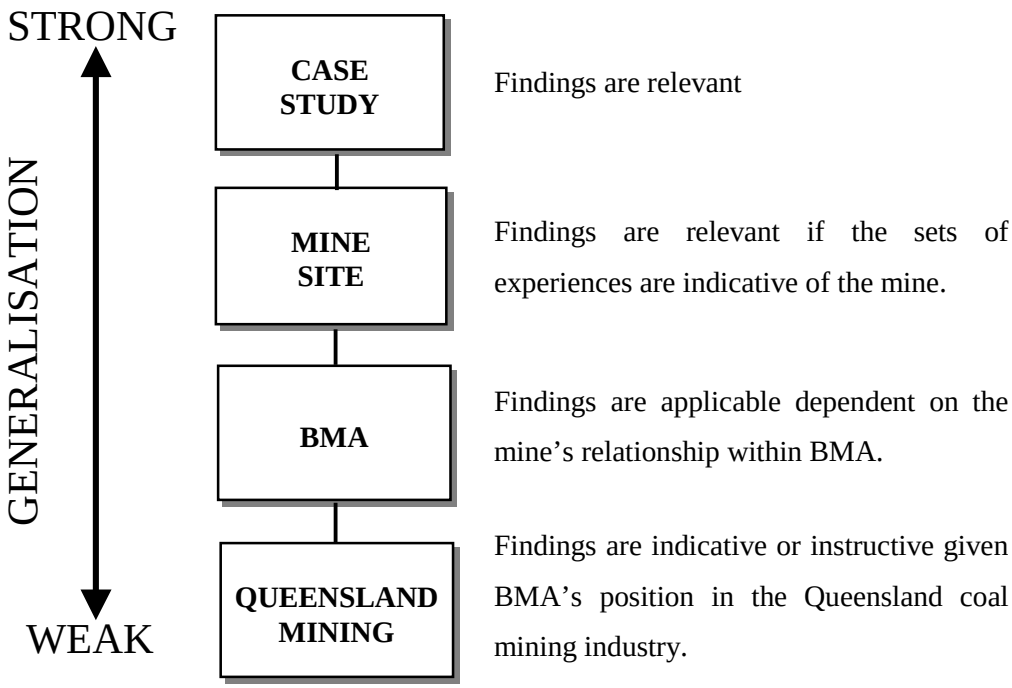
(d) does not take a pre-analysing approach to discussions.

3.7.3 Generalisation of Research Findings

The application of the findings of this research are constrained by the selection of case study methodology utilising interviews. This is primarily because the purpose of the case is not to represent the world, but to represent the case (Stake 1994). How we learn from a single case is determined by how the case is like, and not like, other cases (Stake 1994). In this study the findings of each case are related to the particular case. The analysis of that case is aimed at gaining understanding of EIP and how that

understanding is supporting or contradicting existing theory within that case. Generalisation then is strong within the case and progressively weakens as links to the case become more remote, as shown in Figure 3.4.

Figure 3.4: Generalisation Links



SOURCE: Developed for this dissertation

3.8 ETHICS AND CONFIDENTIALITY

Dooley (1995) states ethics is the study of right and wrong conduct and the essential ethical question is the reconciliation between two or more conflicting preferences and, as such, is a philosophical question (Zikmund 2001).

The major conflicts that need to be considered are:

(a) research goals versus subject rights;

(b) veracity of research findings versus research motivation; and

(c) research claims to original work versus attributing work by others.

Hence these concerns revolve around harm, consent, deception, privacy and confidentiality of data (Punch 1994).

In research, the principal purpose of an ethics process is to protect the subjects from physical and psychological harm, to ensure the subjects rights are not violated and to ensure the research findings are based on an appropriate methodology (Dooley 1995). Dooley (1995) clarifies this further to suggest the focus of ethical research practices as:

(a) the protection of human and non-human subjects;

(b) appropriate methodology;

(c) inferences, conclusions and recommendations based on actual findings; and

(d) complete and accurate research reports.

The ethical practices adopted for this investigation were:

(a) the interview protocol provided sufficient information so that the participants could make an informed decision to participate;

(b) to ensure that the participants felt they were not pressured into participating, i.e. their consent was freely given;

(c) it was established with BMA and the participants that access to the information gained from the participants would be limited and secure. This would extend to the access by BMA management such that confidentiality of the identity of information sources was maintained;

(d) participants could withhold information about which they felt uncomfortable;

(e) specific data would not be identified to specific participants;

(f) that the duty and responsibility for gaining the consent and ensuring the confidentiality and privacy of the participants lay with the researcher and could not be delegated;

(g) that the methodology used would be systematic and objective and the controls would be stated and approved by USQ;

(h) that the research findings would be reported completely and in an unbiased manner, including errors, findings not supporting the research propositions and within a documented research design; and

(i) to provide an overview of the investigation to the USQ Faculty of Business Ethic Committee.

(Dooley 1995; Zikmund 2000)

3.9 CONCLUSION

This chapter has outlined the research methodology and design used in the investigative process. The research question and issues have been reviewed, along with the setting of the investigation, to establish that the appropriate research paradigm for the investigation is the critical realism paradigm. From this, a qualitative research strategy utilising a multiple case study approach and semi-structured interviews was justified as being appropriate to the investigation being undertaken. Also, a detailed research protocol was established and presented that covered the research process, pilot study, interview guide, data collection, data storage and the data analysis strategy.

In approaching the case study methodology, the direct process of establishing the validity and reliability of data by using a standard research protocol for all interviews and set probe questions was used. The protocol was first tested in a pilot study for its functionality and applicability. Also, an experienced HR practitioner was used to review the protocol and, along with the BMA key informant, review drafts of the findings for validity testing. The use of multiple sets of experiences and data coding for pattern seeking was also used to establish findings and secondary data sources were used to support those findings. Triangulation processes from multiple interviews, multiple cases and secondary sources were also used to establish data reliability.

The confidentiality of interview participants was gained by first seeking, and obtaining, assurances from BMA, then setting a mine and interviewee code that protected the interviewee's identification for the data analysis and case findings. The mine and interviewee code is kept in a different location from the investigation database and in a secure office. All interview participants were invited to participate in the interview and given the opportunity to withdraw. Additionally, permission was sought from the interviewees to tape-record the interview. Where the permission was not granted (two instances) no tape-recording was undertaken. All tapes were identified by the previously designed code.

4.0 ANALYSIS OF DATA

4.1 INTRODUCTION

This chapter presents the data derived from the implementation of the research methodology for this investigation described in Chapter 3. The data interrogation method is also presented and how the data relates to the research question and research issues is also explored. Additionally, a cross-case analysis is conducted and key themes and patterns are identified and their relationship to the research questions and issues is extrapolated. Presentation of data veracity and creditable tools used will also be given. A discussion of the findings of the research follows in Chapter 5.

The investigation was guided by the research question and issues. The findings from the thirty-five interviews at four mines, BMA head office and secondary data will be discussed in addressing the questions posed. For convenience the research question and issues are shown in the box below.

RQ. 'How do coal mines in Queensland utilise employee involvement practices?'

R1. 'How does BMA perceive the concept of employee involvement practices?'

R2. 'What employee involvement practices are utilised at BMA?'

R3. 'What are the critical factors that influence the implementation of employee involvement practices at BMA Coal?'

R4. 'How does BMA sustain effective employee involvement practices?'

R5. 'What strategies do BMA Coal adopt to enhance effective employee involvement?'

This introduction is followed by a brief mine description and overview of the data analysis process utilised in the investigation. The sections following will present workgroup and mine findings, cross-mine findings and cross-hierarchal group findings as they apply to each research issue.

The final section will consider the findings for each research issue and attempt to tie this to a collective picture.

4.1.1 Stages of Analysis

As indicated in the research methodology, the data management process shown in Figure 3.3 was followed. The first stage was the reduction of the interview tape-recordings into a narrative. This narrative was then summarised around the probe questions to form a record of interview, an example of which is shown in the Appendix D.1. Further data reduction was undertaken using open coding and display matrices to summarise data by workgroup; examples of these are shown in Appendices D.2 and D.3 respectively. At this stage the workgroups were expanded to eighteen by linking interviews between hierarchal and functional groups as shown in Appendix D.4. The coded information in the expanded data shells was analysed for common themes and patterns that related to the research issues, an example of which is shown in Appendix D.5. These data display shells form the formal investigation database. It was at this stage that the emerging common themes were referenced back to the record of interview and field notes for verification testing in an iterative process. The next stage sought to seek pattern matching and across workgroup analysis for the purpose of answering the research questions and to explore theoretical generalisation about the research issues. Once these common themes and patterns had been established, conclusion-drawing was undertaken for the respective research issues, and data verification undertaken using the record of interview, cross referencing between workgroups, testing with field notes and secondary data sources. The secondary data sources gathered for the investigation are listed in Appendix E.

In fulfilling the objective of analysing data to answer the research question and issues for this investigation additional information on other areas of interests was also discovered during the interviews. This information is also summarised and listed in the relevant research issue section.

4.1.2 Interview Identification Structure

The mine identification and interview code is shown in the box below. This identification system preserved the workgroup anonymity and interviewee confidentiality.

INTERVIEW CODE

MINE	DEPARTMENT	POSITION
A = Blackwater Mine	E = Mining Operations	G = Supervisor
B = Crinum/Gregory Mine	F = Mining Maintenance	H = Direct Employee
C = Sariji Mine	J = Coal Preparation	HR = Human Resources Manager
D = Gonnyella/Riverside Mine	HO = Brisbane Office	SM = Mine Manager
		UN = Union Official

4.2 DESCRIPTION OF MINES

Mine A

This mine is a BMA open cut mine which has a strike length of some 60kms. It is an operation that was merged three years ago from two mines with operational histories dating back to the 1960s.

Two workgroups were interviewed, one from mine operations and the other from mine field maintenance. The Mine Manager and Human Resource Manager were also interviewed. The interviews took place in the mine's administration building where mine assembly, training, operations planning and administration is carried out. Three people from each workgroup, one supervisor and two direct reports, were interviewed resulting in a total of eight site interviews. The interviews were selected as outlined in Sections 3.4.2. All interviews were tape-recorded with the exception of two interviewees (I05 and I06) who requested the interview not be tape-recorded to maintain confidentiality.

In the week prior to the interviews, the mine experienced a 2-day 'wild-cat' strike over bonus payments.

Mine B

This is also a BMA merged mine which utilises underground and open-cut technology. The underground section is approximately eight years old while the open-cut section is approximately twenty-five years old. Although it is a merged operation, the underground mine operates separately from the open-cut mine with the distance between the two being twelve kilometres. Both the underground and open-cut mines share coal handling and rail loadout facilities. Senior mine management is also shared between the two mines.

The two workgroups interviewed were from the underground section to provide a contrast with BMA's predominantly open-cut operations. One workgroup was from a mine face production team while the other was from the mine mobile underground plant maintenance crew. The mine manager and human resource managers were also interviewed. The workgroup interviews took place at the mine pit top assembly area. The mine manager and human resource manager were interviewed at the mine administration office. A total of eight interviews were undertaken. These people were again selected following the guidelines in Section 3.4.2. All interviews were tape-recorded.

Mine C

This is a BMA open-cut mine that commenced operation in the 1960s. It has had a recent history of being considered marginally profitable with intense discussions on 'contracting out' operations. It is characterised by BMA's Brisbane office as a mine prone to industrial action.

Two workgroups were interviewed, one from the field maintenance group and one from the coal preparation plant (CPP). The mine manager was interviewed on site at his office and the human resource manager by telephone one week later. In addition, a conversation regarding EI with the CPP manager also took place. The interviewees were selected using the guidelines in Section 3.4.2 and all interviews were tape-recorded with the exception of the CPP manager conversation which was captured in a field

note. All workgroup interviews took place in the Safety and Training Group offices.

Mine D

This is a BMA merged open-cut mine. One of the merged mines commenced operation in the mid 1960s, while the other commenced in the mid 1980s. The merged mine, up until the previous twelve months, was considered by management to be highly profitable, however, in the last twelve months it has changed to be a marginally profitable mine due to changing market quality requirements.

Two workgroups were interviewed, one from the coal preparation plant (CPP) and one from mine operations. The Human Resource Manager was interviewed in his office. The mine manager declined to be interviewed due to his short duration at the mine and BMA (less than three months). The previous mine manager was interviewed in the Brisbane office. In providing a corporate overview, he extended his interview to cover specific issues concerning Mine D. The workgroup interviews were selected using the guidelines in Section 3.4.2 and all interviews were tape-recorded. The CPP interviews took place in the CPP control room and CPP maintenance office. The mine operation interviews took place in the mine assembly area.

Union Interviews

Two site union officials were interviewed from Mines D and C. The Mine D interviewee, identified as I25, participated in a detailed telephone interview, while the Mine C interviewee, identified as I26, was limited. This was primarily due to the interviewee's pre-occupation with his participation, as a candidate, in an upcoming mine site union election. Hence, the interview data of I26 is considered of limited value and used sparingly.

Non-Mine Interviews

Further interviews were conducted, one with the BMA Human Resource Vice President and one with BMA Business Improvement Vice President

(previously Mine D mine manager), both these interviews were tape-recorded and undertaken in Brisbane at the respective interviewee's office.

Summary

A summary of the interviews, and the organisational levels the interviews represented, are shown in Table 4.1(a) and (b) below.

Table 4.1(a): Interview Workgroup Schedule

INE	PRIMARY MINI TECHNOLOGY	MINE WORK AREA	WORK GROUP MEMBERS	MINE MANAGER	HUMAN RESOURCE MANAGER	ORGANISATIONAL LEVEL INVESTIGATED	NUMBER OF NTERVIEWS
A	Open-cut	Mine Operations Mine Maintenance	3 3	1	1	3	8
B	Underground	Mine Operations Mine Maintenance	3 3	1	1	3	8
C	Open-cut	CPP Mine Maintenance	3 3	1	1	3	8
D	Open-cut	CPP Mine Operations	3 3	-	1	3	7
Brisbane Office				1 *	1	1	2
Union Official						1	2
						TOTAL INTERVIEWS	**35**

* The Mine Manager of Mine D had been in the role for only four weeks and declined to be interviewed. The BMA Business Improvement Vice President had been the preceding Mine D Mine Manager and had simultaneously undertaken both roles for approximately six months. During his interview he provided insights into Mine D as well.

Table 4.1(b): Organisation Level of Interviews

Organisation Level	Interviewees by Code in Level	
CORPORATE	SM01, HR01	2
MINE SITE MANAGEMENT*	SM01-4, HR02-5	8
SUPERVISORS	I01, I04, I09, I12, I13, I16, I19, I24	8
EMPLOYEE	I02-3, I05-08, I10-11, I14-15, I17-18, I20-23	16
UNION	I25-26	2

* SM01 covered two levels

A summary of the interviewees mine, mine position and general experience is shown in Appendix D.6.

4.3 DATA ANALYSIS

In this section, each research issues is discussed for each individual mine. In the discussion within each mine, the management (including supervisors) group will be contrasted with the mine's employees. The overall context of the sets of experiences from Brisbane Office is given as it relates to the research issues. Upon completion of this section a summary is given for BMA. Where direct quotations from participants are given in this chapter the interviewee code is given, followed by the page number of the record of interview form. For example, (I05, p.3) refers to interviewee I05 and the quotation, or supporting comment, is on page 3 of the record of interview that is held in the investigation database.

4.3.1 RI 1: 'How does BMA perceive the concept of Employee Involvement?'

The first research issue concerns how BMA perceived EI and its application. In considering the findings for Research Issue 1 responses from the interview questions 1.1, 1.2, 1.3, 1.12 and 1.14 shown in Appendix C.1(a) and Appendix E secondary data sources; SDA02, SDA06, SDA07, SDA08, SDA09, SDA12, SDC09, SDC12, SDC13, SDC15-18, SDO01, SDG01, SDG06-11, SDG16 were used.

In undertaking this analysis the interviewees' responses were considered for discovering a common EI definition and determining what attributes of the various aspects of EI that had been identified in the model described in Figure 1.1. Also of interest were attributes not considered in the model that interviewees thought described the concept of EI. While the analysis did not necessarily seek consensus amongst all the interviewees on the attributes of EI, the analysis did seek to determine the range of attributes commonly held and to identify any attributes unique to a group of interviewees.

In considering the above data sources, a number of attributes about the concept of EI emerged and these are listed below in Table 4.2 for each mine.

Table 4.2: Attributes of the Concept of EI for BMA

	MINE			
ATTRIBUTES OF THE CONCEPT OF EI	**A**	**B**	**C**	**D**
1. Involvement of actual crews	ü	ü	ü	ü
2. Emphasis on day to day work activity	ü	ü	ü	ü
3. Information sharing on business performance	ü	ü	ü	ü
4. Two-way communication in the business between management and workers	ü	ü		
5. Utilises a team or teaming approach	ü	ü		ü
6. Restricted to mine site activities of the business		ü	ü	
7. Consultation on decisions	ü	ü	ü	ü
8. Management pejorative not threaten		ü		ü
9. Management listens to concerns	ü	ü	ü	ü
10. EI more suitable to some work activities than other	ü			
11. Ability to influence decisions	ü	ü	ü	ü
12. Safety involvement mandatory	ü	ü	ü	ü
13. EI restricted to mine site activities		ü		ü
14. Positive reception of ideas and inputs by all groups	ü	ü	ü	ü

The attributes that emerged were then considered by the organisational level within BMA and this is shown in Table 4.3.

Table 4.3: Attributes of the Concept of EI by Organisation Level

Attributes of the Concept of EI	Workers	Union	Corporate	Site Manager	Supervisor
1. Involvement of actual crews	ü	ü	ü	ü	ü
2. Emphasis on day to day work activity	ü			ü	ü
3. Information sharing on business performance	ü	ü	ü	ü	ü
4. Two-way communication in the business between management and workers	ü	ü	ü	ü	
5. Utilises a team or teaming approach			ü	ü	ü
6. Restricted to mine site activities of the business				ü	
7. Consultation on decisions	ü		ü	ü	ü
8. Management pejorative not threaten		ü		ü	
9. Management listens to concerns	ü				ü
10. EI more suitable to some work activities than other				ü	
11. Ability to influence decisions	ü	ü	ü	ü	ü
12. Safety involvement mandatory	ü	ü	ü	ü	ü
13. EI restricted to mine site activities				ü	
14. Positive reception of ideas and inputs by all groups	ü			ü	ü

While all mines raised these attributes of EI when they are considered from an organisational level perspective the following aspects are apparent.

First, there were attributes of EI that were common to all levels, namely:

(a) The involvement of actual crews, as illustrated in the following examples:

- *'employees getting involved in the day-to-day running of their crew', (SM02, p.1)*
- *'employees have a say in the way things are done', (HR03, p.1)*
- *'take advantage of the ideas and capabilities of your workforce on a day-to-day basis', (SM04, p.1)*
- *'involving people in the decisions of the workplace', (I24, p.1)*
- *'getting involved in decision making and running the job today', (I14, p.1)*
- *'involved with employer … at the place of work', (I20, p.1)*

- *'important to have some involvement they (work crews) have the hands on experience', (I07, p.7)*
- *'decision that … are being made we are involved', (I26, p.1)*

(b) Information sharing on business performance was inferred by these examples:

- *'having ideas heard', (I18, p.1)*
- *'listening to people on the floor', (I04, p. 1)*
- *'talking to each other', (I09, p. 9)*
- *'have enough information to do the job … if not available, can ask for it', (I09, p. 3)*
- *'management around … if you want to talk to them, you can', (I07, p. 7)*

as well as the references to SoN, TT, Newsletters and Noticeboards, (SDA01; SDA06-09, SDA13-16; SDA18; SDA21; SDB02; SDC01-08; SDC19-22; SDD02-07; SDA09-11; SDD15-17; SDD20)

(c) EI as a team approach, was shown in the following examples:

- *'work as a team', (I01, p.1)*
- *'team building … changed things immensely', (I19, p.1)*
- *'teams on teaming … all contributing to and showing an interest in the business', (SM02, p.4)*
- *'teamwork with foreman and group', (I06, p.2)*

(d) Consultation and influence on business decisions was illustrated in the following examples:

- *'given some opportunity to have input in decision making', (I10, p.1)*
- *'people have a say in decision making', (I104, p.1)*
- *'having a say in the job, having ideas heard, basically being able to discuss things', (I18, p.1)*
- *'where people take an active interest in work and contribute in the running, control and systems', (SM01, p. 1)*
- *'unions are involved by management', (I26, p. 1)*
- *'input employees have in the business … influencing the business', (HR01, p. 1)*

(e) EI is mandatory in safety management, was shown in the following examples:

- *'lots of EI revolves around safety management', (SM03, p.1)*
- *'own input – especially safety', (I06, p.1)*
- *'involved in own decisions and managing their own safety', (I09, p.1)*
- *'B-Safe committee … empowered to a degree', (I03, p.3)*
- *'safety contacts every three weeks … nothing stops us from nominating issues' (I08, p.1)*
- *'safety gets open discussions', (I14, p.7)*
- *'always involve people', (I22, p.4)*

Secondly, the following represent some notable differences in perceptions between interviews from different organisational levels.

Site management was concerned that EI focused on site issues only. For example,

- *'not so much in the critical areas of marketing and sales but operations, maintenance, safety and community', (HR03, p.1).*

Also management did not see EI as a process that usurped management prerogative to run the business as expressed by

- *'[EI] … Not to take the place of management prerogatives' (HR04, p.1).*

Between interviewees, some of the differences in alignment of the perceived attributes of the concept of EI, it is felt, could be assigned to the organisational level of the interviewee. For example, the corporate perspective on the EI concept attribute of involvement in the day-to-day work may be due to their remoteness from the work force.

4.3.1.1 Summary

The common themes that emerged from these findings for the BMA mines were:

(a) a belief that the concept of EI is predicated on the involvement of the actual crews that do the work;

(b) that EI is about involvement in the day-to-day work activity of the people;
(c) EI is about sharing information on the business performance.
(d) that EI includes people being consulted on decisions by management;
(e) that EI has the commitment of management to listen to issues and concerns about the workplace;
(f) EI in mine safety is a mandatory activity, rather than discretionary; and
(g) in undertaking (c), (d), (e) and (f) above people believe they are able to influence decisions.

Tying the common themes together for the four mine sites leads to the view that EI as a concept, within BMA, is that of the involvement of the actual crews doing the work in the day-to-day operations of their actual work area of the mine. This involvement is the capacity of the actual crews to influence or have inputs into the decisions that affect their day-to-day operations. The involvement is categorised by the positive reception of their ideas and inputs by both management and their fellow workers. Also distinctive is that the extensive use of information sharing and involvement is not restricted to formal processes of EI.

4.3.2 RI 2: 'What Employee Involvement Practices are Utilised at BMA?'

The second research issue is essentially the discovery of what EIP are being used at the BMA mines investigated in this study.

In response to RI 2 the following probe questions shown in Appendix C.1(a) were used 1.1, 1.3, 1.4, 1.12, 1.14 and the following secondary data sources were also used; SDA03, SDA04, SDA06-11, SDA14-16, SDA18, SDA21, SDB02, SDC01-09, SDC11-13, SDC15-22, SDD01-07, SDG14, SDG15.

From the literature review, EI was operationalised into a large range of EIP. This large range was broken down into five major schemes defined in Section 2.3.2 and for convenience they are shown below:

(a) Information sharing / communication processes;
(b) Decision making / problem solving processes;
(c) Business improvement / skill development;
(d) Financial rewards and incentives; and
(e) Performance management processes.

These five schemes were used as a framework into which the EIP of BMA identified during the investigation were placed. This is shown in Table 4.4.

Some of the EIP discussed did not neatly fall into the above five schemes. These EIP were:

(a) Employee involvement in areas outside the organisation, for example, Olympic volunteers (I03);
(b) Mentoring within work teams and groups by more experienced workers (I07, I08). This was especially evident in the underground mine; and
(c) Newsletters, while providing mine performance information, also gave information on community and non-work areas, such as insurance, items for sale and sporting achievements (SDA14-16; SDA17; SDB02; SDC19-21; SDD05-07).

In the findings to Research Issue 1 some of the EI attributes listed, such as consultation on decisions, did not emerge as a formal EIP. This was supported by interviewees I11, p1 and I23, p1. Although stating they were not 'into' EI it became apparent during the interviews that they were quite involved in a range of attributes listed in Table 4.2, such as, consultation on decisions and the ability to influence decisions.

With this in mind, a categorisation of EI practices into formal or informal practices was made on an analysis of the manner in which interviewees discussed the topic and on the extent to which they were involved in daily work practices and business performance improvement processes. This categorisation was also tested with reference to the secondary documentation available.

A formal EIP was defined as a practice that is sponsored by management and supported by specific training and monitoring structures, examples of which are targeted recruitment, Operating Excellence (OE) and information-sharing processes such as State of the Nation addresses (SoN) and Toolbox talks (TT). Informal EIP are practices in existence that allowed people to influence and control, or direct, work activity generally in their immediate work activity area and were focussed on the day-to-day work activity. This was not limited to planned work, but also applied to business improvement, examples of which are problem solving, work scheduling, prioritisation and recognition. Informal EIP were characterised by intra-workgroup support, no formal structure or reporting system and little, if any, formal or focussed training that directly supported this form of EIP. Indeed, some of the informal EI occurred within the formal EIP that had been set up for another purpose, i.e. TT which are primarily a safety meeting. The EIP detected through the investigation are listed in Table 4.4.

Table 4.4: Employee Involvement Practices at BMA Mines

EMPLOYEE INVOLVEMENT PRACTICES	Formal or Informal EIP	MINE			
		A	B	C	D
Information sharing / communication processes					
• Tool box talks (TT)	F	ü	ü	ü	ü
• State of the Nation (SoN)	F	ü	ü	ü	ü
• Newsletter	F	ü	ü	ü	ü
• Noticeboards	F	ü	ü		ü
• Start of Shift	I	ü		ü	ü
• Union Consultation	F	ü			ü
Decision making / problem solving processes					
• In-shift discussions, prioritisation of work on day to day basis	I		ü	ü	ü
• Work methods	F/I		ü		ü
• Recruitment	F	ü	ü	ü	ü
• Start of shift	I	ü		ü	ü
• Problem solving	I	ü	ü	ü	ü
• Vendor overhaul visits and inspection	F	ü	ü	ü	ü
Business improvement / skill development					
• Within TT					
• Operating Excellence Program (OE)	F	ü	ü	ü	ü
• Debrief	F		ü		
• Training Committee	F	ü			ü
• Safety Committee	F	ü	ü	ü	ü
• Personal Growth	F				ü
• Inspections of other operations	F			ü	
Performance management processes					
• SoN	F	ü	ü	ü	ü
• TT	F	ü	ü	ü	ü
• Newsletter	F	ü	ü	ü	ü
• Performance Review – staff only	F	ü	ü	ü	ü
• Task Force	F	ü			
• Site Safety Meeting	F	ü	ü	ü	ü
• Start of shift	F	ü	ü	ü	ü
Financial rewards and incentives					
• Bonus	F	ü	ü	ü	ü
• Recognition	I/F	ü	ü	ü	ü
• Gifts	F		ü	ü	ü

The EIPs listed in the above table will now be briefly commented on as follows.

- **Information sharing/communication processes**

  The formal processes for information sharing are SoN, TT, site safety meetings, monthly union report back meetings and newsletters.

  No formal overarching communication process existed for BMA (HR01, p.1). Downward communication was the formal process by which management shared information. This included feedback on the performance of the mine, as well as the performance of each individual

department. Management use the process to highlight below budget performance and to mandate prescribed corrective action plans that they had developed. Therefore, this can also be considered part of the performance management process. Downward information sharing was a formal process through SoN presentations, generally every six months, by the mine manager and monthly TT presentations by either the department manager or work group supervisor.

Almost all interviewees spoke of the content of SoN involving production, productivity, safety, costs, projects and some marketing and sales information. These views are supported by secondary documents SDC01, SDC02, SDD04 and SDD20. At these information sessions it was also reported by interviewees that general questions on mine issues were asked as illustrated by:

- *'questions, a lot on bonus' (I19, p.4) and;*
- *'usually time for a few (questions' (I12, p. 2)*

Similarly, with TT and newsletters almost all interviewees reported on their occurrences and their content and this is supported once again by secondary documents, SDA08-09, SDA14-16, SDA16, SDA21, SDB02, SDC03-05, SDC19-21, SDD05-07 and SDD15-17. TT had a more local flavour and while the principal focus was safety, it also covered general mine issues (I08, p. 1). This is illustrated by the following examples:

- *'open forum for questions ... minutes are taken and reported back' (I17, p.4)*
- *[TT were] forum for people to 'put ideas' (I22, p.4).*

Interviewees reported limited upward information flow or sharing which was essentially limited to the formal process of asking questions at the SoN, TT, site safety meetings and union feedback meetings. While these processes are reported by interviewees to occur on an 'as need' basis there was no evidence in secondary documents to support this (SDA07-09; SDC03; SDC07; SDD09-11; SDD17-18).

Newsletters also provided information on mine performance, status of projects and general mine news such as people movement (SDA14-16; SDA18; SDB02; SDC19-21; SDD05-07).

Formal consultation with the unions on site matters was reported at two mines, Mine A and D, and this is primarily associated with reviewing bonus payments. Mine D had a formal process as indicated in secondary document (SDD09-11). While it is expected that this occurs at all mines, this was not directly revealed in the evidence available (I26; HR05). Other consultation appears informal and dependent on the personal characteristics of supervisors and managers.

Mine A management emphasised the difficulty in establishing regular effective communication processes due to the 12-hour shift arrangements and the additional combined one and half hour travel time added to the shift length. This made management reluctant to schedule out of shift communication sessions that added to the overall 13.5 hour shift duration (HR02, p.8; SM02, p.3). This impact of shift lengths was supported by employee comments (I15, p.10, I21, p.4). However, with that exception, most interviewees at other mines did not raise shift length and its impact on communication as an issue.

A further form of formal consultation utilising EIP in the recruitment of people was reported by interviewees from all mines (I20, I18, I04), with the exception of Mine B. The formal process of targeted recruitment is used, whereby selected people from the workforce are used in the process of recruitment for vacancies at the mine. These selected people were supported by training (HR02, p.2). Formal consultation also occurred on safety via department and mine safety meetings (SDA06, SDA10-11, SDC03-06, SDD02-03). All interviewees reported on this consultation process and this was supported by secondary documentation (SDA06-07; SDC04-06; SDC08; SDD02-03).

- **Decision making / problem solving processes**

  Most interviewees gave evidence of the ability to have an impact on day-to-day decisions of their work areas such as prioritising work breakdown responses and the sequencing of work, for example:

  - *'prioritisation of work unless there is a set schedule' (I06, p.1)*
  - *'new feeders at train loader ... involved in location' (I17, p.6)*
  - *'decision on changing stacks [stockpiles] ... like to help supervisor with their job' (I20, p.4).*

  This process predominantly occurred on an informal level and there is little evidence of a formal delegation of such decision making or formal empowerment of workers. However, there is evidence of the ability of workers to influence and have input into safety decisions and the management of safety as evidenced by B-Site committee minutes (SDA06-07; SDC04-06; SDC08; SDD02-03) and interviewee I02 response to training (SDA20).

  Once the work front moves from the workers' immediate work activity, the opportunity to influence decisions or have input reduces dramatically, yet information sharing continues and is expected by all interviewees. The worker's influence and input into these broader decisions is delegated by the worker, to a certain extent, to the union. The maintenance and CPP workgroups were reported to have greater impact and influence on their work area and activities than those in the mining production (HR02, p.7; HR05, p.11; SM02, p.4).

- **Business improvement (BI) / skill development**

  One of the key BI activities undertaken is the Operating Excellence (OE) program in operation at all the mines. OE projects put together teams utilising people from the actual crews, direct supervisors, management, technical specialists and relevant vendors, as indicated by 'a range of people involved' (I19, p.7) and 'involved people (doing the work)' (I13, p.4) when interviewees discussed OE. While projects are selected by management, once they are initiated they involve representatives of the

actual crew. The formal OE process calls for sign off of the stakeholders which involved direct discussions by the project team with the crews affected by the project (SM01, p.1; SM02, p.1; SM03, p.4; SDA05; SDC10; SDC11). At Mine D an OE team was observed at one of their workshops on drill and blast efficiency improvements. This was an interactive section following the general format outlined in SDC10, SDC11, SDC12 and SDC13. In the mining office and assembly area of Mine D high quality OE posters were observed highlighting the outcomes of the OE project on tyre wear. Annual reporting on OE and updates on OE projects occurred in newsletters (SDA04; SDA14-16; SDA21; SDC11-13; SDC19-21; SDD01; SDD05-07) and were distributed to the workforce. OE project improvement measures focussed on productivity measures exclusively, e.g. operating hours of tyres, meters/hour of drilling rigs and CPP yields.

Training, for the purpose of this investigation, is considered a BI activity. Training is essentially focussed on technical and statutory requirements for workers, whereas for supervision it is extended to communication, planning and problem solving skills. Members of OE teams receive various levels of training to support the skills required and the necessary OE methodology, (I20, p.6; I02, p.4; I04, p.12; I12, p.6; I16 p.18; I18, p.1-2; SM03, p.4).

Continuous improvement has been referenced by some workgroups as occurring informally within workgroups with the primary method being discussions within the TT. However, this was not supported by minutes of the TT meetings (SDA07-09; SDD15-17) and therefore is suggestive of the informal nature of this approach. Workers also undertook inspections of vendor work at vendor locations to ensure that equipment overhauls, equipment refurbishment and modifications lead to improved equipment performance. This was preceded by input into the scope of work to be undertaken (I15, p.3; I10, p.6; I02, p.2). The informal nature of continuous improvement is also evident at Mine B with the development of the Burty-Weiss bar (a device to facilitate installation of

roof mesh) which was developed within a workgroup. It was only after the successful initial development that formal company sponsorship was given (Insite 2001; SDG14; SM03, p.5).

- **Performance management processes**

  Performance management occurs at a number of levels. Management at all levels use KPI or a scorecard approach, based on the mine budget, for performance management (I01, p.3; SM01, p.4; SM02, p.4; SM03, p.4).

  Interviewees from the management and supervisor groups reported that performance reviews are conducted individually and on an annual basis, as illustrated by:

  - *'KPI set by senior supervisor ... wanted to achieve, we talked about them', (I13, p.5)*
  - *'read that and sign that', (I24, p.4).*

  Interviewees from across the mines indicated that budgets are formulated from a small group of planners and department heads. KPIs derived from budgets are given and not negotiated, as shown in the following examples:

  - *'always moving the goal posts' (I19, p.5)*
  - *'who sets (targets) is a complaint read out at toolbox meetings' (I14, p.2)*
  - *'new manager said budget will be redone, and believes it cannot be achieved' (I06, p.3)*

  This suggests ownership of KPI/scorecard measures is not high.

  Mine A at the time of the interviews had lower than budget production performance. Interviewees I01 and I04 reported this resulted in supervisor tension with management. Management and planners developed corrective action plans. There was no wider involvement of people prior to the communication processes to inform the workforce of the required actions, suggesting a relatively narrow approach to EI (SM02, p.4).

Problem solving, at all mines, was reported to be undertaken on an informal basis at the worksite, e.g. truck sequencing at the pit top and prioritising of maintenance at the workshop. Interviewee I05, p.1, also indicated this occurred within the team and did not require to be led or directed by the supervisor. Interviewee I03, p.1, also stated this occurred at Mine A's thermal coal CPP when he worked at that location.

Safety performance was managed at all mines by the TT and an area and site safety committee which had workforce representation (SDA06; SDC04-05; SDC22; SDD02-03). Management had extended this use of safety contacts to initiate and legitimise direct contact with people on other work related matters (HR01, p.13; HR03, p.3; SM01, p.1; SM03, p.1). Workers believe that it is their legitimate right to be involved in the management of safety at their mines (I02, p.4; I06, p.5; I07, p.4; I12, p.9, I18, p.3; I14, p.7). The B-Safe area and site committees are also utilised to consult with people on the management and direction of site safety which included programs, development of programs and allocation of resources (SDC04-05; SDC08; SDD02-03).

Daily briefings occurred at shift commencement at all mines and some presentations were given at this time. These briefings sometimes referred to as 'morning prayers', were for the purpose of reporting current operational status and primary activities for the shift ahead. While this is a briefing session, interviewees report questions occur that allow an informal two-way exchange of views (I02, p.2; I06, p.2; I14, p.2; I20, p.3).

- **Financial rewards and incentives**

  A base pay system exists at BMA mines with the addition of a bonus system. This bonus payment is calculated on production measures such as overburden removed, coal production and mine site costs. The payments are predicated on attaining 90% of budget performance before the incentive commences and is capped at 110% of budget performance

(SM01, HR01, SM02, HR02). A majority of interviewees reported the bonus was not a driver of workplace performance as illustrated by:

- *'if it's there, it's there; if it's not, it's not' (I21, p.7)*
- *'bonus not a driver [to performance] (I17, p.8; I11, p.7)*

Although underground mine workers felt it was an incentive, for example:

- *'harder you work, the more you get paid' (I08, p.6)*

This may well be associated with the bonus measure being directly related to their workgroup performance (development meters) and the quantum of the bonus paid (reported to be $850-$925 per week, I07).

The majority of interviewees stated the positive influence of personal recognition of their work from their immediate supervisor, for example:

- *'recognition goes a long way, helps the workforce, makes them happier, does not take much' (I08, p.6)*
- *'money is not the same as personal recognition' (I19, p.7)*

Also recognition of safety performance and length of service with small gifts occurred. Interviewees I03 and I22 had also experienced a promotion and job expansion as recognition of their performance and work attitude.

4.3.2.1 Summary

The individual EIP used at BMA do generally fit into the five schemes proposed in Figure 1.1. While most are explicitly endorsed formal EIP, the informal EIP are mostly prevalent in the Decision making/problem solving processes scheme which is more directly involved in the day-to-day work of employees in their immediate workplace.

While not all EIP could be set within the proposed five scheme framework, the only EIP in this group that was common through the four mines was the informal intra-group mentoring by experienced workers.

Although, this was clearly restricted to discrete areas of the mines such as underground production teams and CPP workgroups. With this exception, the other EIP that could not be set in the schemes had the appearance of being peripheral to the major thrust of EI to promote improved organisational performance.

While the EIP identified are generally congruent with the five schemes proposed in Figure 1.1, the extent of the EIP and the degree of implementation appeared to be variable between mines. This leads to the consideration of critical factors that influence EI implementation.

4.3.3 RI 3: 'What are the critical factors that influence the implementation of Employee Involvement Practices at BMA'

This research issue focused on developing the critical issues that influence EIP implementation at BMA. In considering this research issue, the findings from the following probe questions from Appendix C.1(a) were analysed: 1.3, 1.4, 1.5, 1.6, 1.7, 1.9, 1.10, 1.11, 1.13, 1.14; and all secondary data sources in Appendix E were considered.

Issues identified as critical to EIP were developed by the level of importance subscribed to them directly, or inferred, by the interviewees and issues which interviewees felt either enhanced or inhibited the effectiveness of EIP implementation. The critical issues developed from the application of the above criteria were categorised into a worker/management demarcation and also by mine. In this instance, supervisors were allocated to the management category, primarily due to the perception by workers that supervisors were the face of management, coupled with management's perception of supervisors as the organisation's conduit to the workers. These issues are summarised in Table 4.5.

The critical factors initially considered were under the five schemes used in Research Issue 2 and shown in Table 4.4. It was found that in reviewing the interview data no critical issues emerged that fitted into the scheme of

business improvement / skill development. This lack of fit may well be due to the formal nature of business improvement programs such as OE and the relative lack of involvement in the OE program by the interviewees. Also, with regard to individual skill development this may well be associated with the interviewees' view of training as a legal requirement focussed on statutory obligations. As this lack of fit with this EIP scheme did not emerge until the data analysis phase these reasons have not been tested with the interviewee base.

Among the issues that did emerge some were associated with the environment that supported the other schemes and thus a critical issue category of Supportive environment for EI was developed.

Table 4.5: Critical Factors that Influence the Implementation EIP at BMA

CRITICAL ISSUES	Worker				Management			
	MINE				MINE			
	A	B	C	D	A	B	C	D
Information sharing / communication processes								
- clear, unambiguous, performance	ü	ü	ü	ü	ü	ü	ü	ü
- relevant	ü	ü	ü	ü		ü	ü	ü
- TT are vital	ü	ü	ü	ü		ü		
- two-way communication	ü	ü	ü	ü	ü	ü		
Performance management processes								
- goals & targets realistic, relevant & owned		ü			ü	ü	ü	ü
- OE ownership is limited	ü	ü	ü	ü				
Decision making / problem solving processes								
- involvement of actual crews in work management, control & improvement	ü	ü	ü	ü	ü	ü	ü	ü
- relevant to day to day work of people in their immediate area	ü	ü	ü	ü		ü		ü
Supportive environment								
- foster & nurture EI	ü	ü	ü	ü	ü	ü	ü	ü
- small groups more desirable	ü	ü	ü	ü	ü		ü	
- positive reception of ideas	ü	ü	ü	ü		ü		
- management creditability	ü	ü	ü	ü	ü	ü	ü	ü
- EI processes flexible to the varying nature of work	ü		ü		ü		ü	
Financial rewards and incentives								
- bonus is not supporting BMA objectives	ü	ü	ü	ü	ü	ü	ü	ü
- recognitions is valued	ü	ü	ü	ü				

Of the critical issues identified, the issues listed below were common to both worker and management categories:

(a) information sharing on performance;
(b) involvement of the actual crews;
(c) fostering and nurturing EI;
(d) management creditability; and
(e) dissatisfaction with the bonus.

Issues that were generally exclusive to the worker category were:

(a) the importance of Toolbox Talks (TT);
(b) effective EIP needs to be relevant to day-to-day work activity;
(c) small groups are more desirable for EIP development;
(d) management's view of upward communication processes differed from the workers; and
(e) OE as a formal EIP is seen as a management tool.

The only generally exclusive critical issue pertaining to the management category was that of ownership and acceptance of performance goals and targets by the people of the mine.

The critical issues that influence EIP implementation will be discussed using the categories of issues from Table 4.5 and from the two aspects of workers and management. Where individual mines have a departure from this generalised discussion, it will be noted. A brief union perspective is then offered.

A brief outline of the key aspects of these issues now follows.

- **Information sharing / communication processes**

  Information sharing was considered by the employees as being a vital component of their involvement process. Broader mine issues and BMA perspectives were also of interest, in particular the mine's future plans as they relate to job security. It is the information sharing about the actual work area for the mine that was considered critical and this stems from the perception that:

(a) employees can influence day-to-day decisions; in effect have two-way communication (I08, p.2; I15, p.1; I20, p.3);
(b) employees can naturally assess the creditability of the information (I02, p.2; I09, p.3; I15, p.2; I17, p.5);
(c) the information affects the employee's day-to-day work environment, therefore it has meaning (I11, p.2; I17, p.3; I20, p.3); and
(d) the information is one component toward allowing an employee to form a simplistic 'done good; done bad' judgement on their day (I08, p.4; I14, p.5; I18, p.6; I22, p.4).

Information sharing, to have an impact on employee behaviour, must be relevant to the immediate work area. This impact is enhanced if productivity or production measures are simple and clear, and conclusions drawn from the measures by management are transparent and use non-complex logic. The formal information sharing process of TT is considered essential in this regard. From a management perspective, it was felt information sharing was a foundation block of employee engagement for business improvement (I09, p.5).

While there was significant commonality between worker and management on the critical nature of information sharing, there were two notable exceptions. The first was information sharing, in that management believed the information sharing, at SoN in particular, was significant and relevant to the employee. The second was that management saw the extent of the question and answer component as an indicator of the employees' concern for the business goals or the willingness of the employees to be involved and engaged in the business. Conversely, the employees generally viewed the SoN information as interesting, an 'information dump' and were generally quite cynical as to the creditability of the information.

As indicated in Section 4.3.2, there was a view, particularly from management, of an open two-way information exchange process. Employees, to a degree, felt they were able to ask questions, but there was little documentary evidence to support management's belief. Information sharing was essentially a downward process only. In the development of EI, a critical issue emerged of the different perceptions of management and workers of upward information flows.

- **Performance management processes**

  On the broader issues relating to mine performances, the workers felt disenfranchised from the budget performance expectations and subsequent KPIs (I06, p.3; I07, p.3; I14, p 5; I19, p.4; I21, p.4). They felt that management set unrealistic goals and if the goals were reached this then became the new regular target, i.e. 'ratcheting it up' (I15, p.5) or expecting more for the same, or the same for less. Workers felt that the peak performance of one good shift was extrapolated out to set the target for 365 days (I19, p.7). Yet, the ownership of performance goals by involvement in developing budget expectations was recognised by SM01 and SM03 as being important. SM03 stated a belief in 'exceeding to exceed', in other words getting people to achieve reasonable targets and gain confidence and self belief in their performance so that they move to higher levels of performance to allow them to perform at higher levels. Management's presentation on performance information was considered by people to be complex and often not consistent (I15) and seen as an information dump. Interviewees often felt it was propaganda, as well as being generally negative in tone (I14, I21). Mine D had attempted to change this negative perception by starting meetings with a good news item (HR05; SDD02-03; SDD09-11; SDD20). This was limited to mine management meetings and no evidence was found in TT minutes sourced from Mine D. What can be deduced from the above is that the communication of performance information is a critical issue. Information on performance goals and targets must be realistic and be relevant (owned) to the people if they are expected to achieve the goals.

Significantly, all H-category interviewees (supervisors) did not express any ownership, strong or otherwise, of the mine budget expectations, with the exception of safety. Yet senior management put great store in performance reporting by making a comparison between actual performance and budget expectations in the belief front line management (supervisors) believed and owned budget targets. This tendency actually diminishes the value of performance reporting, the impact of corrective actions and management's exhortation to improve performance. Further, budget ownership is challenged by some interviewees who believe that management perpetually 'ratchet up' the goals expecting more performance for the same, or less (I15, I21). To a degree, this may also be associated with the interviewees' view on management creditability and trust, in that once the perception of management moves from the direct supervisor to more senior levels trust falls quickly away (I02, p.6; I09, p.7; I16, p.9; I23, p.8).

The critical issue from this is that for employees to utilise information for EIP the information must be:

(a) relevant to the immediate work area;
(b) productivity or production measures must be simple and clear; and
(c) conclusions must be transparent.

The formal information sharing process of TT is considered essential to augmenting and simplifying this process as in this forum the information can be simply presented and is relevant to the employee's day-to-day activity. The impact of information shared is enhanced and thus management creditability is promoted and sustained.

OE and projects were not considered by employee interviewees to be a critical factor in implementing and developing an EIP that would lead to increased performance. In making this statement it is noted that only a few of the interviewees had been directly involved in an OE project, which limits the validity of this conclusion. This contrasted with the belief by management that OE was a significant EIP. While, OE may

well be a continuous improvement methodology that involves people, the perception of OE, as a general EIP process, was not shared by the employees interviewed. Management's view, expressed by SM03, was that people returned to the workplace with greater business understanding and that developing problem solving or continuous improvement methodology skills has merit. This aspect warrants further evaluation for the resources devoted to OE. The critical issue is that one of BMA's major EIP and performance improvement programs is not owned as relevant by the workforce at large.

- **Decision making / problem solving processes**

  As previously indicated, all groups expressed the vital nature of involving the actual crews who undertake the work. They are deemed to have the most direct knowledge of the work and are the ones who implement change at the actual work front. Most people from the supervisors' organisational level wanted this involvement through input into the day-to-day work of their area, with regard to job scheduling, job prioritisation and job design. Supervisors were not necessarily seeking formal mechanisms to do so and one interviewee was concerned that formal processes led to a high documentation load (I24, p.5).

  Many of the interviewees indicated not only their willingness to be actively involved in the immediate work area, but also where they actually do have involvement (Mine A, Mine B, Mine C – CPP, Mine D – CPP). While some interviewees indicated they were unwilling to get involved in the business, discussions on their work activity and work crew interactions indicated they were actually involved in the day-to-day organising, scheduling and development of their immediate work area (I05; I06; I11; I15; I22). These interviewees appear to harbour a reluctance to become involved in formal EIP sponsored by management. This reticence, especially, seems to occur when employees are required to accept responsibility in more public forums and/or in areas where they feel they have less familiarity. A critical area for EIP is ensuring it is

relevant to the day-to-day work of people in their immediate work area. The value of project work may not be as great as believed.

A critical feature was the quality and the ongoing development of the TT, in particular, as it relates to the immediate work activity involving job planning, job prioritisation, job design and job procedures. Although interviewees were informally involved in their workplace activity this was not thought of as an EIP, but more as in the guise of problem solving (I02; I17). This perception, along with the previous comment, infers a further critical factor is that small workgroups focussed on the immediate work are considered more desirable by workers for EIP and BI. The importance of workgroup size in EIP was further reinforced when interviewees respond that feelings of trust were greater for their immediate supervisor relative to management levels further removed from the work crews (I23; I20; I02; I16). This highlights the issue of the role of the supervisor as being critical to building and engendering an environment which fosters EI.

While SoN information sharing may be limited as an EIP, this was quite different when people discussed involvement in information sharing at the TT level and work area level. This may well have been due to the small numbers of participants compared to SoN and the familiarity of setting that allowed more dynamic interaction, such as a two-way dialogue. The key aspect associated with the extent of this interaction is the supervisor's ability to engender and sustain such a culture of information and opinion sharing, discussion and questioning. Examples of discussions and measures used in the immediate work area were truck count per shift, tonnes per shift, or not handing over unfinished work (I23, p.4; I10, p.8). The satisfaction in achieving these goals was evident in the voice tone and body language of the interviewees (I03, I08, I14, I23) (Pease 1988). These discussions and interactions occur both formally and informally at the TT where the focus was on the immediate workgroup activities and issues.

- **Supportive Environment**

  A key issue for workers was the positive reception of ideas and inputs into the business. Most interviewees nominated that management demonstrated this by:

  (a) listening;

  (b) being open and available for discussions; and

  (c) giving direct face-to-face feedback.

  Management feedback on ideas and inputs received was vital to establishing this positive environment. A key negative issue raised by interviewees was supervisors, without any explanations, not accepting ideas, or accepting ideas/inputs but giving them a low priority.

  The majority of interviewees stated that their ideas and inputs needed to be received positively and gave examples of where this occurred (I02, p.2; SDA02) and where it had not (I15, p.5). Interviewees put positive reception, or lack of it, as a dependency on the workgroup's supervisor and most interviewees had experienced both positive and negative receptions to ideas and inputs, further reinforcing the important role of the supervisor. Positive reception of ideas aligned with feelings of personal value and worth encouraged an environment that was fostering and nurturing of EI. Thus, for EIP to be effectively implemented, the supervisor's attitude, skill and actions in fostering a work group culture that allowed the positive reception of ideas and input and derivative feelings of personal value and worth was a critical issue.

  It was also apparent with some interviewees that the positive reception of their inputs and ideas by their fellow workmates was important as they did not wish to be ridiculed (perhaps this was more associated with a need to feel included or valued as a team member). Mine D interviewees, despite their focus on personal growth and team dynamics training, still experienced these issues (I20, p.5).

Frustration was often expressed at the lack of progress or non-completion of issues, problem solving and projects that were commenced, but later died out after a period of time (I16, p.6; I02, p.2; I12, p.7). This brings to the fore the important nature of the need for management to build creditability by completing projects and by not changing to new programs while current ones have not been fully implemented. This was particularly evident at Mine A and Mine B. To a number of interviewees, this typified the view that there was a lack of consistency between managers and supervisors about feedback, job allocation, recognition and willingness to accept ideas (I03, p.3; I15, p.5; I20, p.7; I22, p.6). Some workers felt their efforts and involvement were diluted by a lack of co-ordination and departments working together. Reference was given to 'passing the buck' on downtime recording (I15, p.1; I18, p.7) and a willingness to blame, rather than accept responsibilities (I04, p.4).

Management actions across the mine site are required to be consistent and a derivative of this is that management action must support the expressed management philosophy. Therefore, a critical feature is management creditability built by doing what they say they will do.

It was recognised by some interviewees, particularly from the supervisor category, that some activities lend themselves more naturally to developing and sustaining EIP. The CPPs and underground face crews and maintenance groups with a workshop base have more natural intra-group interactions with potential multiple interactions throughout the entire shift than open cut mine coal haulage, mine services and over-burden removal workgroups. This results from the relatively defined geographical work area of CPP and the underground face area. In turn, this is augmented by the team dynamic that results from related and dependent work activities to achieve shift outcomes which naturally facilitate communication, work prioritisation and problem solving. Conversely , in the open mine once a truck driver enters the cabin of the truck there is relative isolation and while the truck is mobile the drivers

direct work space will remain static and isolated. This isolation of activity is exacerbated within open cut mines that have long strike distance which result in long haul distances between quite repetitive activities. The critical issue is that some mine activities lend themselves more naturally to EIP than others, and for EIP to be utilised as a mine site-wide approach it may well require different approaches suited or customised to the nature of the work.

- **Financial rewards and incentives**

  Almost all interviewees, regardless of category, expressed the view that the bonus system did not affect how they applied themselves on a day-to-day basis at work. They did not indicate a direct relationship to bonus payment and their efforts and most interviewees thought the current bonus system was too complex to be relevant to their day-to-day work.

  The interviewees implied that the bonus payment was expected, almost a right, and they would continue to do what they thought was expected of them and in turn expect a bonus that was close to historical averaging and comparable to other mines. This view was particularly strong with long-serving interviewees. If this level of bonus was not available, it was a point of grievance that created negative management perceptions and supported the need for unions to monitor the bonus scheme. The critical issue for BMA is that the bonus does not appear to be serving BMA's need to actively involve people in the success of the business, and is a source of grievance that restricts direct engagement of the people by BMA.

  All interviewees expressed satisfaction and feeling of worth when their efforts were recognised by their direct supervisors. These feelings were enhanced if this recognition was supported by senior management.

- **Union Perspective**

  From a union perspective, although primarily from only one source (I25), the following were noted as critical issues for EI;

(a) Need for management support, as evidenced by:
- *'new manager was hand picked to follow Ian' (I25, p.2)*
- *'management worked at it' (I25, p.2)*
- *'wouldn't take much to drag it [EI] back, eg. bad managers' (I25, p.2)*

(b) Leadership is vital to EI from both a management and union perspective and the alternative is industrial conflict as indicated by:
- *'[alternative] … stoppage on every little things' (I25, p.3)*
- *'there is a lot of negative people, you need to be positive' (I25, p.3)*

(c) Communication processes are important for information needs and socialisation of new entrants, as indicated by:
- *'easier when people know, what happens … and where they fit in' (I25,. P.3)*
- *'people need to be socialised into the process, the way we do things' (I25, p.3)*
- *'trust management to give information' (I25, p.1)*

(d) Supervisor skills were considered important by both I25 and I26 to the implementation of EI, due to their direct impact on the day-to-day work activity of people.

4.3.3.1 Summary of Critical Factors

The critical issues can be summarised under the headings used in Table 4.5.

(a) Information sharing / communication processes

Information sharing, to be effective, needs to be simple, clear, unambiguous and relevant to the immediate workplace. In this sense TT are considered vital to achieving work place relevance. Information on workplace and mine performance is a foundation for EI as it is one of the principle mechanisms by which organisational context is developed. Management has a view that upward communication channels are open, yet workers believe, beyond their immediate supervisor, very little two-way communication occurs.

(b) Performance management processes

For performance goals to be effective they need to be realistic, relevant and owned. BMA workers do not own their mine's performance goals, which limits their acceptance as a performance driver. The formal OE process is not owned by the workforce at large, primarily due to their limited exposure or opportunity to get involved.

(c) Decision making / problem solving processes

EI, in the above scheme, must involve the actual crews who do the work in the management, control and improvement of the work. For the EIP to be effective it needs to be relevant to the day-to-day work of people in their immediate work area. The EIP in this area occurs informally and is embedded in formal EIP such as TT.

(d) Financial rewards and incentives

The current BMA bonus system is not supporting BMA's objectives and indeed creates a negative perception of management by workers which is corrosive toward developing management trust. Personal recognition of employees' achievements from their direct supervisor was valued by employees.

(e) Supportive Environment

EI implementation is heavily dependent on a supportive environment, such as those issues outlined above, for it to achieve maximum effectiveness. The features thought vital for the supportive environment are:

(i) management to follow through on commitment;

(ii) management to maintain consistency with their espoused philosophy;

(iii) small groups are more effective for EI implementation;

(iv) the role of the supervisor in creating the environment that fosters and nurtures EI; and

(v) EIP processes in this environment can vary, depending on the extent of the workgroups' natural interactions in the workplace.

When considering the findings of this section in relation to Figure 1.1, the factors impacting Employee Perceptions of Influence show there is strong alignment with management commitment, trust, day-to-day work, congruence of management style and action, personal reward and decision making processes. The components of employee perceptions of influence that did not appear as strongly aligned critical factors were clarity of organisation mission, organisations competitive position, personal development, job security and self efficacy.

While no direct link for these components is apparent, associations can be drawn with certain factors in Figure 1.1 for example, the information sharing/communication processes scheme critical factors of simple, clear, unambiguous and relevant information may well be related to clarity of organisation mission. Personal development was a clear feature at Mine D, but did not surface as critical feature in the overall data analysis. Skill development and job security, while not emerging from the case findings as critical, was thought by most interviewees as desirable.

Self efficacy did not emerge as a critical factor. However, given the critical nature of involving the people doing the actual work is based on the belief those people will know the work best, the attribute of self efficacy can potentially be considered embedded in that belief. This was not, however, clearly demonstrated in the investigation. Also, considering the view EI is primarily an initiative of management self efficacy, as a factor, may come to the fore as a demonstrable factor in a well-developed, supportive EI environment.

To create a supportive environment for EI is one consideration; to sustain the EIP that are developed from, and contribute, to this environment then becomes the next important consideration.

4.3.4 RI 4: 'How does BMA sustain effective Employee Involvement Practices?'

This research issue focussed on discovering how BMA currently sustains the EIP listed in Research Issue 2. In considering this research question, the findings from the following probe questions shown in Appendix C.1(a) 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.10, 1.12, 1.13, 1.14 were used and the following secondary data sources were considered SDA02- SDA11, SDA14-SDA21, SDB02-SDB, SDC01-SDC13, SDC15-SDC22, SDD02-SDD07, SDD09-SDD20 and SDG14.

The issues that emerged from this analysis were placed in the framework shown in Table 4.6.

This framework was developed from the data and consideration of the EIP found in Research Issue 2 shown in Table 4.3. The framework sought to determine positive actions BMA was undertaking to support the effectiveness of the EIP.

Table 4.6: BMA Practices That Sustain EIP

SUSTAINING EFFECTIVE PRACTICES	MINE			
	A	B	C	D
Information Sharing / Communication Processes				
- Tool box talks (TT)	ü	ü	ü	ü
- State of the Nation (SoN)	ü	ü	ü	ü
- Newsletter	ü	ü	ü	ü
Safety Meetings	ü	ü	ü	ü
- Tool box talks (TT)	ü	ü	ü	ü
- Reports	ü	ü	ü	ü
- Committees	ü	ü	ü	ü
Training	ü	ü	ü	ü
- Technical	ü	ü	ü	ü
- Safety	ü	ü	ü	ü
- Supervisor	ü	ü	ü	ü
Supervisor Reinforcement (Larkin Card)		ü		
• Supervisor reception of ideas	ü	ü	ü	ü
Formal Practices/Consultation				
- OE	ü	ü	ü	ü
- Union report backs	ü	ü	ü	ü
- Recruitment	ü			ü
Performance Management				
- Debrief of performance		ü		
- Performance Data				
• SoN	ü	ü	ü	ü
• TT	ü	ü	ü	ü
• Newsletter	ü	ü	ü	ü
• Noticeboard	ü	ü	ü	ü
• Reviews (staff only)	ü	ü	ü	ü
• Verbal recognition	ü	ü	ü	ü

A number of the practices identified in the investigation findings are concurrent with the EIP utilised by BMA and discussed in Section 4.3.2 and shown in Table 4.4. It is proposed in this section to discuss how the practices identified in Table 4.6 influence sustaining EI. It is not thought necessary to re-describe the practices.

Sustaining the current suite of EIP at BMA requires actions that are either overtly supporting the EIP, or are an indirect result of other actions. This section will review EI sustaining actions from the mine management point of view and also point out aspects of individual actions that support EIP.

By far the most sustaining action BMA does to support EIP, at all mines visited, is the information sharing that occurs through SoN, TT, newsletters and noticeboard displays of information (viewed at Mines A, B & D). This is exemplified by the following example:

- *'communications is vital for workforce acceptance and understanding what's going on' (I09, p.5).*

Information sharing is a key component of EIP and management's focus is on production or performance indicators, with an emphasis on comparison with budget or target indicators. Hence, management feel the performance expectation is known by employees. Yet most interviewees expressed a dislocation to the budget or target. This lack of ownership was expressed in the following examples:

- *'the measures are not realistic' (I03, p.3)*
- *'goals unattainable' (I04, p.7)*
- *'they shift the goal post' (I14, p.5)*
- *'targets are OK as long as we are given the resources' (I19, p.5)*

While this information sharing on business performance was extensive and formed the basis of performance management and problem identification processes, it was essentially a downward communication process. There is little evidence of formal upward communication of workforce issues or problems other than those raised at the union report-back meetings to

management. Informal raising of issues, problems or suggestions was reported to occur at TT and at on the job intra-workgroup discussions. The extent of this direct involvement, therefore, was heavily dependent on the supervisor's approach and style to involving people in the work. BMA, with the exception of KPI production monitoring, did not have a monitoring process to ensure this direct involvement occurred, information flowed upward to senior management or was shared horizontally within the organisation.

The management of safety at the site also plays an important role in EI by utilising an area of commonality between management's safety desires, statutory obligations and the intrinsic need of people's desire not to get hurt. This is also supported by BMA policy and documentation (SDG01; SDG13). By involving people in safety, in particular the site safety committee, this leads to broader involvement in the workplace by incorporating reviews, mutual definition of work procedures, responsibilities, expectations and standards. Equally, in the safety management process work is prioritised, resourced and scheduled allowing those involved to gain an improved understanding of the business planning through the safety window. This approach was present at all mines (SDA11; SDA06; SDC04-05; SDC22; SDD02-03; SDD09-11; SM03).

In the face-to-face dynamic the TT was the major vehicle for involvement in the formal sense once again built on the back of safety whereby each session not only provided performance information, but also had a question and answer component on any issues the workforce wished to raise (I17, p.4; I22, p.2). The question was minuted and if feedback was not given at that meeting it stayed on the TT record until answered or resolved. The TT's primary focus was on the immediate work area and activity of that crew (I22, p.2). Reviews of TT minutes suggested this approach was inconsistent. However, in viewing the documents this may also be a function of the literacy skills of supervisors.

Throughout the interviews there was broad recognition that EI was, in the first place, initiated and controlled by management (I03, p.1; I09, p.4; I17, p.7; I20, p.6). This clearly puts an onus on management, in general, to foster EI with an emphasis on the skills, attitudes and behaviours of the front line supervisor. BMA's current approach is to have a series of supervisor training modules called S1, S2, S3. S1 covers statutory duties, S2 covers accidents and investigations and S3 covers communication (I04, p.1; I12, p.6; I13, p.2). At Mine B, the HR department has introduced a concept called the Larkin card to assist supervisors and to attain consistency. The Larkin card contains key messages around the issues of the day and prompts for supervisors to manage various situations (HR03, p.2).

Interestingly, in discussions on trust the majority of interviewees indicated trust in their immediate supervisor. Their feelings of trust, however, were less evident the further removed the management level was from the interviewee. This is illustrated in the following examples:

- *'very little trust of the people above [supervisor]' (I23, p.8)*
- *'trust supervisors differently … no trust in management interested in well being of people' (I20, p.9)*
- *'trust onsite management team, any further don't know' (I16, p.9)*
- *'Brisbane … too far away' (I02, p.5)*

Yet, employees were willing to advance conditional trust to supervisors and management in general as illustrated by:

- *'must be trustworthy to get there' (I22, p.8)*
- *'at some stage you've got to trust them' (I17, p 9)*
- *'no distrust, keep an eye on it' (I09, p.7)*

Only two interviewees expressed no trust of management and cited ideological reasons to support their position (I11, p.9; I18, p.9). There was, however, concern expressed over the stability within management ranks (I05, p.6; I16, p.9; I20, p.9).

An inference that can be drawn from this discussion is that the TT is more effective in sustaining EIP than SoN due to its immediate workplace focus and the TT is led by the workgroup supervisor. Although SoN had a question and answer component there was a more cynical approach to information. The SoN was still considered important and desirable in the information sharing process because it provided an overview measure of the mine's performance, a report card and also gave indications of future plans.

The use of the OE projects, with the involvement of people from the area of interest for the project, fostered EIP. The OE methodology also has a 'stakeholder' signoff (SM01 p.1; SDC10; SDC11) which required the project team to gain feedback and acceptance of project recommendations from the people actually doing the work, thus further involving people (I19, p.7; I13, p.4). Interviewee I11 (p.7), however, offered a counter point that OE occurs 'in a room with people of little knowledge who come up with different ways and people introduce it without trialing'. Concerns over whether the right people get onto OE teams were expressed by a number of interviewees (I08, p.1; I10, p.1; I14, p.1). Management claim people exposed to the OE methodology developed greater business understanding, problem solving and communication skills, which were taken back and utilised within their own workgroups, and thus support EI in business improvement at the workplace(SM04, p.5). This view was unable to be verified from within the interview group. SM03 extended this generally to projects, commenting that projects gave management an opportunity to build trust with people.

Mine A had indications of the positive reception of ideas and inputs (I02, p.1; I03, p.5) identifying actions they had initiated that were well received (SDA20). Mine B's introduction of the Burty Weiss bar was also an example of the positive reception of ideas.

Mine D had undertaken a series of workshops relating to communication, personality types and interpersonal skills for the entire mine. The interviewees from Mine D also indicated that this training had broadened

their understanding of team dynamics and modified their behaviour toward achieving positive team outcomes such as problem solving and work allocation (I19, p.1; I20, p.1; I21, p.2; I24, p.1).

The informal sustaining of EIP is heavily dependent on the personal approach taken by individual supervisors (I03, p.6; I05, p.6; I14, p 1; I17, p.1; I22, p.6). Also Mine C generally indicated a more supportive EIP context with newer supervisors replacing older Utah Development Company (previous mine operator) style supervisors (I15, p.5).

Another form of EIP sustenance was that of verbal recognition for a job well done, or input received. This was highly valued by the majority of interviewees for example:

- *'get verbal recognition … good to get, know you are doing a decent job' (I13, p.7)*

This was also reported to be very inconsistent in its application.

Mine B, Mine C and, to a limited extent, Mine D also reported offsite vendor or site inspection by people doing the work. This EIP was sought after as a personal recognition of competency and worth. Indeed Mine C was undertaking this style of EIP, utilising workers' offsite inspections without the involvement of a supervisor (HR04, p.2).

4.3.4.1 Summary

In consideration of how BMA sustains EIP as discussed above, and the critical factors identified in the previous section, the key finding that emerged is the essential presence of an overarching supportive environment for EIP to be effective. This supportive environment is mainly derived from informal EIP that are embedded in formal BMA EIP. The two key EIP practices BMA use are information sharing and TT.

The importance of information sharing, in particular performance information relative to the immediate workplace, is that it provides a context in which people can make a decision to engage or not engage the EI opportunities on offer. In other words, it sets the context for desirable workplace conduct, the optimum and active engagement of employees of EIP. This context must be established first before workplace conduct can occur.

The second key factor is the TT that occurs every 3-4 weeks. This forum, initially predicated on safety, provides the forum for review and reflection on workgroup performance in the immediate workplace environment. This forum allows employees to participate in informal EIP such as influencing decisions, participation in problem solving and raising issues of concern. TT effectiveness, in this sense, is further enhanced if supported by 'morning prayers' and weekly plans that occur at all mines, as they provide additional day-to-day context to the regular TT.

BMA have recognised the critical building block of the immediate workplace environment in the direct engagement of people by focussing on workplace leadership and increasing supervisor capability beyond the technical competence required of the work. They have extended their supervisor development programs with the soon to be commenced Lominger program.

This leads to the next research issue that considers the strategies BMA is using to support at their mines.

4.3.5 RI 5: 'What strategies does BMA Coal adopt to enhance effective employee involvement?'

This section is focussed on identifying and discussing the strategies BMA directly utilises to develop and foster the sustaining actions for EIP implementation and address, in part, the critical issues identified in the

previous two research issues. In undertaking this analysis, the following probe questions from Appendix C.1(a) were used, 1.1, 1.6, 1.7, 1.8, 1.9, 1.11, 1.13, 1.15, 1.16, 1.18 and the following secondary data sources, SDA07-09, SDA12, DA20, SDB04, SDB07-10, SDC01-10, SDC12-13, SDC15-18, SDD02-04, SDD09-19, SDG05-12, SDG15 were considered.

The strategies that emerge from the findings are primary strategies that seek to address BMA-wide issues. Secondary strategies that address site-specific issues will be highlighted in a very limited manner. The primary strategies will be outlined only and no BMA implementation plans discussed or prioritised, as both of these issues will be dependent on particular mine site mine site dynamics.

The primary strategies are set around six key aspects, namely;

1. Supervisor skills;
2. Information sharing/communication processes;
3. Intra-workgroup skills;
4. The TT as a primary EIP;
5. Formal EIP process; and
6. Financial rewards.

Overarching the strategies are two issues. The first is that of senior BMA management consistency and commitment in working within and implementing the principles embedded in the BMA Charter and the HR strategy that was derived by the senior BMA management to support the BMA Charter (SDG05-11). The second issue is resolution of the bonus payment impacts. The current bonus payment system is not seen by any of the interviewees as a driver for positive behaviour. It is seen by many to generate negative behaviours and to exist as a generator of a dysfunctional relationship between management and workers. Indeed, a sound argument can be mounted that the current bonus system and management of it are a key power source for the unions to legitimately function as a third party in the management/workforce relationship.

The primary strategies that emerge from the case findings are:

- **Strategy I: Supervisor skills**

  For the development of more effective EIP the role of the supervisor is pivotal in creating an environment within the workgroup that not only fosters the initiation of people's involvement, but also nurtures their involvement's ongoing sustenance. BMA have recognised this, not only in the supervisor training modules S1, S2 and S3, but also with the introduction of the Lominger training modules (HR01, SDG06-07; SDG11; SDG15). The skills required are in the area of communication, openness, listening, feedback, and team dynamics in the workgroup. It is problematical whether these skills can be inculcated and utilised by supervisors as the skills need to be developed beyond theoretical instruction into real contemporary situations. That is, the onus is on senior management to not just provide the training, but also the complementary development of such skills. In as much as training can give a mechanistic set of skills in the context of EIP, the fostering of the situational environment that nurtures EIP is beyond the mechanistic application of learnt skills. While site managers SM02, SM03 and SM04 reflect this belief, there was no clear program found to support it. However, other evidence indicated these skills and capability were part of the performance review process (SDC15-18; SDD12-14) and in corporate HR strategy documents (SDG07-11).

  EIP fostering by supervisors requires skills in supervisors that appear to be evident in the new Mine C supervisors. Hence, this strategy of improving supervisors' skills is not only a requirement in supervisor development, but also a consideration in supervisor appointments and recruitment.

- **Strategy II: Information sharing / communication processes**

  Information sharing is a vital part of an EIP program and at BMA this currently occurs in two key areas: mine site and BMA information (SoN and Newsletter) and immediate work area (TT).

  The overall mine site information is quite detailed (SDA05; SDB11; SDC01-02; SDD04; SDD20). A focus in SoN on comprehensive detail leads to potentially engendering information overload and thus potential negative impacts. This was illustrated by:

  - *'a lot of graphs, percentages f…….. bull…….. can't trace overheads to see how they are linked' (I15, p.2)*
  - *'lots for flow charts' (I05, p.2)*

  Despite these views, the information flows are generally well received and people consider them valuable.

  - *'[give] …plans for immediate future performance' (I11, p.2)*
  - *'information is adequate' (I01, p.2)*
  - *'information like to get … Does it phase me, is OK' (107, p.2)*
  - *'believe we have sufficient information [given]' (I18, p.4)*

  Where there is concern with the BMA information approach it is with information comparison to budget data. This is illustrated by:

  - *'budget is not known, how ideas on certain machines formed' (I05, p.2)*
  - *'measure/targets do not involve people … easy to sit back and say what we do without all the information' (I03, p.3)*
  - *'limit involvement of people in targets' (I08,p.2)*
  - *'figures rubbery always in dispute' (I15, p.7)*

  Information on the immediate work area is relevant and current and reflects people's immediate area of control. As well as being relevant to them, it is their immediate work pay-off in job achievement. This is illustrated by:

  - *'meeting with plant manager each morning … what's happened previous day … what will happen in the future …impact on operations' (I17, p.3)*
  - *'morning meeting … quiz supervisor anytime of day' (I20, p.3)*

- *'everyday … rundown on what happening' (I23, p.2)*
- *'24hour/weekly plan …company dedicates a fair amount of effort to do this, it's worth it' (I11, p.2)*
- *'morning prayers … priority for the day … work schedule … questions asked' (I06, p.2)*

This places a greater emphasis on TT than SoN and allows workgroups to use the information for problem solving and work improvement that also gives mutual payoffs in job satisfaction, effort and competitive comparisons. This area of information sharing on a local level is the most important to the business for performance improvement. While global information can set context and be a platform for action the actual activity occurs at the workplace, based on information that is discrete to the workplace and used by people in the workplace.

Communication processes utilised at BMA built around the SoN, TT, shift start briefings and newsletters are essentially a one-way process of downward communication. This is not necessarily bad, as employees need to know the direction and expectations of management. They also need information on how the business is going, their work team's performance and their own performance so they are able to participate in the business and be held responsible for the outcomes. This is particularly important because the workgroup outcome is the aggregate outcome of the individual members of the workgroup and the need for information on that performance is an antecedent to any form of EIP. The mine outcome is the aggregate outcome of all the discrete workgroups which, in turn, is founded on the individual's performance. The key aspect for BMA is to maintain the downward communication, subject to the caveats above (simple, relevant and owned data), yet incorporate also an upward communication component. Notwithstanding an acceptance of the preferred informal processes essentially occurring within the TT, a formal process, outside of union involvement to gather upward communication to ensure mine site-wide issues are known by management was not demonstrated in the investigation findings.

The communication processes appear to be limited by the shift arrangements. Given the extended nature of the shifts (12 hour duration) and consideration of commuter time, management is reluctant to hold meetings for communication and business improvement outside of normal work time. This is illustrated by:

- *'12 hour shifts make it difficult to make space (to communicate)' (HR02, p.2)*
- *'geography can be constraining for contact … can't just go out and talk to people' (HR05, p.4)*
- *'how to give supervisors the time to have a two-way dialogue … big challenge' (SM02, p.3)*

While Mine A emphasised this issue, other mines did not see it as a particular barrier. Adjusting to the shift arrangement and scheduling communication processes was considered just part of 'the way we do business'. Mine A may need to address this separately or understand why other mines do not share the same concerns. BMA needs a consistent approach to this issue of communication within a 12-hour shift cycle.

In the communication processes, the nature of work has an impact. Some workgroups such as CPP and underground face workers work more naturally in teams and have more intra-workgroup interactions than mobile plant workers. These mobile plant workers operate in the isolation of their equipment cabins and intra-workgroup interaction is limited to shift start, shift finish and radio contact, as shown by the following comment,

- *'opportunity does not present itself as you are stuck on a machine' (I03, p.3)*

The more natural workgroups allow easier formal and informal communication processes consistent with continuous production. Strategies to overcome this communication barrier need to be developed to facilitate more formal and informal communication processes. Such strategies may include scheduled communication within the shift time,

intra-workgroup meetings and the setting of supervisor performance expectations and measures for communication processes undertaken.

- **Strategy III: Intra-workgroup skills**

  For workgroups to be successful at EIP and, therefore, ultimately lead to business improvement the workgroup needs to have skills and abilities in analysis and problem solving. While these skills can be given in training, it also requires the workgroup to understand not only business information, but interpersonal relationships and workgroup dynamics.

  Mine D has undertaken training on personal relationships, conflict resolution and understanding of personality types. Indications from the case findings were very positive as evidenced by:

  - *'did help people at the workplace … got some people on track … it touched some people' (I24, p.1)*
  - *'feedback tools to give positive constructive criticism … without belittling them' (I19, p.1)*
  - *'some people learnt to be a bit more responsible' (I21, p.2)*
  - *'gave you strategies, a way of thinking … there is more ways than just … your own' (I20, p.1)*
  - *'saw a big change in people' (I20, p.1)*

  While this has a focus on personal growth it also underlines to what degree the individual perceives they are personally valued and appreciated by the organisation. The higher the level of this perception the deeper the implied psychological contract is established. The relationship evolves and becomes more than just an exchange of cash for effort.

- **Strategy IV: TT as a primary EIP**

  The TT is a mechanism that was initially used to address safety matters at the workplace for the workgroup involved in that workplace. It is where a direct relationship exists between the company and members of the

workgroup. The TT has been expanded at all BMA mines visited to include other issues beyond safety as illustrated by:

- *'toolbox … issues around the mine … put ideas' (I22, p.2)*
- *'supervisor [at the TT] goes around everyone asking for input' (I23, p.3)*
- *'toolbox … everything discussed … feedback next week' (I18, p.3)*
- *'toolbox … tonnage, costs, equipment damage … open forum' (I17, p.3)*
- *'safety contact [TT] … what going around the pit … safety … production rates' (I07, p.6)*
- *'toolbox … address issues and problems and to handle question' (I01, p.1)*

The TT allows direct contact with people in their immediate work area and, as such, is usually with small groups that are natural teams. With enhanced supervisor skills and intra-workgroup skills the opportunity exists to establish within groups a culture that is receptive to inputs and ideas that will involve people in attaining agreed performance expectations and seek improvements to workgroup performance.

- **Strategy V: Formal EIP processes**

  In the actual EIP processes formal processes are relevant to a particular project such as OE and are limited to that project. Any extension of learned skills beyond that project is dependent on the dynamics and acceptance of the workgroup that receives these skills. In that sense, formal EIP processes have a limited reach in involving a large number of people. Indeed it appears at BMA that formal EIP processes, such as SoN and OE, offer management more comfort than workers. The informal processes, developed as part of TT and intra workgroup discussions fostered by supervisors, are more valued and seem to be more desirable for most interviewees, as illustrated in the previous interview quotations. Hence, in resource allocation the focus should be on informal processes as opposed to high profile formal processes.

- **Strategy VI: Financial rewards**

  The current incentive scheme bonus is generally perceived as a 'bolt on' component to the remuneration that is a right and not an incentive. It is

not perceived to drive positive behaviour other than to create generally negative discussion about production and costs. The bonus scheme also seems to serve as a platform for union power to audit or check management performance decisions with a focus on increasing bonus dollars. This was illustrated by the following:

- *'company see bonus as an incentive whereas unions see it as right' (HR05, p.9)*
- *'bonus doesn't drive behaviours' (SM02, p.1)*
- *'if it's there, it's there, if it's not, it's not' (I21, p.7)*
- *'bonus compared to others [BMA mines] … is pretty ordinary' (I18, p.8)*
- *'general feeling is bonus has let us down, goal posts moved' (I14, p.7)*
- *'bonus show me the golden formula to work it out' (I06, p.5)*

However, some interviewees felt the bonus was a good incentive. Primarily this was the face workers in Mine B. For example:

- *'the harder you work, the more you get' (I08, p.6)*
- *'[Bonus} … pretty good reward' (I07, p.6)*

This view had some support in management as indicated by:

- *'behaviour became predictable and rational … [after bonus linked to production and costs]' (SM01, p.6)*
- *'some limited positive incentive, due to physicals' (SM03, p.6)*

Any desire by BMA to have a direct relationship with its people will require this area to be addressed, such that a system is developed that is simple, relevant to the employees' immediate work and focused on developing desired behaviours. Any system should not require union vetting or auditing to give it legitimacy.

4.3.5.1 Summary

Six strategies emerged from the data analysis with regard to this research issue, namely, Supervisor skills, information sharing/communication process, intra-workgroup skills, TT as a primary EIP, formal EIP processes and financial rewards.

From the analysis of data the common thread that weaves through the fabric of these strategies is the need for the presence of a supportive EI environment for these strategies to be effective. The supportive EI environment, in turn, is predicated primarily on the influence and commitment of the immediate workplace supervisor to foster and nurture this environment. Therefore, the supervisor's ability, capability and willingness to develop such an environment is vital for EIP to flourish.

4.3.6 Data Analysis Summary

This chapter presented the findings for the five research issues from the data analysis of the multi-cases used in this investigation. The summary of these findings are presented in Table 4.7.

The case study methodology used has provided insights into the research question: 'How do coal mines in Queensland utilise employee involvement practices?'

The analysis indicates that for EIP to be effective, and for employees to move through the engagement interface, the environment in which they work has a significant influence on the level of engagement they decide to undertake. This essentially supports previous work highlighted in the literature review of Chapter 2. What is expanded and firmly established, however, is that an EI supportive environment is equally important to formal and informal EIP alike.

Table 4.7: Summary of Investigation Findings

Research Issue	Summary
How does BMA perceive the concept of Employee Involvement?	(a) A belief that the concept of EI is predicated on the involvement of the actual crews that do the work. (b) That EI is about involvement in the day to day work activity of the people. (c) EI is about sharing information on the business performance. (d) That EI includes people being consulted on decisions by management. (e) That EI has the commitment of management to listen to issues and

	concerns about the workplace. (f) EI in mine safety is a mandatory activity rather than discretionary. (g) In undertaking (c), (d), (e) and (f), people believe they are able to influence decisions.
What Employee Involvement Practices are utilised at BMA?	The individual EIP used at BMA do generally fit into the five schemes. • Decision making / problem solving processes • Information sharing / communication processes • Business improvement / individual skill development • Financial rewards and incentive • Performance management processes While most practices are explicitly endorsed formal EIP, the informal EIP are mostly prevalent in the Decision Making / Problem Solving scheme, which is more directly involved in the day to day work of employees in their immediate workplace. While not all EIP could be set on the proposed five scheme framework, the only one EIP in this group that was common throughout the four mines, was the informal intra-group mentoring by experienced workers. This was, however, restricted to discrete areas of the mines, such as underground production teams and CPP workgroups. All of those EIP that could not be set in the schemes had the appearance of being peripheral to the major thrust of EI to promote improved organisational performance.
What are the critical factors that influence the Implementation of Employee Involvement Practices at BMA?	The critical issues can be summarised as follows: • Information sharing / communication processes Information sharing to be effective needs to be simple, clear, unambiguous and relevant to the immediate workplace. Information sharing is a foundation of EI as it sets organisational context. TT are a vital EIP in this regard. • Performance management processes For performance goals to be effective, they need to be realistic, relevant and owned. BMA workers do not own their mine's performance goals which limits their acceptance as a performance driver. The formal OE process is not owned by the workforce at large primarily due to their limited exposure or opportunity to get involved. • Decision making / problem solving processes EI in the above scheme must involve the actual crews who do the work in the management, control and improvement of the work. For the EIP to be effective, it needs to be relevant to the day to day work of people in their immediate work area. The EIP in this area occurs informally and in embedded is formal EIP such as TT. • Financial rewards and incentives The current BMA bonus system is not supporting BMA's objectives

	and indeed creates a negative perception of management by workers, which is corrosive toward developing management trust. Personal recognition of workers from their direct supervisor of good work was valued by workers. • Supportive Environment EI implementation is heavily dependent on a supportive environment to achieve maximum effectiveness. The features thought vital for the supportive environment are: (a) management follow through on commitment (b) management consistency with their espoused philosophy (c) small groups are more effective for EI implementation (d) the role of the supervisor in creating the environment that fosters and nurtures EI (e) EIP processes in this environment can vary, dependent on the extent of the workgroups natural interactions in the workplace.
How does BMA sustain effective Employee Involvement Practices?	The key finding that emerges is the essential presence of an overarching supportive environment for EIP to be effective. This supportive environment is mainly derived from informal EIP that are embedded in formal BMA EIP. The two key EIP practices BMA use are information sharing and TT. The importance of information sharing, in particular performance information relative to the immediate workplace, is that is provides context in which people can make a decision to engage, or not engage, the EI opportunities on offer. In other words, it sets the context for desirable workplace conduct, the optimum and active engagement of employees of EIP. This context must be established first before workplace conduct can occur. The second key factor is the TT. This forum provides the forum for review and reflection on workgroup performance in the immediate workplace environment. This forum allows for employees to participate in informal EIP such as influencing decisions, participation in problem solving and raising issues of concern to them. TT effectiveness in this sense is further enhanced if supported by 'morning prayers' and weekly plans that occurs at all mines, as they provide additional day to day context to the regular TT. BMA recognise the critical building block of the immediate workplace environment in the direct engagement of people by focussing on workplace leadership and increasing supervisor capability beyond the technical competence required of the work.
What strategies do BMA adopt to enhance effective employee involvement?	Six strategies emerged from the data analysis with regard to this research issue. Namely, there were supervisor skills, communication process / information sharing, intra-workgroup skills, TT as an primary EIP, Formal EIP processes and financial rewards.

	From the analysis of data, the common thread that weaves through the fabric of these strategies is the need for the presence of a supportive EI environment for these strategies to be effective. The supportive EI environment in turn is predicated primarily on the influence and commitment of the immediate workplace supervisor to foster and nurture this environment. Therefore the supervisor ability, capability and willingness is vital for EIP to develop such an environment to flourish.

In considering the implications of this analysis it is vital to the overall effectiveness of EIP that:

(a) they relate to the day-to-day work environment of employees;

(b) the supervisor takes on a direct role in setting and sustaining an environment supportive to EI that EIP effectiveness feeds off; and

(c) informal EIP are equally important in establishing an EI supportive environment as formal EIP.

The following chapter will discuss and offer final conclusions, implications and limitations of the findings discussed in this chapter.

5.0 CONCLUSION & IMPLICATIONS

5.1 INTRODUCTION

This investigation sought to understand some of the factors surrounding employee involvement practices in Queensland coal mines, principally BMA mines. The investigation identified factors critical to the effective utilisation of EIP in Queensland coal mines and conclusions were drawn around the research issues derived from the literature review.

This chapter discusses the findings of the research issues and draws some conclusions by comparing the data analysis in the previous chapter with the extent literature review undertaken in Chapter 2. The chapter also discusses the model proposed in Figure 1.1 with reference to the investigation findings. The contribution of the investigation to the body of theory on EI will be reviewed, along with practical implications of the investigation's conclusions and the limitations of the study. Directions for future research will also be suggested in Section 5.6.

5.2 INVESTIGATION FINDINGS AROUND RESEACH ISSUES

5.2.1 RI 1: 'How does BMA perceive the Concept of Employee Involvement?'

The concept of employee involvement had one major common theme among the four hierarchal levels at BMA's coal mines investigated, namely that of involvement of the actual crews doing the work. The reasons given for this could be broken into two major elements. Firstly, the actual crews doing the work were the people who best understood the work and, therefore, were the best group to make decisions about the work. Secondly, the other significant element was that the involvement of the actual crews doing the work is the best way to establish alignment with business goals and achieve business improvement. It would be no surprise to see that these two views were held respectively by groups differentiated between employees and managers. However, the supervisor or actual workgroups leaders were generally more aligned with the employees in their view of EI concepts.

From this differentiation, it is evident that managers are more strategic in their views of EI. They appear to view EI as an input leading to business improvement, not necessarily as a means to achieve their budget targets although information sharing was clearly focussed on this area. Managers also saw EI as contributing to one of BMA's HR strategies of establishing a direct relationship with its people (refer SDG04). Additionally, managers may, consciously or subconsciously, attempt to use EI as a conduit to establish management prerogatives in the business and minimise the union influence that has historically been perceived as constraining change and business improvement direction. Organisational groups outside of the management level were more concerned with influencing the immediate work environment on a day-to-day basis in order to have influence in the workplace and gain improved job satisfaction. EI was seen as an opportunity to do so.

The underlying strategy of BMA is to have its people directly involved in a relationship with BMA that benefits the business. The reasons for doing so need to be clearly understood. The question that arises for BMA is: has EI been utilised as a management philosophy for business improvement and approach or, has it been used as a defensive strategy toward the unions?

EI was acknowledged by the majority of interviewees as a management initiative. Without the support or impetus of management EI would not function effectively. What is interesting to note is that the implementation of EI in the workplace was, on an informal basis, dependent on the relationships within the workgroup. These relationships occurred on three levels:

(a) the workgroup as a whole and its supervisor;
(b) each individual member within the workgroup; and
(c) the supervisor and each individual member.

All of these relationships or interactions can occur independently from any management initiative or support. The workers interviewed saw EI as a local focus and any impact on business improvement or business success

was a derivative of EI, not a driver of EI. Hence, in this investigation EI as a strategic concept was influenced by management conduct and EI in a tactical sense was more influenced by workplace conduct.

The case findings demonstrated that beyond the common theme quite a range of views on EI existed. Thus, the concept of EI was generally operationalised in nature so that people could explain it. This in itself indicated EI, by its very nature, is a difficult concept to define. It is only perhaps in its application that its form becomes apparent. Yet despite this lack of clarity or uniformity of view on what EI is, generally all interview findings supported the view that it was a desirable feature of the organisation. Although it was apparent there was no clear or established link to business success and performance, EI was thought to be a better way to do things or simply to be 'the right way'. This was indicated by the following quotes;

- *'lot easier to deal with and fun to be around than people just here for the time' (I09, p.9)*
- *'it's their state of mind' (H05, p.1)*

The definition of EI given previously in Section 2.2 highlights EI as a process, with the two key components being the individual and the organisation. The case findings support EI as a process, given the dynamics of relationships of the two key components and the need to engage the individual for the mutual benefit of both the individual and organisation. This concept of mutuality was also highlighted by some management and supervisory interviewees as illustrated by:

- *'mutuality … BMA demonstrate a total care approach (to people) commitment to business involvement as a right' (HR01, p.10).*
- *'mutuality is recognised in OE process through stakeholder review step' (SM01, p.8).*
- *'trust … mutuality do my job and management will look after me, I have never been let down' (I09, p.7).*

The mutuality concept can also be accepted by comparison with social exchange theory (Hackett, Lapierre & Handsorf, 2001), whereby the people who are involved with the organisation have a positive experience of work which is a reflection of the organisation's supportive environment. It is further extended that people with positive work experiences are more likely to reciprocate by increasing involvement and commitment to the organisation. This leads to EI as a management initiative that creates positive work experiences from which people reciprocate to the benefit of the organisation, creating overall positive work experiences that lay a foundation for further involvement and organisational performance improvement.

5.2.2 RI 2: 'What Employee Involvement Practices are utilised at BMA?'

This research issue sought to investigate what EIP were utilised at BMA. Given the view expressed in 5.2.1 that EI's form, as understood by BMA, becomes clearer upon the actual applications utilised (operationalisation), these findings become more important than just a list of EIP. Indeed the EIP utilised are highlighted and described in Section 4.2.3 and it is not proposed to re-list them, but to discuss their application and link them to further describe the form of EI as it is applied at BMA.

EIP within BMA can be considered and demonstrated in two major forms, the first being formal EIP which were quite structured, documented, focused and involve training. Examples of formal EIP used by BMA were OE and SON. The second form of EIP was informal processes. These were generally specific to the workgroup and were contained within the workgroup's local area of influence, such as day-to-day work prioritisation, task sharing and problem solving. The majority of interviewees related well to informal EIP, some of which were embedded in formal EIP (for example, problem solving within TT).

Also of interest is how people felt about the impact of EIP on their immediate work area. The general views, both positive and negative, of

employees were associated with the primacy of the immediate work area both for information and influence. Concern, with regard to the bigger picture of their mine and BMA, is focussed on job security issues and were of general interest, but largely considered an area where little influence could be expected. This dilution of influence is illustrated in Figure 5.1.

When seeking to link this research issue findings with the literature review, the formal EIP clearly provide for the 'opportunity' to become involved shown in Figure 2.3 linking job performance with ability and motivation. Also, in the OE process the selected workers were given training in the OE methodology that allowed them to more fully contribute to the OE process. This selection and training supported the model shown in Figures 2.3 and 2.4 as management selected people with the capacity to contribute to OE program.

When considering the model in Figure 2.5, at the engagement interface the formal process of information is downward and flows through SoN, TT and newsletters. These communication mechanisms become vital as it is only with these processes that individual employees gain information upon which to make a choice to engage in EIP or not, whether it be formal or informal. These information processes set the context for the engagement decision. However, the issues are whether the information in its presentation and veracity is such the employees will consider it suitable and relevant to make such a choice to engage in EIP (leading to improved organisation performance) and the number of employees that will make an engagement choice.

The informal EIP are, in part, dependent on the formal downward communication processes that allow for information, in particular KPIs, for their local work area. This provides a context from which workgroups can make assessments about their workgroup's performance and their own individual performance within the workgroup. In this way, EI can be linked to decisions about improving workgroup performance. The informal process is also built around the TT process which sets a prescribed meeting

of workgroups to discuss immediate workplace issues. While these processes are generally initiated by safety, they do move into performance and co-ordination issues. It is this forum that allows the informal EIP occurring each day to be consolidated into the employee's perceptions of the workplace situation. The TT process also frames an environment that will influence employees to move through the engagement interface. This workgroup culture is created by the supervisor-worker relationship dynamic and emphasises the critical role of supervisors in EI.

BMA uses an incentive component, as part of its remuneration scheme, to increase organisational performance that attempts to support an individual's engagement of EIP practices. The extrinsic nature of such remuneration schemes, or bonus scheme, and their link to performance is shown in Figure 2.4. In BMA, the bonus scheme was largely counterproductive and a consistent source of negativity toward BMA which inhibited the development of EIP. In part it is derived from the lack of ownership of performance targets, complexity of the scheme and the difficulty of individuals to be able to relate the bonus scheme outcome to their own effort. Indeed, in the model proposed in Figure 2.5, the current bonus scheme can be considered a barrier to EIP at the engagement interface in that it does not act as an incentive or driver impelling employees to engage EIP.

In undertaking the literature review the wide variety of EIP were summarised into five main schemes namely; Information sharing / communication processes, Decision making / problem solving processes, Business improvement / individual skill development, Financial rewards and incentives and Performance management processes. The research findings indicated the EIP utilised by BMA at the mines investigated were able to fit the above schema. The exceptions to that have been highlighted in Section 4.3.2 and may well be associated with the isolated location of the communities where the mine workforce lives. Of the five schemes derived from the literature, informal EIP were clearly evident in the Decision making / problem solving processes scheme which were focused directly on

the day-to-day activity of the work group. This finding supported the work of Cotton (1996), Lawler (1999) and Pun, Chin & Gill (2001) that greater EIP effectiveness is gained when the EIP is relevant to the day-to-day work of workers.

5.2.3 RI 3: 'What are the critical factors that influence the implementation of Employee Involvement Practices at BMA?'

The case findings in Section 4.3.3 were aggregated into categories highlighted in Table 4.5. For convenience, this is replicated below:

Table 4.5 (replicated): Critical Factors that Influence the Implementation Practices at BMA

CRITICAL ISSUES	Worker				Management			
	MINE				MINE			
	A	B	C	D	A	B	C	D
Information sharing / communication processes								
- clear, unambiguous	ü	ü	ü	ü	ü	ü	ü	ü
- relevant	ü	ü	ü	ü		ü	ü	ü
- TT are vital	ü	ü	ü	ü		ü		
- two-way communication	ü	ü	ü	ü	ü	ü		
Performance management processes								
- goals & targets realistic, relevant & owned		ü			ü	ü	ü	ü
- OE ownership is limited	ü	ü	ü	ü				
Decision making / problem solving processes								
- involvement of actual crews in work management, control & improvement	ü	ü	ü	ü	ü	ü	ü	ü
- relevant to day to day work of people in their immediate area	ü	ü	ü	ü		ü		ü
Supportive environment								
- foster & nurture EI	ü	ü	ü	ü	ü	ü	ü	ü
- small groups more desirable	ü	ü	ü	ü	ü		ü	
- positive reception of ideas	ü	ü	ü	ü		ü		
- management creditability	ü	ü	ü	ü	ü	ü	ü	ü
- EI processes flexible to the varying nature of work	ü		ü		ü		ü	
Financial rewards and incentives								
- bonus is not supporting BMA objectives	ü	ü	ü	ü	ü	ü	ü	ü
- recognitions is valued	ü	ü	ü	ü				

Within these issues, for EIP to be effective it is difficult to prioritise the critical issues in order of importance, or to establish some mandated sequential linking of issues. This is primarily due to the integrated and dependent nature of the critical issues interwoven with formal and informal EIP. It is unlikely that there is a single 'one recipe fits for all' for every

situation given the complex, interdependence of influences on the implementation and development of effective EIP.

What the findings indicate is that the effectiveness of these EIP, as perceived by workers, is dependent on the culture of the organisation that allows the identified critical issues to be managed and focussed on organisational outcomes. This supports Kaydos (1999), Shadur, Kienzle and Rodwell (1999), Tesluk, Vance and Mathieu (1999) and Vandenberg, Richardson and Eastman (1999) views of the importance of situational or environmental issues for the development and implementation of EI.

The responsibility for the development of the environment that supports EI and the features of such an environment become vital questions for the organisation to answer. To a certain degree, Edwards and Wright (2001) posit that EIP effectiveness is more an issue of the quality of management, as opposed to workforce issues. This investigation supports that position and focuses the quality of management directly at the workgroup supervisor as evidenced by the importance of EIP development through informal processes and the focus on day-to-day work as demonstrated by Cotton (1996). In addition, the findings also support Ichniowski et al's (1996) view that information sharing leads to utilisation of information and self co-ordination found in informal EIP. It is postulated that this necessarily stems from affective commitment in the proximal environment whereby individual value or worth is established and periodically validated. A positive workplace culture for EIP fostered by the supervisor is vital in establishing strong proximal affective commitment in employees. The presence of this commitment is an antecedent for engagement by the individual.

In the case findings, Mine B has clearly established an EIP culture, both formally and informally in comparison with the other mines in the investigation. It was apparent that at Mine B senior management and HR management were more consistent, in as much as there were no significant or recent changes in site management. Also, in comparison with Mine A and Mine D, the underground Mine B was not a merged mine. It is the

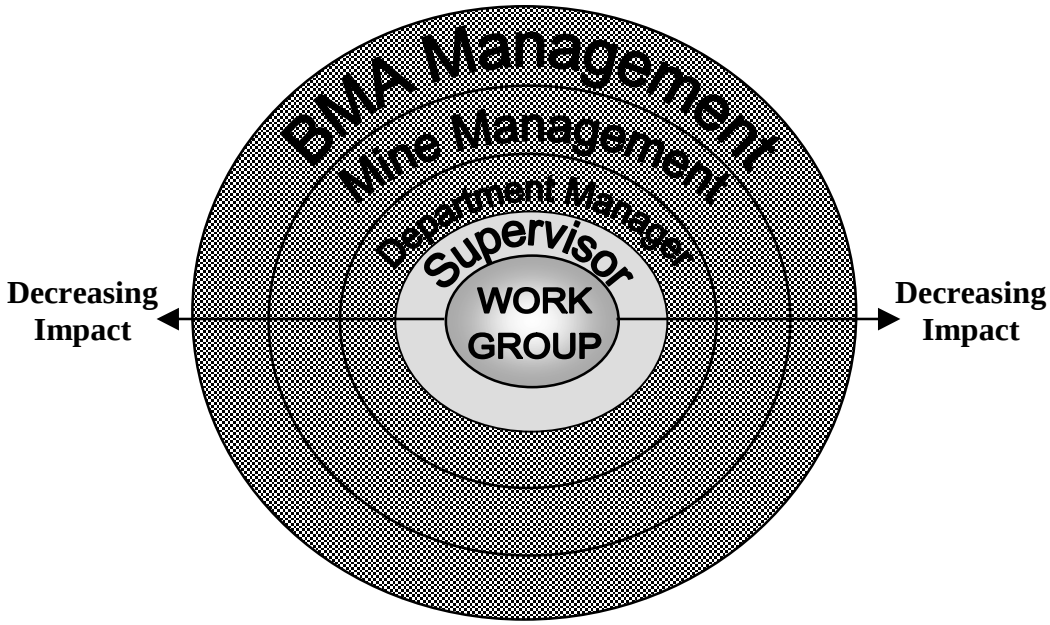
same distinct entity today as it was at its commencement. Management stability both in approach, structure and personnel is important in the development of EI culture.

Consistent with this, at Mine B there was a structural approach to involvement that allowed the informal approach to develop. This structural approach extended beyond SoN and TT to daily plans and weekly plan briefings and the 'love-ins' at the end of each underground panel. Within this structure the involvement of people was sought. Two other features were notable, the first being that in underground mining more naturally developed teams occurred by the nature of the work and the geography. The second feature was that the underground workgroup was led by a 'deputy', which is both a statutory position and a non-management workgroup team leader. The 'deputy' has the capacity and opportunity to be one of the team more so than a supervisor who is seen as a management person, hence the development of enhanced informal interactions is possible. This view was supported by the union perspective of I25. This can be compared with Mine C's CPP which has a similar structure, using workgroup co-ordinators with the natural team advantages of the underground and where an EI environment appears to be emerging.

One of the values in formal EIP programs, or projects, is the opportunity to build trust, however, the development of trust can be constrained by incomplete follow-through on project outcomes (e.g. I02). The creation or development of trust is built on the antecedents of people having positive work experiences, competency beliefs in themselves, work characteristics and personal characteristics (Hackett, Lapierre & Handsorf, 2001; Scholl 1981). The degree of trust in this case is a measure of the enduring mutual confidence between management of the organisation and the people working in the organisation (mutuality). Once again, trust and mutuality are environmental factors predicated on management's intrinsic belief in the value of people. The case findings demonstrate mutuality is strongest between the worker and their immediate supervisor. The employees' feelings of trust are diluted as zones move out from the workgroup

supervisor, as shown in Figure 5.1, and further supports the importance of the supervisor in EIP implementation.

Figure 5.1: Zones of Proximal Trust and Influence Impact



SOURCE: Adapted from Heffner and Rentsch 2001

A clear aspect of the literature was that it is crucial for management to have a clear direction or purpose as shown in Figure 1.1 (Kouzes and Posner 1995; Pun, Chin & Gill 2001). BMA have established this direction by the issue of the April 2002 BMA Charter (SDG04). The investigation findings indicate the Charter is not well understood or even known by all the interviewees. Some interviewees were dismissive of the Charter as being of little relevance (supporting the proximal view expressed earlier of trust and influence), and as shown in Figure 5.1.

Of interest was a view that while the BMA Charter was considered of minor relevance by employees, its greatest importance as recognised by one interviewee (I10, p.10), was that it provided a model for how management would treat employees. While this is not an insignificant value of the charter and should be encouraged, the BMA Charter was not owned or seen as relevant to the day-to-day life of the employees at the mine.

Overlaying this, in the corporate area, were the changes in BHP's management style in the late 1990s, followed by the BHP Billiton merger and the creation of BMA. In effect, these changes while not affecting the fundamental work activity on site, i.e. drilling, overburden removal, haulage and coal preparation, created uncertainty within the workforce. Changes create different foci of measurement and dislocate the existing relationship with management. Regular changes in management caused changes in site EIP and discontinuity in the business improvement program and overall heightened job security concerns. A clear example of this was Mine A's complete cessation of the Driscoll project and on management change instigating the OE program which, in the views of some interviewees, was very similar (IO1; IO2). While these aspects link to the need for a clear purpose and expectation, there is also a greater need for consistency and completeness in formal programs already in operation (Pun, Chin & Gill, 2001).

For people in this environment of changing management the focus on opportunities for engagement are less clear and thus impact on employees' views of management trust, commitment and training. From a perspective of personal value, there can be an increased perception of risk to an employee's sense of value and worth that minimises the imperative for the individual to engage EIP to gain both the intrinsic and extrinsic rewards.

This approach implies that the onus is on management, and only management, to create the positive EIP environment. While the majority of interviewees recognised EIP as a management initiative, it does not absolve employees of their individual responsibilities (Morrow, 1993). This view supports the emphasis placed on personal growth development at Mine D. More generally, this approach can flow through to recruitment based more on personal characteristics and attitudes, as opposed to solely technical skills and competency based attributes (Hackett, Lapierre & Handsorf 2001; Miller, Woehr & Huspeth 2002; Morrow 1993).

Of further interest in the case findings was how some work functions do not easily lend themselves to EIP. A truck driver in the isolation of the truck cabin travelling along haul roads (particularly on the large haul distances at Mines A and D) for twelve-hour shifts has limited workgroup interactions and supervisor contact relative to underground face workers and CPP workers. This relative isolation also impacts on the strength of proximal affective commitment this worker will develop. For EIP to be effective for these open-cut workers, different EIP engagement processes will need to be considered.

5.2.4 RI 4: 'How does BMA sustain effective Employee Involvement Practices?'

In considering BMA actions for sustaining EIP the findings from Section 4.3.3 were that information sharing, safety management, management initiation of EI and the supervisors approach to EI were the main avenues by which BMA sought to sustain the engagement of their people. These findings highlight management's role in setting an environment for EI, and for formal EIP implementation to be effective it has to be a top-down driven process. Tesluk, Vance and Mathieu (1999) and Vandenberg, Richardson and Eastman (1999) support the findings of the investigation as to the importance of the situational culture toward EIP effectiveness. Tesluk, Vance and Mathieu (1999) also highlight the focus workers have on their immediate work environment which dilutes as boundaries further expand away from their local environment (refer Figure 5.1). With changes in senior site management this places an increased importance on the supervisor's influence and informal EIP practices for the establishment and sustenance of a positive environment for EI. Findings of the investigation suggest BMA has placed more emphasis on the department or mine level with only an emerging focus on the supervisor skill level (Lominger model training). This poses the question: In determining what is more important, a supportive senior management for EIP or supervisors that generate EIP in their workgroups, that senior management in turn can support, the findings from this investigation would suggest both are needed as each group helps

to sustain the other. However, for actual workplace implementation the role of the supervisors is pre-eminent.

In part, this conundrum can be applied to the informal/formal EIP approach, which EIP comes before the other. The formal EIP process can help create the environment and set the foundation upon which informal EIP can develop and provide information that creates the reason for business performance improvement. This will allow the permeation of EI skills through the organisation as more people are exposed to formal EIP processes (e.g. OE, selective recruitment, and information sharing). While the formal EIP are important BMA should consider the proportion of resources applied to develop informal EIP as it is in this area that individual choices and performance occur that contribute to organisational performance as shown in Figure 2.5 and Figure 1.1.

The development of informal EIP within the organisation will need consideration when addressing supervisor skills. The focus on the Lominger model is the current BMA approach to improving supervisor skills. While this scheme has not been reviewed in detail it appears to be a mechanistic approach to supervisor skills, a 'one size fits all' approach. Caution needs be borne in mind that this is not a total solution. The major aim of training is to create beneficial behavioural change in the workplace. After the training is given the most critical step is the development and application of the desired behaviour, without which the training is a wasted effort. If this development is left to trainers, in particular outsourced training, the weaving of this desired changed behaviour into the day-to-day patterns of the workplace will be limited. It is vital senior management is seen to actively lead the development and fostering of the behavioural change in the actual workplace.

Edwards and Wright (2001) have also posed the question whether EI and effective EIP are enhanced by either the quality of the management or the quality of the workforce. The findings indicate one of the primary role of management and supervisors is the initiation and nurturing of EIP. BMA is

moving to enhance the quality of management with training programs (Lominger and S1, S2, S3 programs) and through the performance review process (SDC15-18; SDD12-14). BMA undertakes workforce training which, with exception of Mine D, is focussed on technical competencies and is perceived by some interviewees as the minimum required to meet statutory obligations. This was illustrated by;

- *"company will train, driven by law mainly" (I12, p.6)*
- *"[training] … more like the company covering themselves legally" (I20, p.6)*

The availability of training for employees is seen as an extrinsic reward (I03, p.5; I22, p.1) and is a positive feature in individual job performance, as shown in Figure 2.4. Training opportunities also contribute to the establishment of a psychological contract between the organisation and the employees as it validates the employees' perceptions that they are personally valued by the organisation. Positive work experiences are thus created and set up the basis for 'mutuality' of obligation between management and workers (Heffner & Rentsch 2001; Helper, Levine & Bendoly 1999; Miller, Woehr & Huspeth 2002). Mine D's training has also included a focus on personal development and relationships. This training, while not directly related to workplace tasks or statutory obligations, is also an action that sustains EIP and validates employees' perception of personal worth. Thus, it directly contributes to positive workplace experiences as illustrated by previous interviewee quotes.

Training opportunities are also seen by many authors as opportunities for involvement and engagement of the workforce and, therefore, are an important part in the integrated EIP package for organisational performance (Cotton 1996; Pun, Chin & Gill 2001; Vandenberg, Richardson & Eastman 1999). BMA will need to consider the role of training in its approach to establishing a direct relationship with its people, not only for enhancing the quality of its workforce, but also for its equity component in the direct 'mutuality' relationship with its people.

The findings support the supervisor's vital role in sustaining EIP and support the views expressed by Heffner and Rentsch (2001) and Miller, Woehr and Huspeth (2002) with regard to affective commitment and proximal constituency (refer Figure 5.1). The findings are further supported by Cotton's (1996) view that EIP need to focus on the workers day-to-day work activity to be effective. This can be extended to support the findings of the greater impact on EI engagement of informal EIP. Informal EIP is naturally supplemented and developed by the supervisor's organisational proximity and their direct workplace responsibilities.

5.2.5 RI 5: 'What strategies do BMA adopt to enhance more effective Employee Involvement?'

The strategies outlined in Section 4.3.5 were:

(a) Supervisor skills;
(b) Information sharing / communication processes;
(c) Intra-workgroup skills;
(d) TT as a primary EIP;
(e) Formal EIP process; and
(f) Financial reward.

Of the six strategies discussed three are dependent on the supervisors' capability to be effective and the focus of the first strategy. Yet what clearly underpins all four of these strategies is the framework or overarching company purpose and values. Tesluk, Vance and Mathieu (1999) have recognised the importance of this through the setting of environmental context and Edwards and Wright (2001) have also noted the dependence of EI development on the quality of management. It is sometimes an enigma as to whether good management foster good workers, or whether good workers foster good management. As this is not the focus of the investigation this enigma will not be discussed further. While BMA has an overall Charter and HR Strategic Plan to act as guiding principles, BMA's approach does seem fragmented to the management of people at each of the mines investigated. Whereas, it is expected that each mine would be at a

different point along the path to the overarching goal (BMA Charter), in approach there are significant differences for example, Mine A with a focus on DDI training modules and Mine D with a focus on personal growth. While mines doing different things is not necessarily negative, unless they support the overarching approach and purpose it does create confusion and dilute organisational focus. Pun, Chin & Gill (2001) recognise the importance of a clear mission and purpose, along with Kouzes and Posner (1995). Given BMA's charter and Lominger training this takes on added significance, as with a lack of clarity comes reduced effectiveness.

Mines doing different things can still be a positive, as long as the activities align with the overarching purpose and these activities are supported by a peer review mechanism that seeks to establish what is successful, what does not work, what to do differently and what aspects are transferable. Using different approaches at mines, in this context, may well increase the pace at which the overarching purpose of the organisation is achieved.

BMA's Charter was not well understood or acknowledged by interviewees, with the exception of managers. For any of the strategies to be effective, the Charter will need to be revitalised. One supervisor (I19, p.16) acknowledged there was a meeting of supervisors to discuss the charter and its meaning, but interviewees generally indicated only an acknowledgement of the Charters existence and low acceptance. This can be attributed to an over-reliance on downward communication processes for people engagement. For the Charter to have living effect, BMA will need to consider ways of gaining understanding and ownership beyond dependency on downward communication processes. An alternative approach is to ignore employees' ownership of the Charter and accept the fact that the Charter is mainly a guiding document for management. People, therefore, can formulate judgments on the Charter around the actions of management, i.e. the simplistic 'walk the walk' concept. This approach puts a focus on acceptance and ownership of the management (including supervisors). It does not expend resources toward gaining the acceptance and ownership of

the BMA Charter by the workforce, thereby releasing resources for other activities.

There is little evidence in the literature to support the view that informal EIP are more effective than formal EIP. This cannot be considered an absolute statement as personal characteristics of people will be such that some individuals will readily and willingly take up the opportunities of formal EIP, as indicated by I02 in SDA20 (Miller, Woehr & Huspeth 2002). Generally, however, the interviewees were hesitant or reluctant to acknowledge the opportunities for EI inherent in formal EIP. This is of interest as to the mechanism and influences behind employees' reluctance. It may be associated with a lack of self confidence, competency, understanding of EI and company expectations, or due to a fear of peer pressure judgments in the current industrial climate. The case findings did not shed light on any of these proposed assumptions.

This investigation establishes that for the BMA mines visited, the form or technique of EIP is not overly important. EI is more likely to prosper in informal processes as it essentially has the potential to reach more people in their immediate place of work to influence their day-to-day work. Formal EIP processes can be mechanistic in approach. Without the formal EIP reflecting a genuine belief in the value and worth of people, a connection to EI, the benefits of the formal processes can be diminished. These findings place an emphasis on TT, OE and B-Safe committees to be seen as conduits to gain EI, not as an EIP that creates EI.

The strategies BMA are using are, in effect, bundles of practices. No one strategy in itself was demonstrated to deliver improved organisational performance. This supports the views expressed by Edwards and Wright (2001), Guest (1999) and McNabb and Whitfield (1998) which can be summarised as bundles of HRM strategies have a greater impact on organisation performance than the sum of the individual performance contributions of those strategies. This, they believe, is due to the complex processes involved that does not allow the application of a simple cause and

effect model. It is more the application of the practices they believe, that shape the organisation's culture toward improving organisational performance. In seeking to understand what ties these bundles together such that EIP are collectively able to contribute to organisational performance, the investigation findings support the work of Berg (1999), Tesluk, Vance and Mathieu (1999), Wood and Albanese (1995). These authors maintain the importance of organisational climate whereby there is management congruence with the bundles of practices.

Miller, Woehr & Huspeth (2002) focussed on the importance of organisational climate or environment for allowing the development of positive workplace experiences. The findings do not, however, shed any light on whether one precedes the other. Whether EIP develops positive workplace experiences that create an organisation climate which encourages further engagement of EIP, or whether it is a positive organisational climate that develops positive workplace experiences that lead to engagement of EIP, is still unclear.

The findings indicate that within the EIP, in particular informal EIP, the relationship between supervisor and worker and within the workgroup are important for individuals to engage in EIP. This view is supported by Bellamy and Torsell (c.1999), Guest (1997) and Ichniowski et al. (1996) who focus on EI as a relationship between management and employees. Mine D has recognised the impact of relationships on workplace performance and engagement with its focus on intra group skills training.

The BMA strategies recognise this focus on relationship for EI effectiveness with four strategies being heavily dependent for effectiveness on the organisational climate, which is fostered in the individual workplace by the supervisor. This view is supported by Hackett, Lapierre and Handsorf (2001), Heffner and Rentsch (2001), and Miller, Woehr and Huspeth (2002) who view proximal constituencies (supervisors) as having the greatest impact on trust, influence and engagement of workers (affective commitment).

When the six BMA strategies are viewed in total there is a general alignment with the PIRK model proposed by Vandenberg, Richardson and Eastman (1999) discussed earlier. The BMA strategies are focused on the information and rewards component of the PIRK model through communication processes and information sharing, and financial rewards. Knowledge transfer and sharing can also be viewed through the BMA strategies of communication processes and information sharing, formal EI processes, and TT as a primary EIP. Power sharing is the least overt correlation between BMA strategies and the PIRK model. However, the investigation findings point to decision making, work scheduling and problem solving at the direct workplace as the basis of workplace power. This occurs informally at all mines and is sometimes embedded in formal EIP with a more developed system at Mine B for example, the end of the underground mining panel 'love - ins'.

5.2.6 Relationship to the Model Proposed in Figure 1.1

A model of proposed relationships between EIP and employee perceptions was shown in Figure 1.1. Consideration of the model and the investigation findings on critical issues and sustaining actions for BMA show a solid alignment with the model's proposed perceptions of influence. In particular, day-to-day work, management commitment and trust, management congruence with action, and decision making are notable features.

The findings point to the importance of the environment in creating and sustaining effective EIP and key aspects of management initiative and consistency primarily focussed on the supervisor. For the vitality of the desired EI environment in the workplace, the importance of the personal characteristics of workers in this relationship should not be overlooked, or their congruence with desired organisational culture.

The actual engagement of people in EI is heavily dependent on the environmental factors of the organisation. The decision to move through

the engagement interface is a personal one and the environment people work in tends to dictate the choices available for them to make their engagement decisions. The choice for BMA, therefore, is whether to change, or not, the environment such that the EI schemes proposed in Figure 1.1 are developed and the critical factors emerging from the investigation are addressed. This will develop a different set of choices available to people that they may well align their own strategic directions with that of the organisation.

5.3 CONTRIBUTION TO THEORY

The vast majority of EI studies have been in the USA and western Europe, in particular the UK, and are predominantly quantitative studies. This investigation contributes to the body of theory by providing a section of work on EI in an Australian setting from a qualitative research approach. This study support a number of features highlighted in previous studies, namely:

(a) EI development is dependent on a supportive organisational environment—without which EIP is difficult to sustain;

(b) the supervisor's role in establishing the environmental context for EI is vital;

(c) the quality and commitment of management is critical to the development of EIP and provides the imperative to move through the engagement interface;

(d) EIP utilised at BMA fit the categories developed in the literature review (Section 2.5.9), namely:
   - information sharing and communication processes;
   - business improvement and individual skilled development;
   - decision making/problem solving processes;
   - individual financial rewards; and
   - performance management processes;

(e) primacy of local affective commitment over department and company affective commitment; and

(f) EIP beneficial link to BI is very difficult to clearly establish.

The investigation builds on the body of knowledge of EI in the following areas:

(a) Informal EIP process are more effective in involving more people in the business than formal processes, especially so when there is a relatively limited number of people involved. This was the case at BMA in the formal processes of OE, selective recruitment and setting of remuneration practices. This limited impact on individual employee opportunity for engagement needs to be assessed to determine methodologies to broaden the engagement opportunities for workers. While BMA communication processes are more global, their effectiveness in EI development and employee/company alignment is limited. Until local workgroup issues within workgroups are raised there is no traction for informal EIP to deliver improved workgroup performance and individual employee satisfaction.

(b) BMA management has a top-down driven approach to establishing and fostering an environment that allows EIP to develop, especially formal process. The dependence on formal process can be reduced with the encouragement and development of informal EIP. Informal EIP are more a bottom-up driven process, rather than the top-down driven process which is totally dependent on management. A rebalancing of EIP priorities within BMA will mitigate the impact of management personnel changes.

Communication processes to provide people with the information on the business need to focus more upon what information the employees want to receive and how the employees will receive that information, as opposed to what the organisation may consider they need. The investigation highlighted that people wanted information about the business's future plans from a job security aspect, not necessarily to provide a platform for business performance improvement. (This may well be unique to BMA given the mines were in isolated regions, mostly with limited alternative local employment opportunities and the fact the company provided housing. Therefore, any job loss almost certainly resulted in a change of location.) The information focus on

employees at BMA would be more effective if directed to people's own workgroup performance and day-to-day work schedule, rather than to any big picture information. The TT process is a vital vehicle to provide the information need.

(c) Employees' non technical skills, such as intra-workgroup dynamics and interpersonal communication, are a key aspect in EIP development especially when considering the importance of informal EIP and the importance of motivation and opportunity as shown in the job performance relationship of Figure 2.3.

(d) The literature review indicated the importance of a clear management purpose and direction (Hesselbein & Cohen 1999; Kaydos 1999; Kouzes & Posner 1995; Pun, Chin & Gill 2001). This study suggested two interesting perspectives on this generally accepted view. The first is that of the mines studied different approaches to EI were being undertaken. This is not necessarily a bad thing as each mine will be at a different point on the continuum toward the overall BMA purpose, depending on technology, history (mergers), market competitiveness and management consistency. However, it did give the appearance of a piecemeal approach to EIP and overall corporate alignment was lacking in the implementation of the guiding BMA Charter. This lack of clarity was indicative of no overall co-ordination or a lack of real commitment and belief in the organisation's approach. It leads to a possible conclusion that participatory management processes are not used within the corporate management functions. Hence, any attempt to develop this at the mine site is not predicated on a sustained belief within the corporate management team. It may also be an indication that there is no overall co-ordination and accountability in delivering the organisation's non-tangible goals, i.e. revalidation of the view it is production that is a goal by any method. These findings emphasis the need for congruence between management philosophy and management action in order for an organisation to move toward achieving its purpose and goals.

The other interesting point that arises is that if the organisation's purpose and direction is not clear or owned by people at the workforce then why have it. The evidence at BMA is that people generally understand that their production and safety must meet company expectations, but after that it is not clear what other expectations they are required to meet, e.g. work processes, relationships. This lack of clarity or ownership is not changed by putting the purpose or direction (Charter) up on walls or in Enterprise Agreement booklets as equally, due to its global nature, it lacks meaning to the critical day-to-day work people do. The purpose of the Charter is then limited to setting the framework within which people can expect corporate management to behave, prioritise and make decisions and to give it specific meaning to the individual mine. These, in themselves, are not insignificant benefits. A corporate thread is developed if each mine management develops their own charter which is aligned with the BMA Charter, and within each mine each department develops their own charter down to each workgroup, such that it becomes part of their monthly TT review. Each sub-charter is aligned with the BMA Charter and owned by the relative workgroup. This ownership and relevance will provide greater employee participation and more internal drive to reach relative sub charter outcomes congruent with the overall charter.

(e) The supervisor role, as indicated in the literature (Cotton 1996; Heffner & Rentsch 2001; Hesselbein & Cohen 1999; Pun, Chin & Gill 2001) and supported by the findings of this investigation, is vital. The supervisor is the conveyor and respected reinforcer to the workgroups of the overall organisational approach to EIP with regard to anticipated style, expectations and method. This investigation supports that view and reinforces it with the dependence on the supervisor for the development of affective commitment and the utilisation of informal EIP for business performance, business improvement and job satisfaction for people. This dependence is reinforced when comparison is made by BMA people between old and new supervisors and how the newer supervisors, with a more inclusive and participatory approach, have increased their job satisfaction and sense of value at

work, e.g. verbal recognition (I14; I15; I17). In this sense it is leadership beyond charismatic, mechanistic or process styles. It is leadership based on a belief system of valuing people, their right to be involved and recognises the contribution (and the potential contribution) they make in their workplace, that is, the strength of the competent supervisor.

(f) No link to improved business performance or competitiveness was established. It was 'hinted at' or inferred and in reports there were indicators of EIP improving performance (e.g. drill and blast performance at Mine D). Due in part to the inability to directly segregate EIP effects from other changes occurring at the mines, no clear link between EIP and improved performance was evident. A perusal of secondary documents pertaining to performance reporting at the mine (SDA04; SDA05; SDA14-16; SDB02; SDB05; SDB11; SDC01-02; SDC19-21; SDD05-08; SDD20) indicates essentially a simplistic approach of 'done good, done bad' was the adopted and this was the preferred evaluation process. Little causal link analysis or feedback to people and their workplace participation was undertaken.

5.4 IMPLICATION FOR POLICY AND PRACTICE

The major implications for policy and practice, in particular for BMA within the Queensland coal mining industry, are:

(a) EIP are more effective for people if they are informal and built around their day-to-day activity, as opposed to formal and more structural involvement schemes. The effectiveness of informal EIP will be enhanced if there is a process that allows information to be channelled up to improve senior management awareness of issues affecting local workplace performance.

(b) Information flow, that is downward in particular, is best managed by the workgroup supervisor and focussed to that local area. Mine site and BMA performance data should be relayed by senior management in such a manner so that its intended recipients do not perceive it as 'an information dump'. This is a fundamental and therefore necessary

foundation task for EIP to be effective. Simple, clear and relevant information congruent with local workplace information should be the catch cry for global information sharing.

(c) The focus on informal EIP and local workgroup information sharing therefore prompts a particular type of supervisory requirement. Indeed, even the information sharing in TT requires supervisory skills that foster EIP and inclusion in the business. An emphasis on primarily technically competent and task-driven supervisors may not be supportive to this approach. In addition to technical competency, a more holistic approach is required that focuses on supervisory skills, behavioural and attitudinal traits that value people and, as a consequence, have a natural alignment to EIP. The holistic approach should flow through not only to supervisor development programs, but also to supervisory appointment criteria. It is an intrinsic belief in the application of people skills as a value decision, essentially a moral or ethical belief, that EIP is the only way to treat people. This almost evangelical approach toward supervision requires passionate leaders and role models in BMA's senior management to the extent that they exemplify 'action is the message', and 'do as I do'. Without this overt support of senior management the development of supervisor skills that promote the evolution and fostering of EIP is most difficult.

(d) The focus on supervisory behavioural and attitudinal traits that support EIP and inclusive practices should also be considered for the development and appointment of all employees. Effective EIP is dependent on workgroup relationships, i.e. supervisor to worker, worker to worker, and worker to supervisor hence the employees' behaviour is also a key EIP dependency.

(e) This approach could be adopted in forming a model of the characteristics that are required in the desired employee, i.e.

Personal Characteristics	**Technical Competencies**

From the above, a model for the supervisor could be developed, i.e.

Personal Characteristics	Technical Competencies	Supervisory Competencies

And the desired mine executive model developed, i.e.

Personal Characteristics	Technical Competencies	Supervisory Competencies	Executive Competencies

From this hierarchal build-up the executive shares the same foundation of personal characteristics as the employees. Hence, supervisors and executives view themselves as employees with additional levels of competencies. There is a shared common base and, as such, this potentially leads to a more inclusive approach to supervision and direct relationship building.

(f) The bonus system used by BMA at the mines visited is considered unsupportive of EI and BMA's strategic HR direction. The primary reason for this is that the bonus payment is based on a formula that is seen by people as too complex. It is from this perception that they form the belief that their day-to-day activity and effort is unlikely to affect the bonus amount. Consequentially, while recognising the need to work productively for the mine, the current bonus reward system still does not create an incentive for employees to commit their effort beyond that which is required for job security. Simply put, no incentive exists to encourage and acknowledge discretionary effort. The formula upon which the bonus works is not owned or understood by people. It is perceived to be set and manipulated by management to support the company in preference to employees. Employee perceptions of transparency and trust in management are thus damaged. To make the bonus a tool for organisational vitality and improvement, these issues need to be considered when setting bonus methodologies.

Equally the bonus system, due to its complexity and the historical nature of the coal industry allows the unions to gain legitimacy in the eyes of the workers as the auditors of the bonus system. Employees

entrust unions to interpret the bonus system and then to mediate with management on their behalf. The current system therefore enshrines unions in the eyes of the workforce and gives them a reason to be a third party in the management/workforce relationship which is contrary to BMA's HR strategic direction.

5.5 LIMITATIONS OF THE INVESTIGATION

There are three major limitations of the investigation, namely:

(a) utilisation of the case study methodology;
(b) within the case study methodology, utilisation of semi-structured interviews; and
(c) the focus on the major player in a segment of the mining industry.

The most significant of these limitations is the case study methodology, the limitations of which have been discussed by Yin (1994), and highlighted in Section 3.3.1 and 3.3.2. Yin (1994) postulated the primary demerit as being that of limited sample size. This limitation has been accepted as a trade-off for depth of information or, as Perry (1998) states, for the richness of information provided by in-depth interviews. A further limitation of the case study approach is that generalisations beyond the context of the investigations are tenuous, as shown in Figure 3.4. This limitation has been softened by utilising multi-case studies, a key informant approach within BMA and an external informant with both HR and industry segment knowledge.

The application of the findings of this research is constrained by the selection of a case study methodology utilising in-depth interviews. This is primarily because the purpose of the case is not to represent the world, but to represent the case (Stake 1994). How we learn from a single case is determined by how the case is like, and not like, other cases (Stake 1994). In this study the findings of each case are related to the particular case which is aimed at gaining understanding of EIP, and how that understanding is supporting or contradicting existing theory within that case and within the

cases involved in the investigation. Case study research by interview generates a large amount of qualitative data that has to be managed. By extending the case study to a greater sample size the data management can become overwhelming. Hence, sample size and interviews numbers are more driven by information richness and completeness, rather than whether the number of interviews or cases are statistically represented. Notwithstanding this, the number of cases and interviews in this investigation complied with the minimum case number and interviews recommended in the literature to establish information richness (Eisenhardt 1989; Perry 1998; Yin 1994).

The semi-structured interview investigation limitations were previously covered in Section 3.3.2. However, despite this, the technique was selected to strike the balance between focusing the investigation without restricting areas the interviewees wished to give information on. The techniques of triangulation, pilot study and multi-case studies were used to guard against potential bias from this technique and are summarised in Table 3.5. The utilisation of data summary tables and case summaries seeking pattern matching on the areas of interest also guarded against potential bias.

The limitation of the focus on the major player, BMA, within the Queensland coal mining industry, does restrict the generalisation of findings beyond BMA and most definitely beyond the Queensland coal mining industry. This focus on one segment and one industry was deliberately done with a consideration of time and the resources required to go beyond this utilising the case study methodology. Despite this, the findings of the investigation can be extended to other workplaces, albeit with a degree of caution, due to the focus on employee perceptions and the generic nature of EIP.

While making the above statement, it is acknowledged that:

(a) Other workplaces, while having similar EIP, may have a different method of implementation due for example, to employee educational background or workplace technology.

(b) Other variables may come into play that impact on business performance, viz. management change, national economic performance or organisational restructuring.

5.6 DIRECTIONS FOR FUTURE RESEARCH

Directions for future research that emerge from this investigation are summarised in the paragraphs below.

A more direct examination of the impact of informal EIP on organisational performance would be beneficial to the understanding the nature and processes of informal EIP in workgroups and how dependent workgroups interact. Insights would be gained into ways to support informal EIP and how practices could be focussed on influencing positive business outcomes. It needs to be taken into consideration that informal EIP can also have a negative influence on business performance. A starting point in this examination would be exploring the different conceptual bases for supporting EI that appear to exist between management and employees, and the strategic and tactical drivers of EIP inherent in the local work environment.

A key issue arising from the present investigation is the comparative effectiveness of formal and informal EIP as perceived by the workforce. This perception is very similar to the debate that surrounds the Loose-Tight leadership concept that Sagie (1997) has developed. The debate, in this sense, is whether formal EIP as a strategic management approach sets an EIP culture, or the informal EIP drives the EI culture. In essence, further understanding is needed of what is a supportive environment for EI to flourish and what are the actions that are required for this to occur. The Loose-Tight leadership concept can also be a useful model when

considering supervisor training requirements and EIP development within workgroups.

Equally, the Loose-Tight concept is a useful framework within which to consider the impact of the BMA Charter and the organisational levels upon which it has the greatest impact. The findings of this investigation suggest the BMA Charter had the most impact on the senior management group and their direct reports. The impact is diluted the further removed from that group people in the workplace become. The affective commitment zones in Figure 5.1 also illustrate this dilution of impact. The investigation findings offer no insight into whether this dilution is correlated to the method of introduction of the Charter or not. Clearly, however, the findings indicate a lack of ownership of the Charter. The Sagie (1997) Loose-Tight model would suggest this lack of ownership has little impact on EI, yet this would be worth exploring given the focus organisations put into gaining workforce ownership of mission statements, charters, visions, etc.

Gaining an understanding of the processes to gain corporate alignment, without losing individual operational initiatives and innovation, would be beneficial for organisations with geographically distributed operations. This would appear to be a perennial issue within large, geographically spread organisations. Ensuring compliance with corporate goals without needlessly dissipating corporate energy on managing peripheral issues would benefit the effectiveness of organisations. Control with flexibility, compliance based on trust within the corporate environment, and a supportive governance system, rather than a 'policing' system, are factors which need to be explored in order to understand how EI can be developed as a vital element of organisational effectiveness.

The findings of the research also indicate that the very nature of the work may well lead more naturally to EI. It was apparent that for people working in underground mine production workgroups and CPP production workgroups, the interaction that normally occurs between employees allows them more natural opportunities to share issues, co-ordinate work and

undertake problem solving when compared to a 'sole' operator in a truck or mobile plant cabin. The nature of the work technology and work processes may also have an impact on intragroup and intergroup interactions. Understanding the impact on EI of the nature of work and developing EIP for 'sole' operators within a production crew would be useful for mining companies seeking to fully engage their people in their business.

5.7 SUMMARY

The key findings of this investigation into EIP utilised at BMA coal mines in Queensland are:

(a) EI as a concept is difficult to define and it is only in the operationalisation of the concept that its form becomes clear. However, a common theme of EIP at BMA is the involvement of people who actually do the work;

(b) EI is embraced for different reasons dependent on the person's hierarchal level within the organisation. That is, the workforce embrace EI as a means of control and influence over their immediate workplace. Whereas, mine managers sought to use EI for business improvement;

(c) EI was recognised as a management initiative. Therefore without management's commitment and leadership drive toward EI, effective utilisation, within the organisation, would be constrained;

(d) Notwithstanding the point (e) above, the investigation highlighted the significant impact and influence that informal EIP had over formal EIP in sustaining an EI culture. In this sense it appears informal EIP are capable of reaching greater numbers of people than formal EIP processes and thus, have more potential to develop broad positive workplace experiences;

(e) The presence of an EI culture was important in establishing the antecedents for employees to engage in EI opportunities. Without positive work experiences the move by employees through the engagement interface shown in Figure 1.1 and Figure 2.5 is unlikely to occur; and

(f) The environmental climate conducive of EI is directly linked to management initiative, the EI activities being linked to employees immediate work place and the supportive role of the immediate workplace supervisor. The latter link is of pivotal importance. It is from this interaction of the employee and their immediate supervisor that the employee derives a sense of their personal worth, from an organisational perspective, and has this worth periodically revalidated. Positive work experiences and affective commitment to the organisation are thus created.

No one solution or technique was identified for the establishment of effective EIP in BMA's coal mines in Queensland. Indeed, the investigation supported previous research findings that bundles of HR practices need to be congruent for an organisational climate that fosters EI to be created. Yet within these bundles the role of the immediate workplace supervisor is pre-eminent in establishing the EI climate. This finding places an emphasis on organisation recruitment and development of supervisors who have an intrinsic belief in the value of people and their capability to contribute to the workplace.

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APPENDICES

Appendix A.1: BMA Queensland Operations

MINE	PRIMARY TECHNOLOGY UTILISED	COMMENT
Blackwater	OPEN CUT	Merged mine from BHP Billiton and QCT (2000)
Crinum	UNDERGROUND	Longwall operation – operating 5 years
Sariji	OPEN CUT	Approximately 26 years in operation
Goonyella / Riverside	OPEN CUT	Merged mine from BHP Billiton and TDM (1988)
Peakdowns	OPEN CUT	Approximately 28 years in operation
Norwich Park	OPEN CUT	Approximately 25 years in operation
South Walker	OPEN CUT	Contract mine – 5 years in operation

Appendix A.2: The Research Process

STEP	DESCRIPTION
1.	Define research topic and description
2.	Conduct preliminary literature review and develop initial research question .....(review, step BM)
3.	Complete detail literature review to finalise research question and develop research issues
4.	Conduct interview with industry practitioner and finalise research issues .....
5.	Define and document research design and method.....(review, step BM)
6.	Create data collection instrument including case study protocol.....(review, step BM)
7.	Select cases and gain entry to sites
8.	Conduct pilot case study
9.	Report initial findings
10.	Key informant to review report and revise research findings..... (JS)
11.	Modify research design.....(review, step BM)
12.	Execute case studies
13.	Develop individual case study summary
14.	Key informant to review case summary and revise research findings..... (JS)
15.	Perform cross-case analysis
16.	Modify theoretical model discussed in the extant literature
17.	Prepare case study report..... (review, step JS)
18.	Present and submit final report

Appendix B.1: Overview of Employee Relations Models

MODEL	LEVEL OF EMPLOYEE INFLUENCE	PRIMARY OBJECTIVE	RELATIONSHIP OF EMPLOYEE TO OBJECTIVE	APPLICATIONS EXAMPLE	MAIN CRITICISM	CURRENT VIEW
Human Relations	Informational or consultative	• Co-operation • Harmony • Positive attitude	Means	• Shop floor consultative meeting	• Assist management to manipulate workers • Undermining unions • No causal link between job satisfaction and productivity	• Establishers a 'win-win' approach to workforce relations • Conflict can be controlled or eliminated • Basis for self managed teams
Human Resources	Self-Management	• Personal growth and development • Personal control	End	• Autonomous or self managed work teams	• Primary focus on individual not organisation • Limited to shopfloor decisions as opposed to broader operations issues	• Emphasis is on limited autonomy rather than social interactions or a power balance • Seen as a management imperative of good ethics
Workplace Democracy	Indirect representation and collective management	• Balance power between employer and employee • Support individual rights	End	• European co-determination models or worker co-operative	• Focus on governance • Influence on day to day decision making limited • Concept is counter to view of management's view of profits and efficiency	• Supports western civilisation underpinning values systems • Supporting individuals right to participate in decisions that affect them • Society involvement through workers balances capitalist drive for profit
Instrumental Management	Informational or consultative	• Improve organisation outcomes • Quantity • Quality • Cost	Means	• Participatory goal setting, quality circles		• Process of reducing employee alienation, enhancing organisational commitment, raising the feeling of the level of control • Motivational tool through need satisfaction and ego involvement • Employee knowledge brought to bear on problems • Cognitive process

NOTE: With the exception of Workplace Democracy, all have a base in psychological theory whereas; Workplace Democracy has a political base.

SOURCE: Leana and Florkowski 1992

Appendix B.2: Overview of Some Major Motivational Theories

THEORY	CLASSIFICATION	BASIC FOUNDATION	APPLICATION IN THE WORKPLACE
Maslow Hierarchy Theory	Content	This theory is based on five levels of needs. Physiological needs, such as food are satisfied prior to satisfying higher order needs, such as self-actualisation. This theory has been expanded on by Alderfer to the ERG theory based around Existence, Relatedness and Growth.	• Assumes lower order needs are met • Research evidence to support a needs hierarchy is inconclusive • Widely accepted among organisations • Has been separated into two groups of needs, lower order and higher order needs
Herzberg Two Factor Theory	Content	This theory states that if certain conditions, eg. pay are not present, they become dissatisfiers and will not motivate. However if these conditions are present, it does not mean motivation is supported until certain satisfiers are present. This concept is based on extrinsic (dissatisfiers) and intrinsic (satisfiers) factors.	• Similar to Maslow's split into lower and higher order needs • Assumes job satisfaction is limited to productivity • Ignores situational variables • Assumes job satisfaction is not undimensional and extrinsic and intrinsic factors are a continuum • Work related terminology used • Viewed as oversimplifying job satisfaction • Theory developed by self reports on performance, therefore its impact is challenged • Widely accepted in organisations
McCellands Learned Needs	Content	McCelland postulated needs were learned from the culture experienced by the individual. Three key needs were achievement, affiliation and power. Individuals learned through coping with their environment.	• No lower order needs are assumed • Emphasis is on socially acquired needs • Little independent evidence available to support the theory • The supposition that the need for affiliation can be learned is contentious • It is not clear if the learned needs are sustained over time • Some of the needs, i.e. need for achievement are difficult to measure and therefore gather supporting data
Theory X and Theory Y	Content	McGregor proposed two distinct theories. Negative Theory X, was based around workers and viewed them avoiding work, needing control, not accepting responsibility and valuing security above all else. Theory Y postulated that workers enjoyed work, exercised self-direction, sought and accepted responsibility and that innovation is widely spread in the organisation.	• Little empirical support • Assumes that in Theory X, Maslows lower order needs dominant and in Theory Y, Maslows higher order needs dominant • A derivative of Maslows needs hierarchy

THEORY	CLASSIFICATION	BASIC FOUNDATION	APPLICATION IN THE WORKPLACE
Expectancy Theory	Process	Developed by Vroom who saw motivation as a process governing choices among alternative forms of voluntary activities. The response chosen depended on the individual's expectancy that a particular behaviour will in all likelihood be followed by a particular outcome, i.e. it is probability based.	• Testing this entire model is difficult due to its complexity • Most testing has been associated with the impact of reward systems • Complexity and measurement difficulties make its application difficult • Only applicable where the correlation between effort-performance and performance-reward is clear • Recognises there is no universal principle for stimulating an individuals motivation
Equity Theory	Process	Motivation is based on a desire to be equitably treated at work. It assumes an individual works in exchange for rewards. The theory is based on the perception that the ratio of the individual's inputs and outcomes is equivalent to the ratio of others.	• Focus is on pay and other situational factors not accounted for • The comparison person may not be valid or change over time • Equity theory raises issues for addressing the resolution of inequity • Highlights individuals concern not just with absolute rewards, but with intra organisational relationships/conflicts • Definition of inputs and outcomes may be difficult, i.e. valuing intrinsic rewards
Goal Setting Theory	Process	Individual's behaviours are primarily determined by their conscious goals and intentions. The emphasis is on the conscious state and their intention to pursue those goals. Hence the basis is a cognitive process of some utility.	• Some research indicates that conscious goals regulate behaviour • Does not address the optimal level of employee input into goal setting • Specific goals rather than vague goals lead to higher output • Some indications are that potency of goal setting diminishes over time • Self efficacy is vital

SOURCE: Ivancevich and Matteson 1987, University of Toronto 1995, Weston 1996, Robbins 1998, SIP 2002

Appendix B.3: Employee Involvement Impacts

COMPENSATING DIFFERENCES THEORY	HUMAN CAPITAL THEORY	EFFICIENCY WAGES	INCENTIVES and COMPLEMENTARITY	RENT SHARING	MANAGEMENT BY STRESS
• Workers facing undesirable working conditions will receive higher wages. • EI results in more effort then wages and bonus should increase or safety improve. • If EI is believed as a benefit, then wages should decrease. • Employees care about what happens to their input.	• High skill levels receive higher compensation than do others. • EI is an 'ability sensitive technology'. • EI should result in an increase in wages and bonus.	• High wages will lead to higher productivity. • Higher wages assume employees want to reduce their chances of losing their jobs. • Employee loyalty increased. • Turnover and recruitment reduced. • EI increases monitoring costs. • EI involves a 'gift exchange' i.e. ideas. • EI returns to employer improve with employee skills.	• High wages and high involvement are complementary policies. • Concept based on paying a fairness efficiency wage. • EI involves pay for knowledge. • EI easier to introduce.	• Worker bargaining power and the size of 'rents' and 'quasi-rents' to be divided affect compensation. • EI will lead to an increase in profits. • Profits will be shared with workers due to fairness or worker bargaining power. • EI can increase bargaining power due to feelings of solidarity, knowledge and ability to control productivity.	• A form of rent sharing but EI results in reduced bargaining power due to codifying worker knowledge and reducing union power. • EI can result in transferred work to lower cost plants. • EI can result in lower dissatisfaction, which in turn reduces the need to pay compensation wages, hence wages reduce.

(Helper, Levine and Bendoly 1999)

Appendix C.1: Interview Guide and Record Form

1. Mine
2. Department
3. Interviewee Name
4. Position:
5. Date:
6. Time Start:
7. Time Finish:
8. Location:

CODE			
A	B	C	D
E	F		J
G	H	K	L

CHECKLIST

1. Research overview..... ☐
2. Thanks for participating..... ☐
3. Confidentiality ..... ☐
4. Contact details ..... ☐
5. Permission to tape..... YES ☐ NO ☐

SECTION 1

1.1 What is your current position within the mine?

.....

.....

1.2 Briefly outline your current responsibilities

(is job description available? ☐ YES ☐ NO)

.....

.....

.....

1.3 How long have you done this job?

1.4 How long have you been at this mine?

1.5 What positions have you held at the mine?

1.6 What is your overall general mining experience?
- what other BMA mines have you been at?

Appendix C.1(a): Probe Questions

1.1	What does employee involvement mean to you?
1.2	**What involvement programs have you experienced at your mine?** Can you give examples? *(prompt: O.E., recruitment, consultation, communication)*
1.3	**What information about the mine & BMA's performance do you get?** (prompt for charter / market / strategy / performance). (*How do you get this information? What further information would you like?)*
1.4	**Describe your experiences in getting involved in achieving your work teams outcomes.** *(prompt: O.E., recruitment, consultation, communication)* **Supervisor: How do you involve your people in achieving your work teams outcomes?** Is there a process? Can you give examples?
1.5	**What KPI's / Scorecard do you use to measure performance?** - yours / mine - did you help set them? - are they realistic?
1.6	**What does your mine / supervisor do when KPI / performance are lower than expected?** *(prompt: preparedness to work harder than believe they do to achieve KPI*)
1.7	**How do you see management support for your involvement in the mine?** *(counter point)*
1.8	**How does Operating Excellence (O.E) programs help the mine?** - Do you work on an O.E project? - Do the right people get on O.E project? - How do you get on an O.E project?
1.9	**What are the barriers to O.E project delivering results over the next two years?**
1.10	**How does your mine reward your effort?**
1.11	**What stops / encourages you to discuss performance issues with your supervisors?** What would need to change to allow this dialogue?
1.12	**Supervisors: How do you foster the involvement of your people?** What barriers are there to doing this more effectively?
1.13	**In what areas do you trust management?** *(counter point)*
1.14	**How are your suggestions for changes / improvements received by people?**
1.15	**How do you see job security linked to performance and involvement?**
1.16	**What does high performance mean to you?**
1.17	**How did you find out about the BMA Charter?**
1.18	**What behaviours do you expect to see in an involved employee?**

Appendix C.2: Probe Questions – Research Issue Matrix

QUESTION	**RI 1:** How does BMA perceive the concept of employee involvement practices?	**RI 2:** What employee involvement practices are utilised at BMA?	**RI 3:** How does BMA sustain effective employee involvement practices?	**RI 4:** What are the critical factors that influence the implementation of employee involvement practices at BMA?	**RI 5:** What strategies do BMA adopt to enhance effective employee involvement?
1.1 What does employee involvement mean to you?	**X**				**X**
1.2. What involvement programs have you experienced at your mine? Can you give examples? *(prompt: O.E., recruitment, consultation, communication)*	**X**	**X**	**X**		
1.3 What information about the mine & BMA's performance do you get? (prompt for charter / market / strategy / performance). (*How do you get this information? What further information would you like?)*	**X**	**X**	**X**	**X**	
1.4 Describe your experiences in getting involved in achieving your work teams outcomes. *(prompt: O.E., recruitment, consultation, communication)* **Supervisor: How do you involve your people in achieving your work teams outcomes?** Is there a process? Can you give examples?		**X**	**X**	**X**	
1.5 What KPI's / Scorecard do you use to measure performance? - yours / mine - did you help set them? - are they realistic?			**X**	**X**	

QUESTION	**RI 1:** How does BMA perceive the concept of employee involvement practices?	**RI 2:** What employee involvement practices are utilised at BMA?	**RI 3:** How does BMA sustain effective employee involvement practices?	**RI 4:** What are the critical factors that influence the implementation of employee involvement practices at BMA?	**RI 5:** What strategies do BMA adopt to enhance effective employee involvement?
1.6 What does your mine / supervisor do when KPI / performance are lower than expected? *(prompt: preparedness to work harder than believe they do to achieve KPI)*			**X**	**X**	**X**
1.7 How do you see management support for your involvement in the mine? *(counter point)*			**X**	**X**	**X**
1.8 How does Operating Excellence (O.E) programs help the mine? Do you work on an O.E project? Do the right people get on O.E project? How do you get on an O.E project?			**X**		**X**
1.9 What are the barriers to O.E project delivering results over the next two years?				**X**	**X**
1.10 How does your mine reward your effort?			**X**		
1.11 What stops / encourages you to discuss performance issues with your supervisors? What would need to change to allow this dialogue?				**X**	**X**
1.12 Supervisors: How do you foster the involvement of your people? What barriers are there to doing this more effectively?	**X**	**X**	**X**		

QUESTION	**RI 1:** How does BMA perceive the concept of employee involvement practices?	**RI 2:** What employee involvement practices are utilised at BMA?	**RI 3:** How does BMA sustain effective employee involvement practices?	**RI 4:** What are the critical factors that influence the implementation of employee involvement practices at BMA?	**RI 5:** What strategies do BMA adopt to enhance effective employee involvement?
1.13 In what areas do you trust management? *(counter point)*			**X**	**X**	**X**
1.14 How are your suggestions for changes / improvements received by people?	**X**	**X**	**X**	**X**	
1.15 How do you see job security linked to performance and involvement?			**X**	**X**	**X**
1.16 What does high performance mean to you?		**X**	**X**	**X**	**X**
1.17 How did you find out about the BMA Charter?		**X**	**X**	**X**	
1.18 What behaviours do you expect to see in an involved employee?				**X**	**X**

Appendix C.3: Research Protocol

RESEARCH QUESTIONS & ISSUES

The purpose of the research is to investigate how coal mines in Australia understand the concept of employee involvement as it applies to improving organisation performance and their competitive advantage. From this understanding, the research will seek to determine how coal mines in Australia apply their understanding of employee involvement practices (EIP) in their workplace. At its core, effective EIP is the individual's decision to commit their discretionary effort toward organisation goals that is the individual's engagement of the employee involvement practices. The factors that influence the individual's decision to commit their discretionary effort will also be explored. The request question to be investigated is:

> *"How do coal mines in Queensland utilise employee involvement practices?"*

The investigation will be undertaken at four of the coal mines in the BHP – Billiton Mitsubishi Alliance (BMA) Group in Queensland. BMA mines represents in excess of 50% of the coal mined in Queensland and therefore is a significant segment of the Queensland coal mining industry.

The research issues identified are:

RI 1: How does BMA perceive the concept of employee involvement practices?

RI 2: What employee involvement practices are utilised at BMA?

RI 3: How does BMA sustain effective employee involvement practices?

RI 4: What are the critical factors that influence the implementation of employee involvement practices at BMA Coal?

RI 5: What strategies do BMA Coal adopt to enhance effective employee involvement?

STATEMENT OF PURPOSE (rationale & direction)

The purpose of the research is to investigate the implementation of EIP in BMA and to determine factors that influence the effective implementation of EIP. A secondary purpose will be to link these findings to the BMA's current Human Resource strategy to provide understanding on how this strategy can be adopted.

UNIT OF ANALYSIS

Work teams at the mine engaged in operating activities viz mining, coal preparation or maintenance at each mine.

(a) Front line supervisor (mining, coal handling, maintenance)..... x 1

(b) People reporting ..... x 2

METHODOLOGY & CASE STUDY DESIGN

(a) Multiple-Case Design

Eight (8) sets of experiences with each set seen as an experiment.

- Each case follows a standard protocol.
- Ease case summarised individually.
- Develop a standard format for pattern matching, themes and implications.

(b) Convergent Interviews

- With BMA HR personnel and experienced HR professional (A Weston) to better refine issues and approaches.
- Mine site union officials (2).
- Mine site HR officers (4).

(c) Pilot Case Studies

- Undertake with close, accessible BMA personnel with recent mine site experience and the ability to set situational factors. Combine with convergent interview if possible.
- Use to refine data collection plan for content control and procedure.

(d) Collecting Evidence

- Multiple sources of evidence – sources converging on same facts
  - interview data - main source
  - mine documentation

- mine records

- From above, establish data base for each case with an aim for
  - audit ability and timely retrieval

- Database to include:
  - interview notes
  - documentation records
  - documentation analysis
  - summaries
  - use tables where possible

- Linking system for questions asked, data collected analysis and conclusions

DATA ANALYSIS

Will undertake the following steps, utilising five levels of inquiry as per Table below.

(a) Pattern Matching

(b) Thematic Analysis

(c) Data Contradiction

(d) Data Validity

(e) Data Reliability

THEORY BUILDING

Conclusions or ideas for further development.

CASE STUDY REPORT

(a) Individual Case

- Mine background
  - size
  - technology
  - history
  - structure
  - systems
  - products

- product / market interface
- people story – develop / recruit / IR / takeover / training develop / demographic

- Body (Yin, 1994, (p135)

(b) Cross-Case Analysis For Triangulation And Replication

(c) Overall Case Study Report

- Five chapter dissertation model

TIME TABLE

- Pilot Study – Oct 2002
- Interviews – Nov 2002
- Data Analysis and Reviews - Dec 2002 – April 2003
- Conclusion Drawing - May 2003 – June 2003
- Report Writing - Jan 2003 – Sept 2003

Appendix C.4: Summary of Research Paradigms

	POSITIVISM	CRITICAL THEORY	CONSTRUCTIVISM	CRITICAL REALISM	APPLICATION TO RESEARCH PROBLEM
Nature of reality, or the researchers view of knowledge (ontology).	The world is a deterministic environment and has laws of cause and affect.	There is a single reality but it is shaped by social values and relationships. The research should reflect the researchers perception.	No real truth exists, it is constructed by people (and by definition the researcher). Therefore, there can be more than one truth.	The reality that exists is not certain as the world is complex. Yet reality can be reflected in observing parts of it.	There is no single reality for EIP.
How the researcher knows the world, the relationship between the inquirer and the known (epistemology).	Knowledge is real and can be tested. Hence the researcher is objective and has a non-influencing relationship with the phenomena being investigated, and can predict cause and affect.	The research is critiquing and seeking transformation which will lead to further transformation.	Researchers relationship is an integral part as they are not discovering truth but playing a part in creating it.	As the researcher is observing parts of a complex world, the researchers relationship with the world impacts on the objectivity of the investigation.	The reality that does exist is complex and dependent on situational factors, eg. organisational culture
How we gain knowledge about the word (methodology).	Scientific methods, such as experiments and surveys.	General focus on action research techniques.	Users interpretative and developmental (hermeneutical) techniques and phenomena are perceived as they are and causal study (phenomenology).	General qualitative methods such as case studies, focus groups and in-depth interviews. Surveys have also been used.	The reality can be observed by its component parts, eg. turnover, absenteeism, productivity, etc. The researches interpretation of the situational factors and relationships may affect how reality is observed.

SOURCE: Adapted from Guba & Lincoln (1994), Dooley (1995, p.262), Easterby-Smith, Thorpe & Lowe (1996, p.27), Perry, Reige & Brown (1999)

Appendix D.1: Record Of Interview

MINE CODE: A / E MINE DEPARTMENT CODE: **WG # 1**

INTERVIEWEE / QUESTION (Element)	IO1	IO2	IO3	WORK GROUP COMMENT
	POSITION CODE: G	**POSITION CODE: H**	**POSITION CODE: H**	
1.1 What does employee involvement mean to you?	• Involved in what we are doing • Work as a team • Pull everyone together as a team • Set everyone working within boundaries • Help each other out • See improvement, not afraid to put hand up • Working together • Everyone looking out for each other	• 'Everything' as long as it's carried through, so many times asked after the fact or during • Answering questions 'going through the hoops' • Hope your ideas are going to be carried through, if not, 'can be very depressing', eg. water carts.	• Pretty broad • Company initiative to include employees, take on projects, inspection and audits	
1.2 What involvement programs have you experienced at your mine? Can you give examples? (prompt: O.E., recruitment, consultation, communication) (F) – Formal EI program / practice (INF) – Informal EIP	• Within shift arrangements: - staggered cribs, aim to keep feed on the plant (INF) - get supervisor endorsement after • OE Project – coal recovery (F) • Hot seat shift change (F) • Tritronics – data recording (740) (F) • Toolbox talk or discussions to address issues and problems and to handle questions (INF) • Crew will fix problems during the shift and inform supervisor (INF) • IO1 knows of EI in recruiting but has not participated • Current crew is known for achieving the job so management gets them involved to try changes	• Have been involved & excited - change from underground environment to trucking operation (INF) - after a time truck is boring - progress to other skills is slow - interviewed 3 of the crew for ideas - didn't have to not my job, but my crew - came up with reason-boredom and solution - got mining managers blessing - B-Safe meeting - bosses positive - crew – some were negative (that will never work), some were supportive - see idea accepted doing cartwheels - appreciated support and trust to let me run • Dozer stockpile holes - prepared to speak up - thought through issues in my mind - can be precise and pedantic • OE - has been called in to give advice - think a lot of OE - appreciate the recognition of being asked for advice (F)	• Limited at the workshop and old industrial area - driven by the fitters and therefore, non-trades not offered opportunity to be involved as much as trades • Thermal Coal Plant (TCP) - self directed (3 ops/2 main) - location and roster helped - knew our job - relied on each other and ran own show which was very rewarding - didn't make big decision, not told what to do, did day to day/maint scheduling / stockpile management - saw supervisor once a shift - TCP was automated – disagreed with this (cost cutting measure) - maintenance is now lacking (not principle place of work), no pride in workplace • B-Safe – member see 1.4 - interest in that lead me to be involved • OE - have been on project for fatigue management - was the B-Safe Committee nominee	

INTERVIEWEE / QUESTION (Element)	IO1	IO2	IO3	WORK GROUP COMMENT
	POSITION CODE: G	POSITION CODE: H	POSITION CODE: H	
		for advice (F) • Send people away to look at things • Driscoll project (740) - gathered ideas and ideals - gathered best ways - one person off each crew (either self delegated or nominated) - all crew reps met - company only implemented what they wanted • Have used my training and testing skills • New water carts – people involved, i.e. brake test procedures of washing down procedure • Gregory – magnetite system - CPP management won't admit mistake, took to site manager with a proposal for a CI	- it has fallen into a little bit of a hole recently as safety advisor left • EMS – involvement seconded from mining crew to set up EMS to meet ISO14000 - decided not to use contractors	

Appendix D.2: Codes For Theme and Pattern Listing

• **INFORMATION**	**INF**
Upward	INF1
Downward	INF2
One On One	INF3
Group Meeting – with Supervisor	INF4
Group Meeting – with Peer	INF5
Group Meeting – with Manager	INF6
Performance	INF7
- Projects	INF7.P
- Team	INF7.T
- Department	INF7.D
- Mine	INF7.M
- Business	INF7.B
Safety	INF8
Job Design	INF9
Newsletter Mine	INF10
Newsletter BMA	INF11
Safety Consultation – Meeting	INF12
Union Consultation	INF13
Business Information Costs	INF14
Priority Setting	INF15
E-Mail	INF16
Face to Face	INF17
Planning / Budget	INF18
• **DECISION MAKING**	**DM**
Influence / Input	DM1
Informed	DM2
Consulted	DM3
Untaken	DM4
Work Prioritisation	DM5
Job Design	DM6
Job Scheduling	DM7
• **REWARD**	**RW**
Base Pay	RW1
Bonus – Production	RW2
Bonus – Cost	RW3
Recognition – Verbal	RW4
Recognition – Print	RW5
Recognition – Gift	RW6
Recognition – Training	RW7
Recognition – Celebration	RW8
Job Achievement / Satisfaction	RW9
• **CHARACTERISTIC**	**CH**
Initiated by Individual	CH1
Initiated by Company	CH2
Negativity of People / Lack of Ownership	CH3
Improved Understanding	CH4

• **BUSINESS IMPROVEMENT**	BI
OE – known	BI1
OE – known and involved	BI2
CI	BI3
Teaming / Teamwork	BI4
Suggestion Scheme	BI5
Problem Solving	BI6
Site Visits	BI7
Vendor Inspections	BI8
Job Scoping/Procedures	BI9
Quality Enhancements	BI10
Audits	BI11
Job Scheduling	BI12
Projects	BI13
Involving Actual Crews	BI14
Performance Management	BI15
Safety	BI16
• **MANAGEMENT COMMITMENTS**	**MC**
Participative Management	MC1
- Decision Making	MC1D
- Information Sharing	MC1IS
- Productivity	MC1PE
- Consultation / Planning	MC1CN
- Training	MC1TR
Safety	MC1S
Survey Used	MC2
Promotion	MC3
Mission / Purpose – known	MC4
Mission / Purpose – unknown	MC5
Input / Suggestion Received Positively	MC6
Feedback Provided	MC7
Program Completion	MC8
Management Listening	MC9
Management Nomination to Project	MC10
Consistency	MC11
Senior Management Recognition	MC12
Openness / Availability	MC13
Priority Setting	MC14
• **TRAINING**	**TR**
Technical & Statutory	TR1
Team Skill	TR2
Personal Growth	TR3
CI	TR4
Business Understanding	TR5

• **PROBLEM SOLVING**	**PS**
Supervisor Directed	PS1
Without Supervisor	PS2
In the team	PS3
Problem raised with Supervisor	PS5
Problem raised at Meeting	PS4
• **PERFORMANCE**	**PF**
KPI – Negotiated	PF1
KPI – Given	PF2
Scorecard	PF3
Budget	PF4
Go Hard	PF5
Competition with the Mines	PF6
Performance Shortfall / Supervisor Tension	PF7
Safety and Efficiency	PF8
Expectancy known	PF9
Job Security	PF10
Lower Performance – verbal	PF11S
Lower Performance – written	PF11W
Lower Performance – meeting	PF11M
Best of ability	PF12
• **CONSULTATION**	**CN**
Job Scoping	CN1
Safety	CN2
Problem Solving	CN3
Scheduling	CN4
Operational Status	CN5
• **NEGATIVES**	**NG**
Asked After Fact	NG1
Going Through Loop	NG2
Budget Constraints	NG3
Not Accepting Problems / Issues Raised	NG4
Frustration with lack of progress	NG5
Management Follow-up / Implementation	NG6
Management Feedback limited	NG7
Not working together / co-ordination	NG8
Priorities stop suggestions	NG9
No Clear Direction	NG10
No Recognition	NG11
Manage Creditability – information	NG12
Goals unrealistic, not clear, changing	NG13
Practicality / Over Documentation	NG14
Shift arrangement	NG15
• **RECRUITMENT**	**RC**
Involved	RC1
Not Involved	RC2

Appendix D.3: Open Coding Of Interviews

MINE CODE: A / E **WG # 1**

INTERVIEWEE / QUESTION (Element)	IO1	IO2	IO3	WORK GROUP COMMENT
	POSITION CODE: G	POSITION CODE: H	POSITION CODE: H	
1.1	BI4, DM5, CH1, BI1	CN, BI6, MC6, NG1	CH2 – BI11, BI3, BI2	
1.2	BI12, BI1, PS2, RC2	CHI, MC6, BI1, PS3, BI8, BI9 Bypass Supervisor	INF5, PS2, DM4, CN2, BI2, BI3	
1.3	INF7B, INF6, INF8, BI8, INF18, INF7M, INF2 predominately, INF1	INF7M, INF4, INF7B,INF8 Info could be better INF2 predominately, INF1	INF7M, INF11, INF7B, INF10	
1.4	CH1, CH3, INF15	INF1, BI15, NG4, NG5, NG2	MC1S, INF8,CN2, INF3, PS1	
1.5	PF1, PR4	PF5, PF2, PF6	PF2, PS5 Co-ordination lacking	
1.6	PF6, PS7, MC7	PS7, MC7	PS1, INF9	
1.7	MC6, MCICN, MC9, NG6	MC9, TR2, CH1, MC6, MC1	CH1, MC7, NG4	
1.8	BI1, MC10 Cross section people used	BI1, BI5, MC6 – could improve, BI6	B11, NG6	
1.9	BI3 – not going ahead, NG8, NG3 Paperwork MC10, NG6, NG2, MC11	NG7, NG3, NG4, CH3, MC1TR, MC1	Opportunity CH3 Operational Area	
1.10	RW4, NG8, MC12, RW1, Operational Area	RW7, CH1, MC6	MC6, MC9, MC8, BI5, MC10 TR1, MC8	
1.11		1.2 / 1.5 / 1.6	Operational Area NG5, MG3, NG4 INF4 – Scheduling Forum	
1.12	1.2 / 1.4		NG3 – MC1 – Supervisor NG9	
1.13	MC1IS, MC1S, MC13	MC1 – Supervisor MC1CN, MC9, CH1, MC6, NG9, MC5	Overall Control	
1.14		MC6, MC9 See 1.4 / 1.2	MC6, NG9, MC1S, CN2 Approach positive people	
1.16	MC1, PF4 Cost	PF4 Not all believe	PF8, INF15, NG8 – Departments, NG8	
1.17	PF7, PF2	Safety and Efficiency, PF5	NG7, NG1	
1.18	MC5	MC5	MC4	

Appendix D.4: Expanded Workgroup List

WORKGROUP	DESCRIPTION
1.	Mine A..... Mining Operations
2.	Mine A..... Field Maintenance
3.	Mine B..... Mining Operations
4.	Mine B..... Maintenance
5.	Mine C..... Field Maintenance
6.	Mine C..... Coal Preparation Plant
7.	Mine D..... Coal Preparation Plant
8.	Mine D..... Mining Operations
9.	Mine Managers
10.	Human Resource Managers
11.	Mine A..... Managers & Supervisors
12.	Mine B..... Managers & Supervisors
13.	Mine C..... Managers & Supervisors
14.	Mine D..... Managers & Supervisors
15.	Mine A..... Employees
16.	Mine B..... Employees
17.	Mine C..... Employees
18.	Mine D..... Employees

Appendix D.5: Codes Linked to Research Issues by Workgroup

WG #1

RESEARCH ISSUES	RI 1: How does BMA perceive the concept of employee involvement practices?	RI 2: What employee involvement practices are utilised at BMA?	RI 3: How does BMA sustain effective employee involvement practices?	RI 4: What are the critical factors that influence the implementation of employee involvement practices at BMA?	RI 5: What strategies do BMA adopt to enhance effective employee involvement?
Question Numbers	1.1, 1.2, 1.3, 1.12, 1.14	1.1, 1.3, 1.4, 1.12, 1.14	1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.10, 1.12, 1.13, 1.14	1.3, 1.4, 1.5, 1.6, 1.7, 1.9, 1.10, 1.11, 1.13, 1.14	1.1, 1.6, 1.7, 1.8, 1.9, 1.11, 1.13
Codes	BI1, INF2 predom, INF7, INF8, RC2, BI2, BI3, PS, DM, MC6, MC9, MC1	BI11, BI12, INF7, BI1, BI8, INF8, INF4, CN2, RC2, BI13	INF7, CN2, MC1S, INF/FO, RW4, MC12, PS1, PF2, PF4, MC7, BI5 - past, MC10	MC1 – supervisor, MC1S, MC9, MC6, CH3, NG9, CH1, CN2, MC7, NG3, RW4, NG4, MC13, expectations, positive people, BI5 – ideas raised	INF – space, day to day

Appendix D.6: Interviewee Summary

	I01	I02	I03	I04	I05	I06	I07	I08	I09
Position	G	H	H	G	H	H	H	H	G
Skill	E	E	E	F	F	F	E	E	M
Experience at the Mine (years)	2	14	14	2	1	4	3	4	6
General Work Experience (years)	10	22	14	13	9	13	6	8	20
Number of Jobs Held in Career	6	3	1	3	6	3	2	2	4
Education Background S – Secondary TER – Tertiary T/M - Trades	S	S	S	T/M	T/M	T/M	S	T/M	T/M
Mine	A	A	A	A	A	A	B	B	B

Appendix D.6: Interviewee Summary

	I10	I11	I12	I13	I14	I15	I16	I17	I18
Position	H	H	G	G	H	H	G	H	H
Skill	F	F	F	F	F	F	J	J	J
Experience at the Mine (years)	5	8	5	1	27	13	1.5	14	6
General Work Experience (years)	29	20	19	25	34	18	16	22	12
Number of Jobs Held in Career	6	3	4	5	4	4	6	8	11
Education Background S – Secondary TER – Tertiary T/M - Trades	T/M	T/M	T/M	T/M	T/M	T/M	T/M	T/M	T/M
Mine	B	B	B	C	C	C	C	C	C

Appendix D.6: Interviewee Summary

	I19	I20	I21	I22	I23	I24	I25	I26	
Position	G	H	H	H	H	G	H	H	
Skill	J	J	J	E	E	E	E	E	
Experience at the Mine (years)	27	13	17	2	6	6	30		
General Work Experience (years)	30	13	20	10	12	28	35		
Number of Jobs Held in Career	3	3	2	3*	4*	3	4		
Education Background S – Secondary TER – Tertiary T/M - Trades	T/M	S	T/M	S	S	S	S		
Mine	D	D	D	D	D	D	D	C	

Appendix D.6: Interviewee Summary

	HR01	HR02	HR03	HR04	HR05	SM01	SM02	SM03	SM04
Position	G	G	G	G	G	G	G	G	G
Skill	L	L	L	L	L	K	K	K	K
Experience at the Mine (years)	4	1	4	15	1	6	1	10	2
General Work Experience (years)	25	25	20	25	20	20	25	20	25
Number of Jobs Held in Career	3	6	4	3	4	3	6	3	10
Education Background S – Secondary TER – Tertiary T/M - Trades	TER	TER	TER	ND	TER	TER	TER	TER	TER
Mine	H/O	A	B	C	D	H/O	A	B	C

APPENDIX E

SECONDARY DATA DOCUMENT LISTS

Secondary Data Documentation List: Mine A

CODE	SECONDARY DATA DOCUMENT DESCRIPTION
SDA 01	Mine A Overview; Our Mine; Our People
SDA 02	BMA, Mine A Skills Matrix; Shift Ops B, 2 February 2003
SDA 03	BMA, Mine A Skills Matrix; Dragline B
SDA 04	Operating Excellence Annual Report FY02
SDA 05	OE – Update to End of October 2002 – Current Pro
SDA 06	Mine Safety Performance Monthly Report for November, 2002
SDA 07	Minutes of Crew Safety Meeting – H Crew, 29 September 2002
SDA 08	Minutes of September Toolbox Talks – B Crew, 26 September 2002
SDA 09	Minutes of Toolbox Talk, 8 December 2002
SDA 10	Safety Communication Sessions for 2001
SDA 11	Safety Communication Sessions for 2002 – 2003
SDA 12	BMA Charter
SDA 13	BMA Website – Bulletin Board, 09 January 2003
SDA 14	Mine A Newsletter, Issue 8, 27 September 2002
SDA 15	Mine A Newsletter, Issue 10, 30 November 2002
SDA 16	Mine A Newsletter, Issue 11, 31 December 2002
SDA 17	OE the Edge, Six Sigma Plus Global Newsletter, Issue 4, July 2002
SDA 18	BMAG, Issue 3, January / February 2003
SDA 19	Mine A, Critical Task Register, Coal Production, Trucking, Pumping, September 2000
SDA 20	Report presented by IO2
SDA 21	Mine A, Newsletter, Issue 9, 31 October 2002

Secondary Data Documentation List: Mine B

CODE	SECONDARY DATA DOCUMENT DESCRIPTION
SDB 01	Mine B – Telephone / Email List
SDB 02	Mine B, Newsletter, September 2002
SDB 03	Weekly Report from Mine Manager
SDB 04	Communications Plan (mainly industrial relations focus)
SDB 05	Monthly Report – November 2002
SDB 06	Mine Site Presentation – Future YEJ04 – YEJ08 August 03
SDB 07	Mine Managers Note – undated
SDB 08	Mine Managers Note – undated
SDB 09	Mine Managers Note – undated
SDB 10	Mine Managers Note – undated
SDB 11	Gregory Joint Venture Scoreboard – December Review

Secondary Data Documentation List: Mine C

CODE	SECONDARY DATA DOCUMENT DESCRIPTION
SDC 01	State of the Nation Overheads, November 2002
SDC 02	State of the Nation Overheads, November 2001
SDC 03	Mining Safety Team Minutes, 17 December 2002
SDC 04	Site Safety & Environment Team Minutes, 18 December 2002
SDC 05	Site Safety & Environment Team Minutes, 28 July 2002
SDC 06	CPP – Operations Monthly Safety Meeting Minutes, 11 November 2002
SDC 07	Mining – Draglines, B Crew Monthly Safety Minutes, December
SDC 08	Site Safety Team Meeting, 26 June 2002
SDC 09	Tech. Services Manager, Summary of Individual Performance Targets & Objectives
SDC 10	Email R Harris re OE Guidelines
SDC 11	Six Sigma Plus by Operating Excellence, December 2001
SDC 12	Pre-strip Improvement Project Team Meeting, No.2 Minutes
SDC 13	Pre-strip Improvement Project, July – November 2001
SDC 14	BMA Charter
SDC 15	BMA – Performance Planning & Review (Blank)
SDC 16	BMA – Performance Planning & Review, CPP, February 2003
SDC 17	BMA – Performance Planning & Review, CPP – Lab, February 2003
SDC 18	BMA – Performance Planning & Review, Mining, January 2002
SDC 19	Newsletter, Issue 7; September / October 2002
SDC 20	Newsletter, Issue 6; July / August 2002
SDC 21	Newsletter, Issue 5; May / June 2002
SDC 22	Site Safety Team Minutes, 24 May 2002

Secondary Data Documentation List: Mine D

CODE	SECONDARY DATA DOCUMENT DESCRIPTION
SDD 01	OE Improvement Map
SDD 02	Site Safety Committee Meeting Minutes, 27 November 2002
SDD 03	Site Safety Committee Meeting Minutes, 30 November 2002
SDD 04	State of the Nation, Performance Update; November 2002
SDD 05	Newsletter, Issue 54; January / February 2003
SDD 06	Newsletter, Issue 53; November / December 2002
SDD 07	Newsletter, Issue 52; October 2002
SDD 08	BMA Mine D, Overview; October 2001
SDD 09	UMLT Meeting Minutes – 17/01/03
SDD 10	UMLT Meeting Minutes – 21/02/03
SDD 11	UMLT Meeting Minutes – 22/11/03
SDD 12	Performance Planning and Review Record
SDD 13	Performance Planning and Review Record
SDD 14	Performance Planning and Review Record
SDD 15	Monthly Toolbox Talk / Safety Meeting Minutes
SDD 16	Monthly Toolbox Talk / Safety Meeting Minutes – 18/06/03
SDD 17	Monthly Toolbox Talk / Safety Meeting Minutes – 19/06/03
SDD 18	May 2003 Training Schedule
SDD 19	June 2003 Training Schedule
SDD 20	State Of The Nation, Performance Update – July 2003

Secondary Data Documentation List: General

CODE	SECONDARY DATA DOCUMENT DESCRIPTION
SDG 01	bhpbilliton Annual Report, 2002
SDG 02	BMA Community Partnerships Launch, January / February 2003
SDG 03	BHP Billiton: Employee Relations Manager; Weekend Australian, 15-16 February 2003
SDG 04	BMA Charter, overhead slide
SDG 05	BMA Human Resource Vision; overhead slide
SDG 06	BMA HR Strategy – Delivery, overhead slide
SDG 07	BMA Key Initiatives: Capability, overhead slide
SDG 08	BMA Key Initiatives: Performance, overhead slide
SDG 09	BMA Key Initiatives: Culture, overhead slide
SDG 10	BMA Key Initiatives: Organisation, overhead slide
SDG 11	BMA Human Resources; overhead slide
SDG 12	BMA; bhpbilliton – Employment Principles, 15 October 2002
SDG 13	bhpbilliton Health, Safety, Environment & Community Policy, 1 July 2002
SDG 14	BMAG, Issue 2; September, October 2002
SDG 15	Lominger – The Leadership Architects
SDG 16	BHP Billiton Charter, July 2002
SDG 17	www.bhpbilliton.com/bb/investor centre/home.jsp