

**Cultural Intelligence Considerations in the
Development of Global Managers**

The Case of Süd-Chemie

A RESEARCH REPORT

presented to the

**GRADUATE SCHOOL OF BUSINESS LEADERSHIP,
UNIVERSITY OF SOUTH AFRICA**

**in partial fulfilment of the requirements for the
MASTER'S DEGREE IN BUSINESS LEADERSHIP**

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2006

ABSTRACT

The advent of globalisation has brought about the need for multinational corporations (MNC) to reconsider their strategies in order to sustain competitive advantage. A crucial aspect of strategy is the development of a global mindset within organisations and in particular among global managers. A key underlying theme of a global mindset is the ability to leverage cultural diversity for organisational effectiveness. As such, global managers need to be sensitive to diverse cultures, possess the ability to analyse situations in which individuals of different cultures are encountered, identify the requirements of the situation and exercise the appropriate behaviour. In order to be able to perform the foregoing, managers need to have cultural intelligence or CQ.

The purpose of the research is to provide Süd-Chemie, a German MNC, with a basis to enhance the development of its global managers through the assessment of the CQ of the latter.

A questionnaire that was adapted from literature and tailored for the requirements of the current study was used to assess the CQ of a sample of managers within Süd-Chemie. This was substantiated by structured interviews conducted with a few participants.

It was established that the level of cultural intelligence of managers within Süd-Chemie is average. The key finding of this research is the fact that expatriate experience plays a vital role in the development of CQ. Other findings of note include the fact that cross-cultural training does not have a significant effect on the development of CQ in Süd-Chemie's case. Furthermore, it was established that years of service within Süd-Chemie does not have a significant impact on CQ. The findings from the structured interview revealed that CQ global manager > CQ functional manager > CQ country manager, based on Bartlett & Ghoshal's (1992) triad model.

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I certify that the report is my own work and all references used are accurately reported.

Signed

Date

ACKNOWLEDGEMENTS

I would like to thank my supervisor, Mr Jopie Coetzee (Senior Lecturer: International Business), for his guidance and assistance during the course of this research.

I am also grateful to the executive management at Süd-Chemie Zeolites (Pty) Ltd for their support and allowing me the time as well as providing me the resources to conduct the structured interviews during working hours. Special thanks to the Corporate Human Resources central function at Süd-Chemie AG for their assistance during the data collection phase of this study. I would like to extend my gratitude to all the participants in this research, within the Süd-Chemie group, for completing the research questionnaire and allowing me the time to conduct the structured interviews.

I would also like to thank my wife, Shalini, for her invaluable support during the course of my studies. Last but not least, I would like to thank my parents, in-laws and brother for their continued support.

TABLE OF CONTENTS

Abstract	ii
Statement of own work	iii
Acknowledgements	iv
Table of contents	v
List of Tables	viii
List of Figures	viii
Acronyms, abbreviations and definitions	ix

Chapter 1: Orientation

1. Orientation.....	1
1.1 Audience	1
1.2 Context of the study.....	1
1.3 Research question.....	5
1.4 Research objectives	5
1.5 Delimitation of the study	6
1.6 Importance of the study	6
1.7 Constraints to the research	7
1.8 Chapter outline	8

Chapter 2: Profile of Süd-Chemie

2.1 Introduction.....	10
2.2 Süd-Chemie's organisational structure.....	12
2.3 Süd-Chemie's business units and industry groups	12
2.3.1 Adsorbents and Additives Business Unit.....	13
2.3.2 Catalytic Technologies Business Unit.....	15
2.4 Süd-Chemie's four pillar strategy.....	17
2.5 Previous contextual research	18

Chapter 3: Foundation of the study

3. Foundation of the study	20
3.1 Scope of the body of knowledge.....	20

3.2 Theories	20
3.3 Hypotheses	22
 Chapter 4: Literature review	
4. Literature review	24
 Chapter 5: Research Methodology	
5. Research methodology	51
5.1 Research design	51
5.2 Sample design	52
5.3 Measuring instruments	52
 Chapter 6: Results	
6. Results	54
6.1 Data analysis of survey	54
6.1.1 Frequency distribution	55
6.1.2 Scoring of research questionnaire	57
6.1.3 Descriptive statistics	58
6.1.3.1 Total CQ score	58
6.1.3.2 CST score	61
6.1.3.3 MOT score	63
6.1.3.4 BEH score	65
6.2 Hypotheses testing	68
6.2.1 Hypothesis 1	69
6.2.2 Hypothesis 2	69
6.2.3 Hypothesis 3	70
6.2.4 Hypothesis 4	71
6.2.5 Hypothesis 5	71
6.2.6 Hypothesis 6	72
6.2.7 Hypothesis 7	73
6.2.8 Hypothesis 8	73
6.3 Correlation matrix	75
6.4 Structured interview analysis	75

6.4.1 Global business manager structured interview	76
6.4.2 Functional manager structured interview	77
6.4.3 Country manager structured interview	78

Chapter 7: Discussion, conclusions and recommendations

7.1 Discussion	79
7.2 Conclusions	86
7.3 Recommendations	88

Bibliography	93
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Appendices

A Questionnaire design, with consistency matrix	98
B Structured interview with questionnaire covering letter	105
C Scoring of questionnaire	110
D Output of hypotheses testing	111
E Süd-Chemie group structure and organisational charts	120

LIST OF TABLES

Table 4.1: Managerial challenges in developing a global mindset.....	30
Table 4.2: Relationship between domestic and global mindsets, personal characteristic and competency	33
Table 6.1: Frequency distribution of respondents.....	55
Table 6.2: Descriptive statistics for total CQ score	59
Table 6.3: Descriptive statistics for CST score	62
Table 6.4: Descriptive statistics for MOT score	64
Table 6.5: Descriptive statistics for BEH score	66
Table 6.6: Correlation matrix	75

LIST OF FIGURES

Figure 2.1: Süd-Chemie's R & D Activities Worldwide.....	10
Figure 2.2: Süd-Chemie's Global Presence	11
Figure 2.3: Süd-Chemie group global operating structure (Appendix E)	
Figure 2.4: BAA organisational chart (Appendix E)	
Figure 2.5: BCT organisational chart (Appendix E)	
Figure 2.6: Süd-Chemie group structure	13
Figure 2.7: Süd-Chemie's four pillar strategy	18
Figure 4.1: IB maturity curve	25
Figure 4.2: Alternative mindsets: A conceptual framework.....	26
Figure 4.3: Global Competency Learning Cycle	36
Figure 4.4: Development of cultural intelligence.....	44
Figure 4.5: Designing an intercultural training	48
Figure 6.1: Total CQ score histogram.....	60
Figure 6.2: Spider diagram of mean total CQ score of subgroups.....	60
Figure 6.3: CST score histogram.....	62
Figure 6.4: Spider diagram of mean CST score of subgroups.....	63
Figure 6.5: MOT score histogram.....	65
Figure 6.6: Spider diagram of mean MOT scores of subgroups.....	65
Figure 6.7: BEH score histogram	67
Figure 6.8: Spider diagram of mean BEH scores of subgroups.....	68

ACRONYMS, ABBREVIATIONS AND DEFINITIONS

Definitions

Cultural Intelligence: “a person's capability for successful adaptation to new cultural settings, that is, for unfamiliar settings attributable to cultural context” (Early & Ang, 2003: 9).

Expatriate Manager: “a citizen of one country who is working abroad in one of the firm's subsidiaries” (Hill, 2003: 607).

Global Manager: “an executive who has hands-on understanding of international business, has the ability to work across cross-cultural, organisational, and functional boundaries, and is able to balance the simultaneous demands of short-term profitability and growth” (Pucik & Saba, 1998: 49).

Global Mindset: “one that combines an openness to and awareness of diversity across cultures and markets with a propensity and ability to synthesise across this diversity” (Gupta & Govindarajan, 2002: 117).

Acronyms

BEH is cultural behaviour

CEO is chief executive officer

CQ is cultural intelligence

CST is cultural strategic thinking

IB is international business

MNC is a multinational corporation

MOT is cultural motivation

PRISM is preparing one's mind, reviewing and learning, identifying one's strengths and weaknesses, setting goals and targets and mobilising one's resources

R & D is research and development

SA is South African

US is United States

CHAPTER 1

ORIENTATION

1. Orientation

1.1 Audience

This research is first and foremost intended for management at the Corporate Human Resources central function of Süd-Chemie, headquartered in Munich, Germany. Concurrently, the study is intended for current global managers at Süd-Chemie and its subsidiaries as well as managers of Süd-Chemie, who aspire to become global managers. Furthermore, this research is of interest to academics and students intending to or currently doing research in the field of international business, in particular the development of global managers, the global mindset, cultural intelligence and the assessment thereof.

The research is company specific and its aim is to provide Süd-Chemie with a basis to enhance the development of its global managers through the assessment of the cultural intelligence of the latter.

1.2 Context of the study

Rapid advances in technology and telecommunications have led to the creation of what is often termed “the global village”. Borders between countries, although depicted as distinct solid lines on world maps have now become insignificant and globalisation is a reality that affects every MNC. The dynamics and complexity of today’s global economy requires that MNCs reconsider their strategies in order to compete effectively and ensure sustainable growth. According to Yip (1992) as cited in Kedia & Mukherji (1999), the globalisation phenomenon is driven by four factors. Market drivers stem from increased purchasing power leading to heightened demand for goods on a global basis. In addition, the convergence in lifestyles, tastes, aspirations and expectations of consumers worldwide has altered the markets. Cost drivers emanate from lower factors of production including the availability of low cost labour and raw materials as well as improved transportation. Competition drivers result from an increasing number of global

competitors and the proliferation of strategic alliances. Furthermore, the fall of trade barriers and the formation of trading blocks act as government drivers towards globalisation. Evans, Pucik & Barsoux (2002) even suggest that the path to globalisation had once been through predictable stages, however, in this day, companies are born global.

The global business environment does not only have an impact on the competitive landscape but it requires of global leaders/managers to change the way in which they conduct business and develop new competencies in order to be successful. Although globalisation is a reality, the available body of knowledge stresses the fact that organisations have not kept pace in terms of developing global managers to face the phenomenon. Hence, an additional challenge facing today's MNCs is to develop a mindset that increases organisational effectiveness while simultaneously ensuring efficient business operations, which translates into the fact that concepts that have been developed over the years need to be reassessed in light of globalisation. Therefore, the concept of a global mindset needs to take precedence over existing ones. Such a mindset is required of global managers in the 21st century.

One of the key underlying themes of a global mindset is the ability to function effectively across cultures (Rhinesmith, 1992; Kedia & Mukherji, 1999; Paul, 2000; Rosen, Digh, Singer & Phillips, 2000; Gupta & Govindarajan, 2002). As interactions between people of different cultures have escalated in the corporate setting, today's managers have to be prepared to deal with overseas counterparts and clients from all corners of the globe. Although expatriate managers are more exposed to a culture different from their own, even managers who are based in their home country have daily interactions with colleagues and clients via e-mail, international telephone calls and video conferencing. This growing breed of managers is often referred to as "virtual expatriates" and have proliferated with advancements in e-business. Furthermore, according to Cappellen & Janssens (2005), organisations are increasingly tending towards other types of cross-border moves like short-

term assignments, localised transfer, international commuting and extended business travel. As a result, managers need to be sensitive to diverse cultures, possess the ability to analyse situations in which individuals of different cultures are encountered, identify the requirements of the situation and exercise the appropriate behaviour. In order to be able to perform the foregoing, managers need to have cultural intelligence or CQ.

Expatriate failure in overseas assignments is well documented in the literature (Pucik & Saba, 1998; Mendenhall & Stahl, 2000; Waxin & Panaccio, 2005). The impacts of expatriate failure for the MNC are sunk costs that are irreversible. The cost to company of an expatriate is much more than that of a home country employee. Furthermore, the image of the MNC is tarnished in the host country. Cassidy (2005) argues that the high turnover rate of expatriates results in a loss of knowledge, insight and creativity. Also, when an expatriate leaves an organisation, the networks and relationships that have been built over a number of years become inaccessible, which is not desirable for an organisation wanting to develop global competence. On a personal level, damage to the psychological well-being of the expatriate occurs. The ineffectiveness of the expatriate manager has been linked, amongst others, to failure in grasping the nuances of the host culture.

In effect, the development of the cultural intelligence of the expatriate as well as the global manager to a level where cultural diversity can be leveraged for organisational effectiveness through synergies among a network of employees, suppliers and customers is every MNC's holy grail. This is being touted as one of the most important forms of competitive advantage. Culture is largely invisible unlike the economic, legal and political aspects of the global environment; as a result, culture is most often overlooked (Thomas & Inkson, 2003).

Managers who operate effectively in a local setting are not guaranteed to exhibit the same astuteness when operating on a global basis or in cross-cultural settings. This gap exists because organisations in general, have not

kept pace with the phenomenon of globalisation in relation to the development of global managers for the latter to attain an adequate level of cultural intelligence and develop a global mindset. Lack of these attributes can seriously hamper the ability of the global manager in leveraging diversity for organisational effectiveness. With regards to the research at hand, the following questions arise:

Do managers at Süd-Chemie have the required level of cultural intelligence to function effectively in a global setting? What can be done about the situation?

The sub-problems are as follows:

- To examine the differences in the level of cultural intelligence of managers with or without expatriate experience
- To examine the differences in the level of cultural intelligence of managers who have undergone a form of cross-cultural training and those who have not
- To examine the differences in the level of cultural intelligence of managers who are from individualistic countries as opposed to collectivist countries
- To examine the differences in the level of cultural intelligence of global business managers, functional managers and country managers
- To examine the differences in the level of cultural intelligence of managers with regards to the number of years of service at Süd-Chemie

From the above narrative, it is clear that the development of a global mindset with emphasis on cultural intelligence is key to managing across cultures in this era of globalisation. However, the fact that organisations have not kept

pace with the advent of globalisation in the development of their global managers, transpires from the available body of knowledge. As a result, it is critical to measure the levels of cultural intelligence of managers and use the learnings to equip today's global managers with the ability to face a tough and demanding global environment. This study is being conducted for Süd-Chemie for that very purpose.

1.3 Research question

The research question that defines this study is as follows:

What global learnings can Süd-Chemie apply in enhancing the cultural intelligence of its global managers?

1.4 Research objectives

The main objectives of this research are listed below:

1. To identify those cultural intelligence learnings that may be relevant to Süd-Chemie from the existing body of knowledge namely, accredited journals and industry publications.
2. To identify relevant cultural intelligence measuring tools and construct a questionnaire specific to Süd-Chemie.
3. To measure the levels of cultural intelligence of managers at Süd-Chemie.
4. To synthesise the learnings from 2. and 3. above into suitable conclusions.
5. To develop recommendations to address the research question.

1.5 Delimitation of the study

This research is restrictive in the sense that it is being conducted for Süd-Chemie. Although, cultural intelligence is viewed as an attribute that all managers should possess in order to operate effectively in an international setting, findings stemming from this study can only be extended to all MNCs with caution as company specific factors are relevant. Furthermore, this research focuses on the specialty chemicals industry only, which is a subset of the global chemical industry.

In addition, the target population is restricted to all the global business unit managers, central function managers (functional managers), company heads (country managers), home country managers and existing expatriates within the global operations of Süd-Chemie. Furthermore, the respondents only consisted of male managers, which was purely by default. As such, no inference can be made with regards to the influence of gender on cultural intelligence from this study. The global organisational structure of Süd-Chemie is detailed in Chapter 2 of this research report.

Also, this research does not seek to develop a whole new theoretical grounding or model of cultural intelligence. Existing theories and models will be applied during the course of the study.

1.6 Importance of the study

Increased globalisation and shifting political tides have made the need for intercultural understanding critical in doing business across cultures. Hence, managers must develop a global mindset, of which an integral component is cultural intelligence.

There exists a distinct gap in research on cultural intelligence in the sense that emphasis has been placed on cross-cultural training methods but not on the assessment of cultural intelligence to establish the effectiveness of these

methods and to leverage the learnings to improve on existing training programs. Furthermore, as mentioned in paragraph 1.2 of this research report, the emergence of a new form of globally mobile employee necessitates further research as most of the available literature is dedicated to traditional expatriate managers. Therefore, the aim of the proposed research is to address these gaps in order to assist current and prospective global managers of Süd-Chemie to improve their ability to manage across cultures.

The learnings from this research can be extended to organisations that share similarities with Süd-Chemie. In addition, this study will serve to contribute to the restricted body of knowledge on cultural intelligence as well as on global managers and can be used as a platform to conduct future research.

1.7 Constraints to the research

Self-assessment questionnaires, supplemented by structured interviews with a few subjects, form the backbone of this research. A major constraint that was foreseen is the geographical spread of the sample and its impact on the response rate. In order to counteract the possibility of a poor response rate, the researcher sensitised the target group one month before the questionnaires were distributed by sending an introductory e-mail outlining the purpose of the research. This was followed by an e-mail two weeks after the distribution phase of the questionnaire to offer assistance with and clarify any issues encountered prior to and during the completion of the questionnaires. Finally, a reminder was e-mailed to the target group two weeks before the questionnaire submission deadline. All correspondence with the target population was channelled via the Corporate Human Resources central function of Süd-Chemie in Munich, Germany in order to formalise the study as well as to raise the profile thereof. Furthermore, from a communication viewpoint, it was found more effective to route all correspondence via a central point.

Likewise, the subjects earmarked for the structured interview were contacted by telephone one month before the actual interview to schedule an appropriate date and communicate the format of the discussion to avoid any constraints related to unavailability.

In terms of resources, possible constraints and contingencies are listed below:

- Time management: this was addressed by a detailed plan of activities with deadlines
- Loss of data: data was backed up on a weekly basis.

1.8 Chapter outline

Chapter 1: Orientation

The purpose of this chapter is to orientate the reader by elaborating on the contextual setting of the research. Furthermore, the research problem is stated together with sub-problems, from which the research question is extracted and the objectives of the research are set. In addition, this chapter describes the delimitation and importance of the study. An outline of the research report concludes this chapter.

Chapter 2: Profile of Süd-Chemie

This chapter provides the reader with background information on the Süd-Chemie group of companies in order to put the current study in perspective.

Chapter 3: Foundation of the study

In this chapter, the foundation of the study is described and the scope of the body of knowledge on the topic is outlined.

Chapter 4: Literature review

The existing body of knowledge is explored in this chapter and gaps are identified in order to highlight where the current research fits.

Chapter 5: Research methodology

The focus of this chapter is the field work, whereby the research and sampling designs are discussed as well as the research methodology. The measurement instrument is also presented.

Chapter 6: Results

The collected data is transformed using statistical techniques in this chapter and displayed through the use of descriptive statistics. The proposed hypotheses that define this study are also tested using appropriate statistical techniques.

Chapter 7: Discussion, conclusion and recommendations

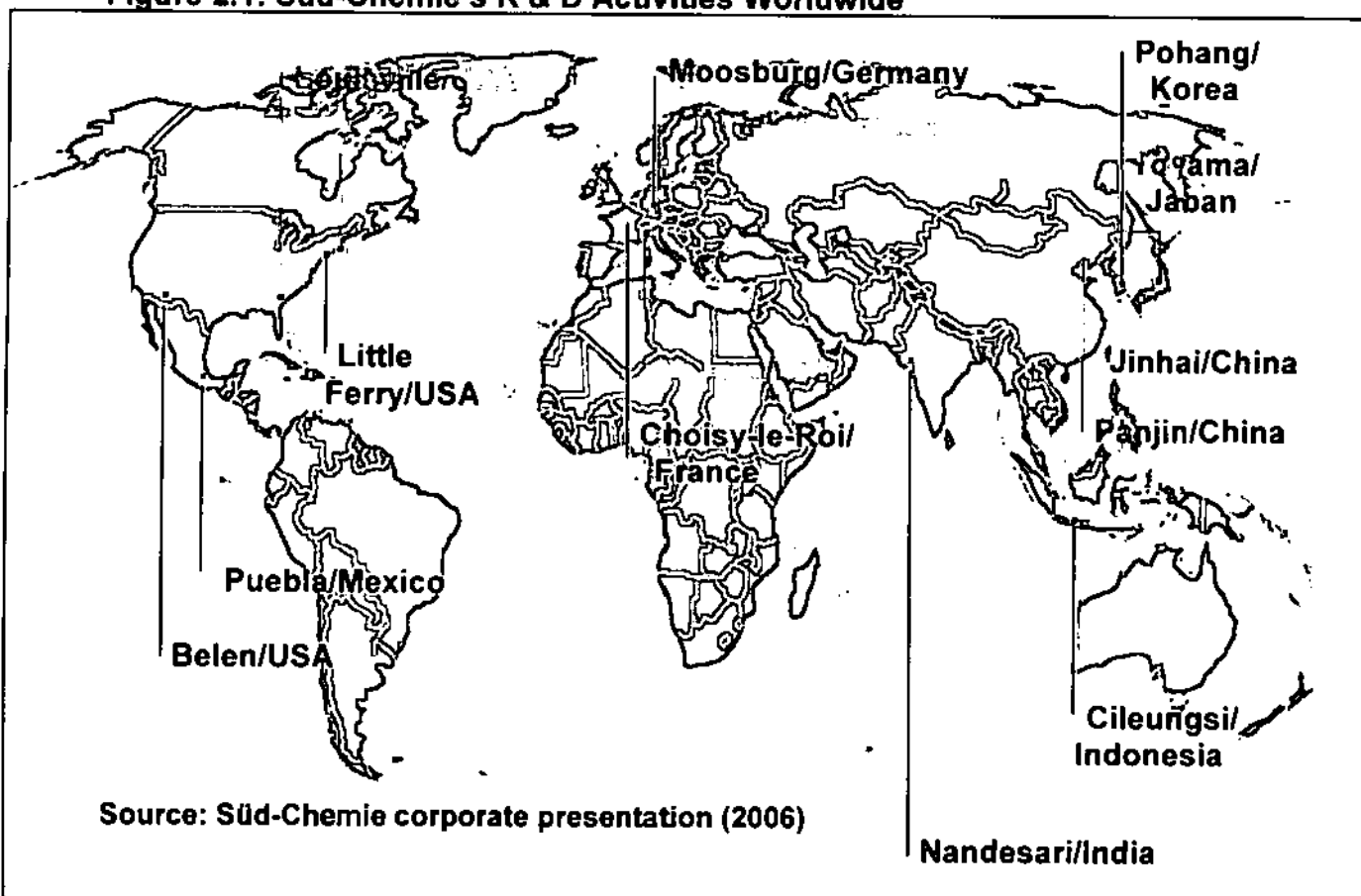
The outcome of the research with cross-reference to the existing body of knowledge is presented in this chapter. In addition, conclusions are inferred and recommendations made to Süd-Chemie.

CHAPTER 2
PROFILE OF SÜD-CHEMIE

2.1 Introduction

Süd-Chemie comprises of a group of companies with the parent company based in Germany. It operates and competes globally as a specialist in the chemistry and physics of surfaces comprising finely distributed inorganic substances. The group is geared towards innovation and the environment. Innovation is the force driving the growth of Süd-Chemie; higher performance technologies and customer-specific solutions are constantly being developed. However, the environment is not overlooked in this endeavour and regardless of whether research, production, sales or service are involved, Süd-Chemie harmonises economic and ecological perspectives as far as possible. Figure 2.1 depicts the worldwide research and development activities of the group that support innovation as Süd-Chemie's driving force for growth.

Figure 2.1: Süd-Chemie's R & D Activities Worldwide

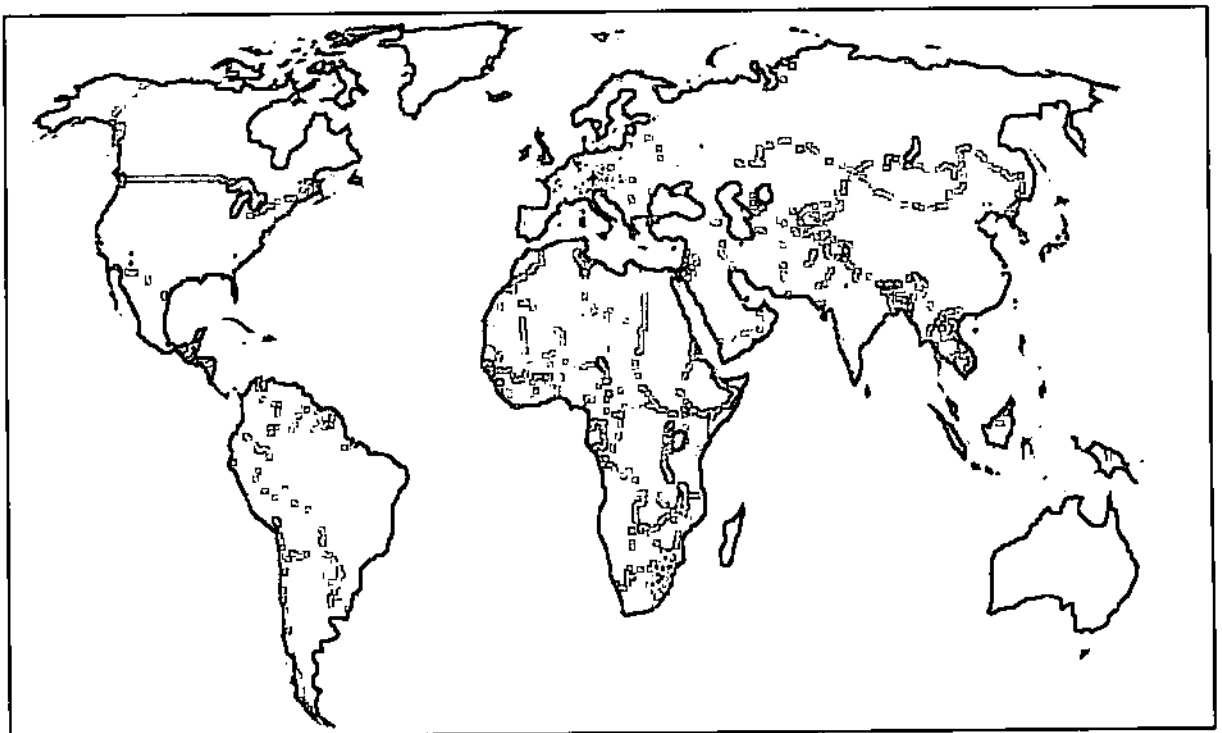


Locations in red font represent research and development centres of the catalytic technologies business unit (BCT) where as locations in blue font

correspond to the research and development centres of the adsorbents and additives business unit (BAA) (refer to paragraph 2.3).

Represented throughout the globe through more than seventy sales and production companies, Sd-Chemie is favourably footprinted to apply a tailored strategy that focuses its specialist technologies on niche markets. The organisation's exemplary proximity to the customer base, due to a worldwide market presence, makes niches large enough to exploit. Figure 2.2 illustrates the truly global activities of the organisation.

Figure 2.2: Sd-Chemie's Global Presence



Source: Sd-Chemie corporate presentation (2006)

2.2 Süd-Chemie's organisational structure

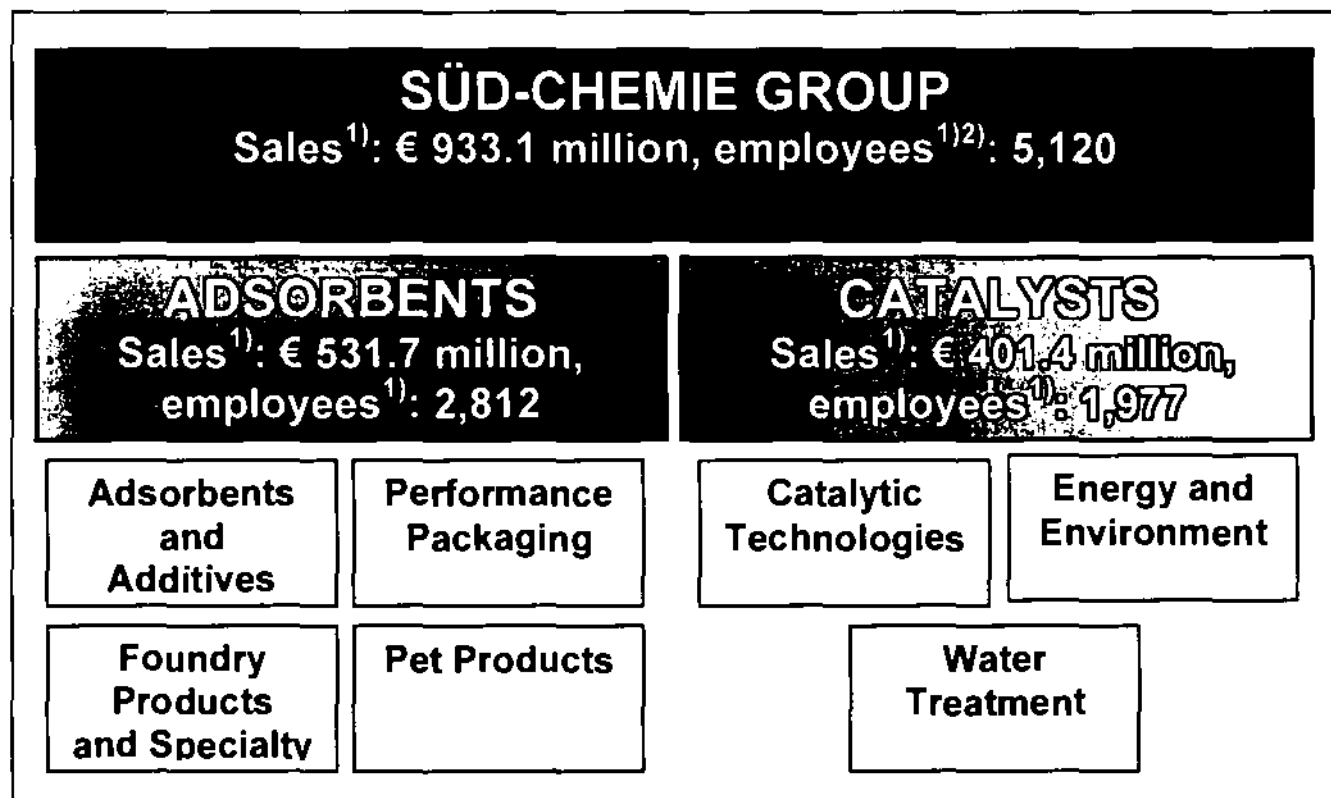
The Süd-Chemie group global operating structure is represented in Figure 2.3 (see Appendix E). The group is headed by the three members of the group strategic committee (GSC)/operational committee (OC), namely the COO, CEO and CFO. These three members constitute the managing board of the organisation. Global business unit managers, with the exception of the foundry products and specialty resins business unit (BFR), report to the COO in the hierarchical structure. The COO also heads three corporate central functions that fit into the operational portfolio of the organisation. These are corporate technical investment and management (CTI), corporate safety, health, environment and quality management (CEQ) and corporate licenses and patents (CLP). For his part, the CEO is at the helm of the remainder of the corporate central functions with the exception of the controlling, financial and information management corporate central functions, which are headed by the CFO.

2.3 Süd-Chemie's business units and industry groups

The Süd-Chemie group consists of two main business units, namely the adsorbents and additives business unit (BAA) and catalytic technologies business unit (BCT). The organisational charts of these two business units are respectively shown in Figures 2.4 and 2.5 (see Appendix E). As depicted, these two business units serve as parent business units for industry groups. The business units are characteristic of a matrix structure whereby the regional functionalities report to both the industry group managers and the regional company heads.

In 2005, total sales amounted to 933 million euros and the number of employees stood at 5120.

Figure 2.6: Süd-Chemie group structure



1) Financial year 2005

2) Incl. employees of central functions: 331 (previous year: 337)

Source: Süd-Chemie corporate presentation (2006)

2.3.1 Adsorbents and Additives Business Unit

The starting material for products manufactured by the adsorbents business unit is a clay mineral known as bentonite, which binds materials dissolved in water or other liquids. Süd-Chemie is the world's largest supplier of bentonite products.

Industry Group for Food and Feed Additives

In this Industry Group, Süd-Chemie mainly produces additives for use in the edible oil, edible fat, food and beverage as well as animal feed industries.

Industry Group for Detergents, Paper Additives and Specialties

Innovative formulae using detergent-bentonite solutions ensure that laundry is soft and gentle on the skin and offer an environmentally-benign alternative to

conventional liquid softeners. Paper bentonite improves the surface quality of paper, as well as the printing quality. It also binds toxic heavy metals during waste-paper processing and removes impurities from recirculated materials.

Industry Group for Foundry Additives

The foundry industry is one of the most important areas of application for bentonite products. Forming an integral part of the molding-sand mixture, bentonite adds the stability required to withstand red-hot molten metal.

Industry Group for Civil Engineering and Construction

In the building and drilling industries, water-based bentonite suspensions are used to stabilise horizontal boreholes and provide support in the construction of diaphragm walls, slurry walls and retaining walls. The Industry Group also supplies bentonite additives to customers in the building and drilling industries to improve the processing properties of construction materials such as plaster, screed flooring and fillers.

Industry Group for Pharmaceuticals and Diagnostics

This Industry Group develops and produces packaging for the pharmaceutical, diagnostics and food-supplement industries. Above all, its solutions provide protection against humidity, but also against oxygen, mechanical damage and ultraviolet rays.

Industry Group for Electronics and Logistics

The Industry Group offers customised packaging solutions to protect against humidity in the form of desiccants and humidity indicators. Desiccants are for instance used in components packaging in the electronics and semiconductor industries, or in the transport and storage of agricultural produce, automobile components and plant and machinery that are affected by humidity.

Industry Group for Plastic Additives

The Industry Group for Plastic Additives develops, manufactures and markets performance plastic additives to improve the environmental compatibility,

flame-retardant qualities and mechanical and barrier properties of PVC and polyolefins.

Industry Group for Foundry Products

The extensive product range forms an optimal basis for customised solutions geared to all foundry processes. This includes resins, core washes and additives, as well as feeders, filters, foundry cores and release agents, in addition to metallurgical products for casting processes.

Industry Group for Specialty Resins

This Industry Group manufactures resins mainly for the paints and coatings industry, these being used for instance in antistatic finishings.

Industry Group for Cat Litter

Owing to its water-storing capacity, bentonite is ideally suited for the production of natural-clay cat litter.

Industry Group for Specialty Products

The Industry Group for Specialty Products focuses on healthy nutritional supplements, as well as care and hygiene products for cats, dogs and rodents.

2.3.2 Catalytic Technologies Business Unit

Catalysts are the key to efficient use of primary chemicals. They accelerate chemical reactions which would often not be possible without them and reduce the amount of energy required to activate chemical reactions without being consumed in the process. No other technical principle links economic and ecological value creation as closely as catalysis. Catalysts enable comparatively inexpensive starting materials to be transformed into high-quality products - while conserving natural resources.

Industry Group for Chemicals

Besides catalysts for the manufacture of ammonia, methanol, ethylene dichloride, phthalic anhydride, sulphuric acid and formaldehyde, the Chemicals Industry Group also offers gas-reforming and hydrogenation catalysts, as well as customised catalysts for the manufacture of various specialty chemicals and for purification processes. Catalyst carriers produced to customer specifications are also included in the range of products offered by this Industry Group.

Industry Group for Petrochemicals

This Industry Group markets catalysts for the manufacture and refining of basic chemicals, above all olefins, such as ethylene and propylene, and aromatics, such as styrene. It also offers catalysts for dehydrogenating alkanes to create olefins, as well as catalysts for olefin purification.

Industry Group for Refinery

The portfolio includes catalysts and catalytic solutions for a highly-diversified range of refinery applications, from the production of hydrogen and fuels to the manufacture of lube oil.

Industry Group Olefin Polymerisation

Ziegler-Natta catalysts are used for the catalytic processes involved in the production of polymers such as polypropylene (PP) and polyethylene (PE).

Industry Group for Air Purification

The Industry Group offers catalysts for treatment of industrial air and gas emissions on a worldwide scale, including the treatment of waste process-gas in the semiconductor industry and decomposition of nitrous oxide created during nitric acid production. In the field of diesel emission control, a particulate filter and oxidation catalysts are produced for upgrading engines, as well as high-quality specialty zeolites.

Industry Group for Fuel Cells

Süd-Chemie is the world's leading manufacturer of synthesis gas catalysts for producing hydrogen. The product portfolio offered by the Industry Group for Fuel Cells consists mainly of reforming catalysts, which have been further developed on the basis of synthesis gas catalysts to meet the specific needs of the fuel-cell industry.

Industry Group for Classic Water Treatment

This Industry Group offers customised solutions for purifying and conditioning of all types of process and industrial wastewater. Its application solutions include plants for treating both cooling water and boiler feed water.

Industry Group for Potable, Effluent and Specialty Applications

The Industry Group offers solutions for the best possible treatment of drinking and process water, as well as effluents. These include in particular all-inclusive solutions for urban authorities.

Industry Group for Water and Process Technologies

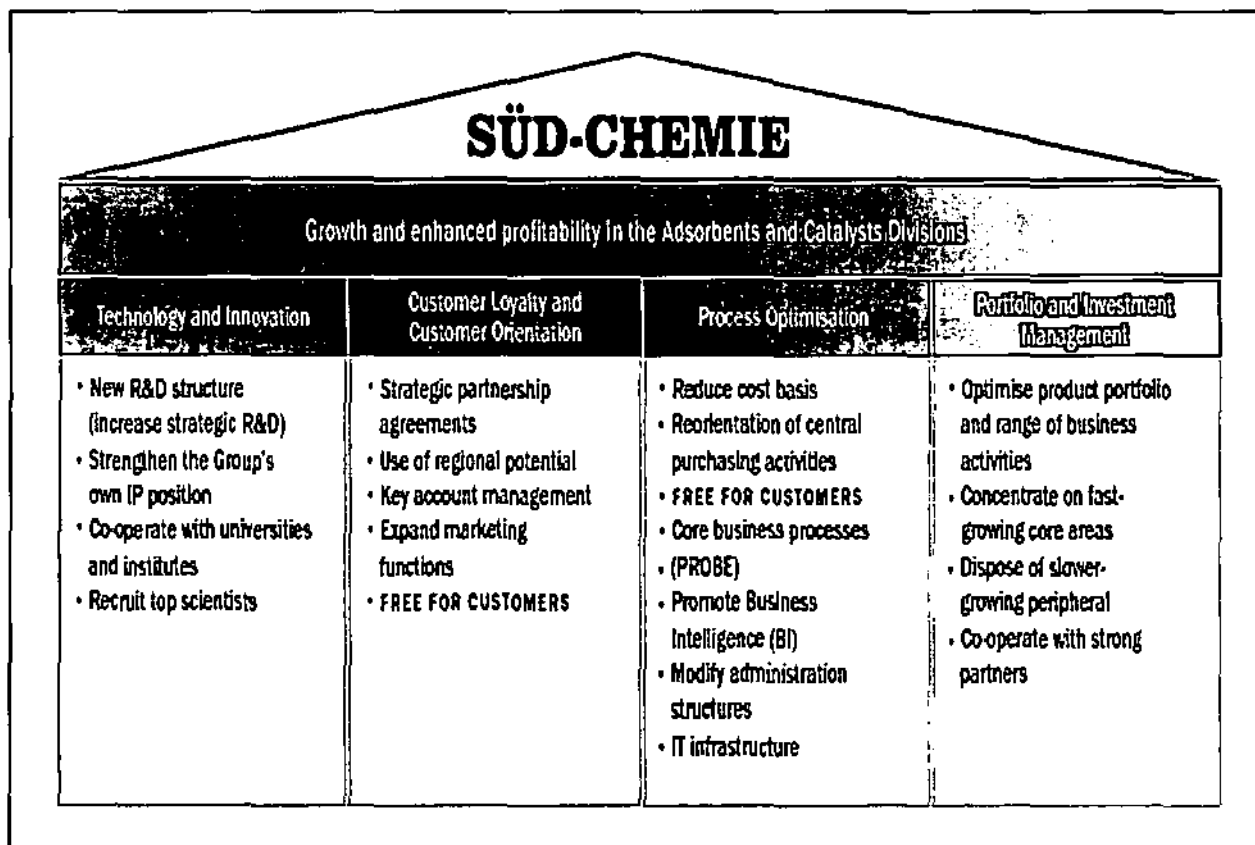
The Industry Group for Water Treatment offers wastewater treatment solutions based on inorganic products for urban and industrial wastewater treatment plants. Services relating to both water processing and plant technology complete the range of products offered by this Industry Group.

2.4 Süd-Chemie's four pillar strategy

The organisation's strategy rests on four pillars as shown in Figure 2.7. In order to sustain growth and profitability, the corporate strategy focuses on technology and innovation, which is the primary strategic thrust. In addition, the consolidation and strengthening of ties with customers is a key component of the overall strategy. Process optimisation and continuous improvement through best practices constitute another vital element of the corporate strategy. The four pillar strategy is completed with portfolio and investment management, whereby the focus centres on growing core businesses and

divesting those with lesser potential as well as forming strategic alliances with suitable partners.

Figure 2.7: Süd-Chemie's four pillar strategy



Source: Süd-Chemie corporate presentation (2006)

2.5 Previous contextual research

In line with the current study, Süd-Chemie conducted a survey among its expatriate managers in 2004. Owing to the increasing number of expatriate managers, the company established the need to generate a global mobility policy to aid decision making for expatriate assignments. Key information that was gleaned from the survey is as follows:

- 50% of the expatriate managers thought that refusing the expatriate assignment would have a negative effect on their careers. On the other

hand, 70% of the sponsors agreed that the expatriates could have refused the assignment without damaging their careers.

- Only 30% of the expatriates received some form of intercultural and/or language training prior to the expatriate assignment.
- Less than 25% of the expatriates reported problems regarding adaptation to the new culture
- Annual reviews by the sponsor were conducted in only 30% of the cases.
- Only 18% of the expatriates had mentors and 50% of them as well as almost all the sponsors recognised the importance of a mentor.
- 60% of the expatriates reported that their objectives were achieved.
- More than 70% of the expatriates agreed that the assignment has had a positive effect on both their business and personal lives and 96% of the expatriates would repeat the exercise if given the opportunity.

The above statistics point out among other things that preparation of expatriates prior to the assignment is inadequate although less than 25% reported adaptation problems. Owing to the size of the sample, the latter finding cannot be extrapolated and hence, this research aims to correct this deficiency by providing a building platform for Süd-Chemie.

CHAPTER 3
FOUNDATION OF THE STUDY

3. Foundation of the study

3.1 Scope of body of knowledge

The body of international business knowledge that is relevant for this study is made up of the following components:

- Cultural intelligence
- Global mindset
- Expatriate/global manager development

The main focus area of the study is cultural intelligence. The definition as well as the different models of cultural intelligence are covered. Furthermore, cross-cultural training with emphasis on cultural intelligence will be explored together with the assessment of cultural intelligence.

The definition of the global mindset is covered together with its contextualisation. Furthermore, the evolution to a global mindset as well as the cultivation thereof is expanded on.

Expatriate/global manager development focuses on the desired attributes from both an individual and a corporate viewpoint.

3.2 Theories

The theories that have been utilised during the course of this study are as follows:

- Earley & Ang's (2003) four facet model of cultural intelligence since the instrument to be used for this study is based on this model. In addition, reliability together with discriminant validity have been demonstrated for this instrument. Furthermore, the researcher is of the opinion that

this particular model is the most researched in the literature in comparison to other models, which are incomplete.

- Hofstede's dimensions of culture, in particular individualism/collectivism as several hypotheses are based on this dimension (Hill, 2003). Thomas & Inkson (2003) assert that of all the dimensions established by Hofstede, individualism/collectivism is the most useful and powerful. Besides the preceding fact, this cultural dimension fits into the global context in which Süd-Chemie operates.
- Bartlett & Ghoshal's (1992) triad model as the organisational structure of Süd-Chemie falls within the scope of the model. As depicted in Figure 3 in Chapter 2 of this research report, the business unit manager (e.g BCT) fits the profile of the global business manager of Bartlett & Ghoshal's (1992) model. On the other hand, the central function manager (e.g CHR) is akin to the global functional manager while the company heads are synonymous with the country manager of Bartlett & Ghoshal's (1992) model.
- In line with the triad model of Bartlett & Ghoshal (1992), the leadership pipeline developed by Drotter & Charan (2001) is pertinent in the sense that through each passage in the pipeline, the ability to effectively leverage cultural diversity increases.
- Gupta & Govindarajan's (2002) model for cultivating a global mindset from an organisational viewpoint. The assessment of the cultural intelligence of managers within the Süd-Chemie group constitutes the core of this study. Thereafter, it is the intention of the researcher to make recommendations in order to enhance the level of cultural intelligence of managers within the organisation, with the ultimate aim of improving the global mindset at Süd-Chemie. Owing to the organisation wide implications of the study, Gupta & Govindarajan's (2002) model is relevant.

3.3 Hypotheses

The following hypotheses are proposed in light of the current study:

Hypothesis 1

Managers with prior expatriate experience are more culturally intelligent than managers with no prior expatriate experience.

Hypothesis 2

Current expatriate managers are more culturally intelligent than home country managers.

Hypothesis 3

Managers having undergone a form of cross-cultural training are more culturally intelligent than managers who have not undergone any form of cross-cultural training.

Hypothesis 4

Managers from individualistic countries are more culturally intelligent than managers from collectivist countries.

Hypothesis 5

There is a difference in cultural intelligence between managers from individualistic and collectivist countries.

Hypothesis 6

Global business managers are more culturally intelligent than functional managers.

Hypothesis 7

Functional managers are more culturally intelligent than country managers.

Hypothesis 8

Managers with more than 10 years of service with Süd-Chemie are more culturally intelligent than those with less than 10 years of service.

CHAPTER 4
LITERATURE REVIEW

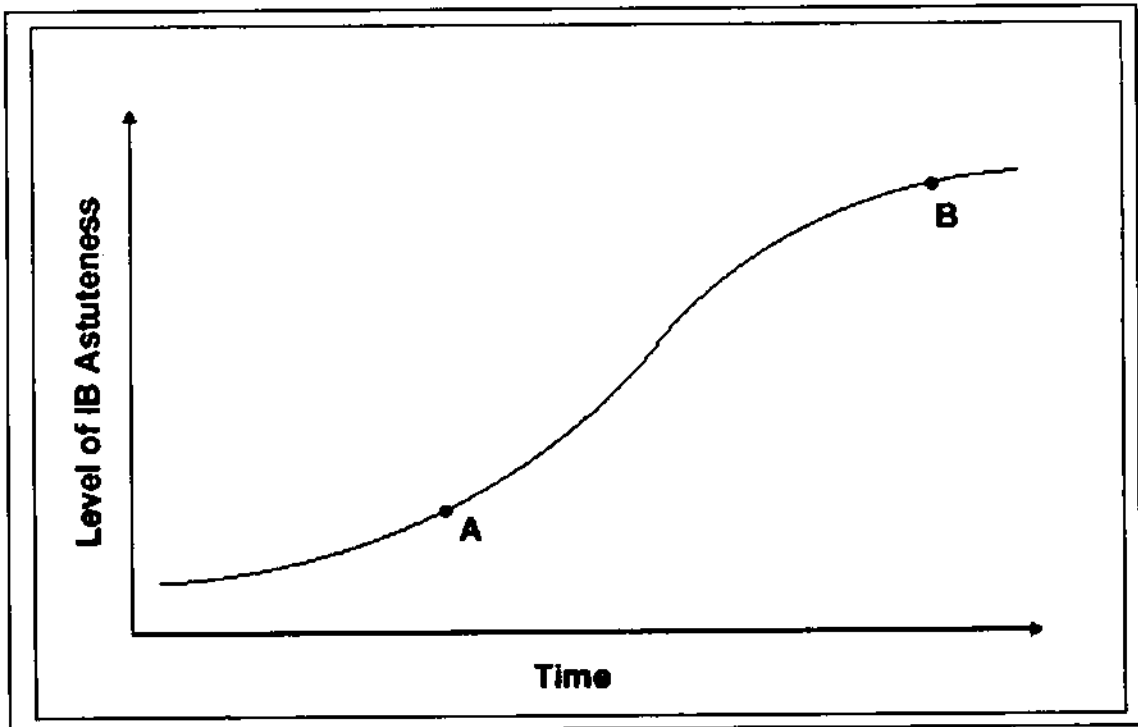
4. Literature review

It is widely acknowledged in the literature that a global mindset is critical for operating effectively in the global context (Rhinesmith, 1992; Kedia & Mukherji, 1999; Paul, 2000; Rosen *et al.*, 2000; Gupta & Govindarajan, 2002). But what exactly is a global mindset? In his paper entitled “Global Mindsets for Global Managers”, Rhinesmith (1992: 63) defines a global mindset as “the scanning of the world from a broad perspective, always looking for unexpected trends and opportunities to achieve one’s personal, professional, or organisational objectives.” This broad perspective is further refined in a culturally rooted definition of the concept as provided by Gupta & Govindarajan (2002: 117) who state that a global mindset is “one that combines an openness to and awareness of diversity across cultures and markets with a propensity and ability to synthesise across this diversity.” This definition is in agreement with Kefalas (1998: 556), who asserts that the following is required of a person who is in sync with globalisation:

- See the world as a whole
- Search for similarities or commonalities among the various elements of the world, such as people and their habits
- Exploit the similarities or commonalities to discover differences
- Use the knowledge gained from this worldwide search to design and execute strategies that will maximise the benefits to all (local and global) stakeholders

Kedia & Mukherji (1999) argue that the development of a global mindset is evolutionary rather than revolutionary. Further evidence of the foregoing is provided by the IB maturity curve (Figure 4.1) proposed by Coetzee (2005), which depicts the exponential development of IB astuteness over time, from a local mindset (point A), which is synonymous with a drive for local impact and insensitivity as well as hostility towards other perspectives, to a position (point B) of astute IB knowledge, which encompasses a global mindset.

Figure 4.1: IB maturity curve



Source: Coetzee (2005)

Kedia & Mukherji (1999) outlined four managerial mindsets that track the evolution to a global mindset. The **defender** mindset, which is considered to be the least “global” of the mindsets, focuses on domestic operations and views foreign competition as a threat and has recourse to drastic measures such as lobbying for trade barriers and quotas to keep the competition out. No attempt is made to understand the impact of globalisation on the business and strategy does not incorporate any international elements. This type of mindset is analogous to a local mindset.

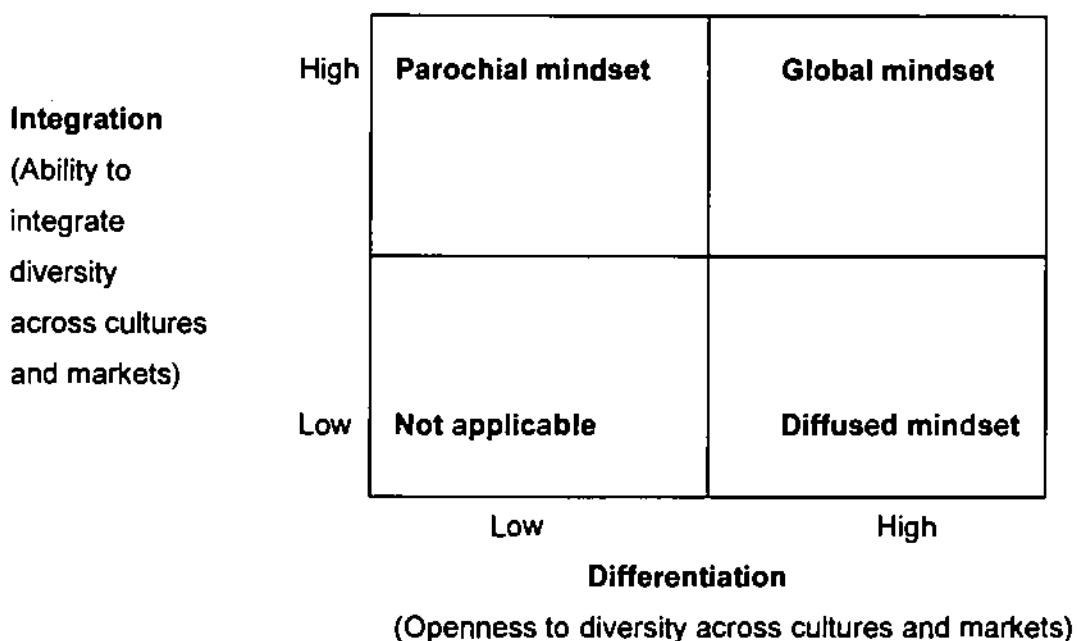
The **explorer** mindset tends to be primarily concerned with domestic operations. However, there exists an awareness of differences between cultures and that foreign markets offer business opportunities. Furthermore, international forays are limited to exporting and franchising with the main purpose being the gathering of information in foreign markets to counteract

any possible threats. The approach used in managing international ventures is purely ethnocentric.

The **controller** mindset differs from the explorer mindset in the sense that although ethnocentrism strongly prevails, international forays extend to the implementation of green field operations. However, the home country culture and practices are imposed on the host country to a large extent with some variation to accommodate differences in culture as long as benefits accrue to the parent company. A high degree of control is maintained on international operations by the head office.

On the other hand, the **integrator** mindset is a true reflection of the global mindset whereby enhanced knowledge and skills are applied to leverage differences in people, cultures and values to create synergies through network building among suppliers, customers and competitors. This is in support of Gupta & Govindarajan's (2002) definition of a global mindset. These authors propose a conceptual framework to distinguish the global mindset from parochial and diffused mindsets. The framework is depicted in Figure 4.2.

Figure 4.2: Alternative mindsets: A conceptual framework



Source: Gupta & Govindarajan (2002)

A diffused mindset is typical of a strong cross-functional team in an organisation but one that lacks the leadership to integrate the diverse attributes into a cohesive strategy. On the other hand, a parochial mindset is reminiscent of a team of technical experts working on a specific project within an organisation, whereby a high level of integration exists but only within the confines of the team members' field of expertise. A global mindset, analogous to Kedia & Mukherji's (1999) integrator mindset, however is one where diversity is leveraged for organisational effectiveness. A variation of the term is proposed by Rosen *et al.* (2000) in their global literacy framework. Following a study of 75 CEO's in 28 countries, these authors identified four global literacies that are crucial to the sustainability of corporate leaders in a borderless multicultural marketplace. Personal literacy requires an understanding and valuing of one's self. The ability to engage and challenge others is referred to as social literacy. On the other hand, business literacy necessitates the mastering of skills to focus and mobilise the organisation. Finally, cultural literacy involves valuing cultural difference and the ability to translate these differences into competitive advantage. This is essentially a variation on the global mindset theme.

The relevance of a global mindset is put into perspective through two interrelated models viz. Bartlett & Ghoshal's (1992) triad model of global strategies and Drotter & Charan's (2001) leadership pipeline. Bartlett & Ghoshal (1992) propose three (hence triad) fundamental dynamics of global operations, that are driven by three groups of global specialists, namely the global business manager, the global functional manager and the country manager. Drotter & Charan (2001), for their part, contend that management must ensure that there is a continuous supply of skilled leaders from within the organisation through the development and maintenance of a leadership pipeline. Six passages characterise this pipeline. The first passage entails the progression from managing oneself to managing others by assuming responsibilities as a first line manager. This requires a mindset change from individual work to valuing managerial work. Thereafter, a shift from managing

others to managing managers signals the second passage, whereby the coaching of first line managers constitutes a vital role.

A leap from managing managers to managing a function constitutes passage three. At this level, two important skills become evident, that is, working as a team with other functional managers and competing for resources based on business needs. In addition, the development of sustainable functional strategies for competitive advantage is essential. This is akin to Bartlett & Ghoshal's (1992) global functional manager. According to these authors, the global functional manager is responsible for global organisational leveraging and learning capability. The global functional manager's role rests on three pillars, which are scanning for specialised information on a global basis, cross-pollinating cutting edge knowledge and best practice and championing innovations that transcend national borders, offering opportunities on a transnational level. At this stage, it is inevitable that one needs to exhibit a global mindset as interactions with other cultures escalate.

Within Drotter & Charan's (2001) leadership pipeline, the progression from a functional manager to a business manager marks passage four. First and foremost, business managers are responsible for the bottom line. The simultaneous management of different functions requires the development of certain skills and more time needs to be allocated for reflection. Sensitivity to matters of functional diversity and the ability to communicate clearly and effectively are vital. To possess a global mindset becomes a prerequisite at this level, as is the case through to passages five and six. This is echoed in Bartlett & Ghoshal's (1992) definition of the global business manager, who is responsible for global scale efficiency and competitiveness. Three key roles characterise the global business manager viz. the strategist for the organisation, the architect of the organisation's global assets and resources and more prominently, the co-ordinator of global transactions. On the other hand, national level responsiveness and flexibility is the responsibility of the country manager according to Bartlett & Ghoshal (1992). Similar to the global business manager, the country manager plays three vital roles namely the

sensor and interpreter of local opportunities and threats, the builder of local resources and capabilities and a contributor to global strategies. The development of a global mindset is crucial to the three groups of Bartlett & Ghoshal's (1992) global specialists to enable integration of all three thrusts into one truly global and effective strategy (transnational). This responsibility belongs to the corporate manager, whose focus is on developing the three types of managers mentioned above but also on the interchanges and subtle negotiations required among all three. This is characterised within Drotter & Charan's (2001) leadership pipeline as passages five and six. Passage five represents the transition from business manager to group manager. Four skills are paramount in shaping the group manager viz. the ability to evaluate strategy and allocate capital accordingly, the skill to develop business managers, the capability to develop and implement the right portfolio strategy and the capacity to assess whether the organisation possesses the core competencies for competitive advantage. Passage six culminates into the enterprise manager or CEO, whereby the focus on values supersedes skills. CEO's need to exhibit visionary thinking and set the direction for the organisation as a whole on a global basis. In addition, they must ensure that short-term performance is in line with long-term strategy.

In support of Bartlett & Ghoshal (1992), Kedia & Mukherji (1999) stipulate that a global mindset is mandatory at the corporate level for the integration of the three global strategies. Paul (2000) substantiates the foregoing by stressing that a global mindset starts at the helm of the organisation. He proposes that a multicultural board of directors is a first step towards the development of a global mindset for the organisation as a whole. In addition, Paul (2000) describes a number of managerial challenges required to shape a corporate global mindset. Table 4.1 details the transition that is required by a traditional multinational company to that of a global company.

Table 4.1: Managerial challenges in developing a global mindset

Type of company	Traditional multinational	Global company
Investments		
Top management and board	Dominated by home country nationals	Multicultural approach to reflect global operations
Management philosophy	Focus on "hard" tools: Strategies, structures and systems	Shift of focus to "soft" tools: Vision, process and people supplemented by hard tools
Networking	Corporate ethnocentrism with headquarter in one country and fully controlled subsidiaries in other countries	Corporate collaboration through networks of internal companies and external partners
Employee selection	Primarily domestic recruiting	Worldwide pool of talent/diversity recruiting
Career path planning	Primarily business or functional specialisation with limited international exposure	Global apprenticeship with background in several functions, businesses and countries
International assignment and mobility	Demand driven to provide know how and to uphold corporate control	Learning driven to benefit from local market and cultural differences

Source: Paul (2000)

According to Paul (2000), there are roughly three categories of companies viz. 1) truly global companies that need to continue to build and expand their global mindset in order to keep pace with globalisation 2) traditional multinational companies that have to contend with evolving to a global mindset and 3) companies that need to start afresh in terms of developing a global mindset. The latter category consists mainly of small to medium sized companies as well as those that have so far only focused on local responsiveness as a strategy. Paul (2000) recommends that these companies

recruit management personnel with a global mindset to refocus their approach towards a more global one.

For their part, Gupta & Govindarajan (2002) outline the value of a corporate global mindset through the following forms of competitive advantage:

- Early mover advantage following the identification of emerging opportunities
- More detailed analysis of the trade off between local and global responsiveness strategies
- Better co-ordination and complementing of cross-border activities including sharing of best practices
- Faster introduction of new products and technologies

Furthermore, Gupta & Govindarajan (2002) propose that the cultivation of a global mindset, from an organisation viewpoint, is driven by four factors which are as follows:

- Cultivating curiosity about the world by recruiting employees with the correct mindset and promoting employees, who are open to diverse cultures and markets, to senior positions in order to send a strong signal to the remainder of the organisation
- Articulating the current mindset by stressing that there is more than one view of the world
- Cultivating knowledge regarding diverse cultures and markets through formal education, cross-border teams and projects, the rotation of venues around the world for team and project meetings, immersion experiences in foreign cultures, expatriate assignments, promoting a multicultural team at the top of the organisation, and locating business unit headquarters in diverse places around the world.

- Cultivating the ability to integrate diverse knowledge bases by defining and integrating a set of core values throughout the organisation, distributing ownership rights in the organisation on a global basis, promoting employees on merit as opposed to nationality, enabling job rotations across operations in terms of location, division and function and promoting interpersonal and social ties among employees in different locations.

From the above, it is apparent that there is a high degree of overlap with Paul's (2000) proposals to shift from a traditional to a global organisation. In addition, Mendenhall & Stahl (2000) point out that returned expatriates are a valuable resource to the organisation, whose skills are vastly underutilised. They propose that mandatory seminars be instituted by organisations for returned expatriates such that the contribution of the expatriate to the organisation is valued and recognised, but most importantly, to help home country employees globalise their frames of reference. Cassidy (2005) points out that the information gleaned from the returning expatriate can help the organisation understand the logistical and educational support required in various parts of the world. Furthermore, the expatriate's knowledge can be utilised to prepare managers earmarked for foreign assignments.

While Paul (2000) and Gupta & Govindarajan (2002) examined the corporate global mindset, Rhinesmith (1992) focused on the mindsets of individual managers. According to Rhinesmith (1992), a global mindset consists of six components. He further developed a six-part framework that links the six components of the global mindset to a desired personal characteristic that provides the backdrop to a required management competency. Table 4.2 below shows the relationship between domestic and global mindsets, personal characteristics and competencies.

Table 4.2: Relationship between domestic and global mindsets, personal characteristic and competency

Domestic Mindset	Global Mindset	Personal Characteristic	Competency
Functional Expertise	Bigger, Broader Picture	Knowledge	Managing Competition
Prioritisation	Balance of Contradictions	Conceptualisation	Managing Complexity
Structure	Process	Flexibility	Managing Adaptability
Individual Responsibility	Diverse Teamwork and Play	Sensitivity	Managing Teams
No Surprises	Change as Opportunity	Judgment	Managing Uncertainty
Trained against Surprises	Openness to Surprises	Reflection	Managing Learning

Source: Rhinesmith (1992)

More recently, Caligiuri (2006: 220) reported that ten tasks were found to be common and unique to those in positions of global leadership following a survey of managers from European and North American firms. These tasks are as follows:

1. Global leaders work with colleagues from other countries
2. Global leaders interact with external clients from other countries
3. Global leaders interact with internal clients from other countries
4. Global leaders may need to speak in a language other than their mother tongue at work
5. Global leaders supervise employees who are of different nationalities
6. Global leaders develop a strategic business plan on a worldwide basis for their unit
7. Global leaders manage a budget on a worldwide basis for their unit
8. Global leaders negotiate in other countries or with people from other countries

9. Global leaders manage foreign suppliers or vendors
10. Global leaders manage risk on a worldwide basis for their unit

In order to perform these tasks successfully, Caligiuri (2006) stipulates that global leaders need to possess a certain set of knowledge, skills, abilities and other personality characteristics (KSAOs), which correlates well with Rhinesmith's (1992) earlier work as well as Pucik & Saba's (1998) review of the literature on the subject matter. These authors identified five fundamental factors that contribute to successful expatriate and global managers. These are "professional and technical competence, relational abilities, leadership factors, family situation and cultural awareness" (Pucik & Saba, 1998: 51). Furthermore, Pucik & Saba (1998: 49) proceed to define the global manager as "an executive who has hands-on understanding of international business, has the ability to work across cross-cultural, organisational, and functional boundaries, and is able to balance the simultaneous demands of short-term profitability and growth."

Rhinesmith (1992) contends that managers with global mindsets drive for the bigger and broader picture by continuously scanning the business environment for new markets, suppliers, competitors and technology. To this end, the manager needs to have the technical, business and industry knowledge to enable him/her to manage competitiveness. This is reinforced by Kedia & Mukherji (1999), who assert that in order to sustain a global mindset, managers require a certain set of supportive knowledge and skills. Caligiuri (2006) further confirms the foregoing by proposing that global leaders need not only be knowledgeable about international business, which is topic specific knowledge related to conducting business on a global scale but also require culture general knowledge, which is the level of understanding of differences between cultures as well as culture specific knowledge which pertains to the level of understanding of a particular country's culture. This is consistent with Rhinesmith's (1992) diverse teamwork and play component of his six-part framework whereby managers need to value diversity in a multicultural setting and be sensitive to other cultures in order to effectively

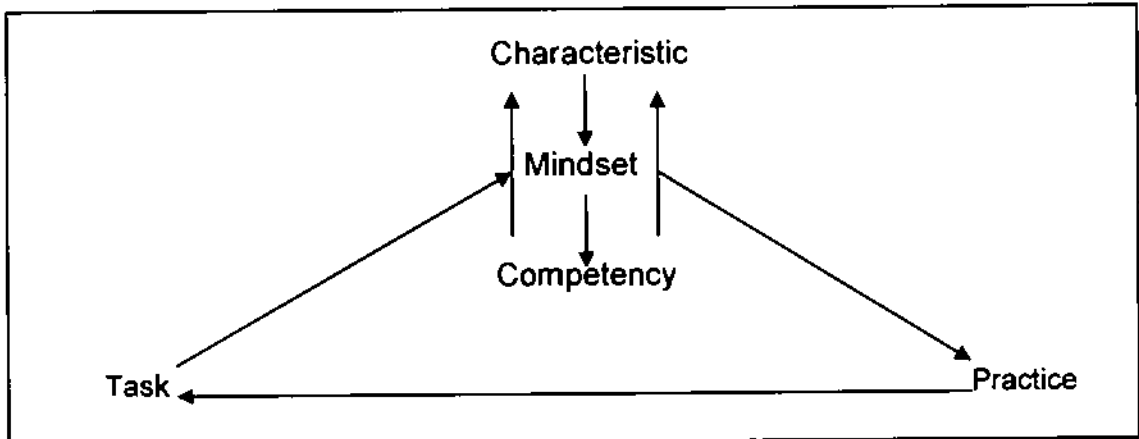
manage multinational teams. This point is brought to the fore and supported by Kedia & Mukherji (1999), who state that an important skill for the manager who operates in a global setting, is the need for acculturation of other cultures and the ability to leverage diversity for organisational effectiveness and increased performance. Further support for the foregoing is provided by Cant (2004), who identified five key global cultural competencies for the successful manager. These are cultural self-awareness, cultural consciousness, leading multicultural teams, negotiating across cultures and a global mindset.

According to Rhinesmith (1992), global managers have to accept the balance of contradictions in business and need to be skilled in conflict management. In a sense, managers need to be specialised but at the same time, be holistic in their thinking. They are often called upon to utilise both right-brain abilities together with left-brain skills to manage complexity. This is also echoed by Bartlett & Ghoshal (1992), who suggest that a combination of specialisation and integration is key in the global environment. In line with the above, Caligiuri (2006) contends that the global leader requires a specific set of skills and abilities in order to achieve success on the global stage. Intercultural interaction skills such as negotiating skills as well as cross-national conflict resolution skills are considered to be an attribute. Moreover, foreign language skills and an advanced level of cognitive ability are required of global leaders. "It has been suggested that to be effective globally, individuals must possess cognitive complexity and intuitive perceptual acuity to accurately perceive and interpret behaviours across multiple cultural contexts" (Caligiuri, 2006: 222).

In addition, Rhinesmith (1992) goes on to propose that managers with global mindsets need to be flexible and use organisational processes as opposed to policies and procedures to manage adaptability to global demands. In addition, managers with a global mindset see change as an opportunity and thrive, through the use of sound judgment, in managing uncertainty. Lastly, these managers subscribe to continuous improvement and reflect about themselves on an ongoing basis in order to manage and facilitate organisational learning to meet global challenges.

From the above, Rhinesmith (1992) proposed a global competency learning cycle whereby a competency is developed by the continuous flow of mindset to practice to task and back to mindset, as shown in Figure 4.3.

Figure 4.3: Global Competency Learning Cycle



Source: Rhinesmith (1992)

By the constant transformation of mindset into behaviour, the required competency is developed and reinforced. Although, one might possess the necessary personal characteristic, it can only be transformed into a competency if it is applied in the relevant context. Personal characteristics contribute to the original mindset but also result through the competency learning cycle process. The foregoing suggests some form of relationship between personal characteristics and the development of a global mindset. This is supported by Caligiuri (2006), who identified some form of relationship between the Five Factor model of personality and the success of people who live and work internationally. Extraverts are more likely to put in the necessary effort to interact effectively with people of diverse cultures. Furthermore, a higher degree of cross-cultural adjustment is reported for more agreeable managers. Due to the complexity involved in managing on a global scale, conscientiousness is considered an advantage, as there is a higher propensity to demonstrate greater effort and task commitment. In addition, the higher level of ambiguity that is encountered by the global manager calls for enhanced emotional stability or emotional intelligence. Lastly, openness is

judged to be key for global managers due to the need for adaptation to diverse cultures.

In contradiction to Rhinesmith (1992) and Caligiuri (2006), Baruch (2002) claims that the concept of a global manager is flawed as there exists no distinct set of characteristics that define a global manager. This author posits that there exists no combination of demographic characteristics like age, gender, marital status, nationality and personality that define the global manager. Surprisingly, prior expatriate experience is not necessarily an important competency of a global manager as rated by Kobrin (1994), who is cited in Baruch (2002). This is in stark contradiction with later research conducted by Black, Gregersen, Mendenhall & Stroh (1999: 2) who concluded: "An international assignment is the single most powerful experience in shaping the perspective and capabilities of effective global leaders". In a study of 11 expatriate managers, Cassidy (2005) recorded cultural literacy based on the global literacy framework (Rosen *et al.*, 2000) as the first or second highest response category for 8 of the 11 participants. This finding illustrates the crucial role of international assignments in the development of a global mindset.

Although, a set of specific traits that characterise the global manager could not be identified by Baruch (2002), the latter postulates that the most important aspect of the global manager is his/her frame of mind, that is the ability to transcend across cultures by appreciating, being motivated and receptive to cultures other than his/her own. In their review of the literature pertaining to the selection and development of expatriate and global managers, Pucik & Saba (1998) assert that the definition of an expatriate manager is related to the location of the assignment whereas the global manager is characterised by his/her frame of mind, which is consistent with Baruch's (2002) characterisation of a global manager.

In addition to Rhinesmith's (1992) Global Competency Learning Cycle, the development of global managers has been covered, among others, by Drotter

& Charan (2001) through the leadership pipeline. These authors assert that a well-defined leadership pipeline is beneficial to an organisation in several ways. Taking into account the context of this study, a well-defined leadership pipeline can be used as a useful tool in the development of global managers by firstly identifying gaps that exist from one passage to the other and tailoring training programs accordingly and secondly, accelerate the growth of those managers that already exhibit skills that are required at the next level. It is imperative to identify and select potential candidates for global leadership positions based on personality as cautioned by Caligiuri (2006) since it was established, in an earlier study by the same author, that personality traits such as openness, sociability and emotional stability are predispositions that are desirable in an individual in order to reap the benefits of a developmental program. In this regard, Caligiuri (2006) suggests various training and development interventions that can enhance the effectiveness of global managers. These are discussed in relation to the attributes (KSAOs), that have been previously reviewed. The training and development interventions are grouped into three categories, namely didactic learning programs, experiential opportunities and intensive cultural experiences.

Didactic learning programs comprise of culture specific cross-cultural training that is aimed at enhancing the ability of managers to behave in more culturally appropriate manners and to enable the latter to identify means of working together with people of a given culture. On the other hand, general cross-cultural training serves to enable managers to develop methods to cope with uncertainty when working with people of diverse cultures or in foreign countries. Diversity training improves intercultural interaction within a diverse workforce. In order to complement cross-cultural and diversity training, Caligiuri (2006) proposes foreign language training since it provides managers with the necessary language skills to communicate with people of different cultural backgrounds from within and outside the organisation. Experiential opportunities take the form of individualised coaching by an assigned mentor as well as immersion programs. Immersion programs have also been suggested by Gupta & Govindarajan (2002) as a means to cultivate

a global mindset. In addition, these authors proposed that job rotation across operations in terms of location, division and function should be promoted for the same purpose. In essence, this is defined as intensive cultural experiences by Caligiuri (2006) and consists of rotational programs that are offered to prospective global managers at an early stage in their careers such that the appropriate knowledge, skills and abilities to successfully manage on the global stage can be gained through these experiences.

The literature review of the global mindset as well as global leadership and management revealed that one of the fundamental underlying themes of the concepts is awareness of and sensitivity to diverse cultures when managing in a cross-cultural context. The foregoing is supported by the study carried out by Stroh and Caligiuri (1998), who found that the development of cross-cultural leadership competence is among the top five organisation-wide practices impacting on the effectiveness of MNCs. Empirical evidence from the study revealed a positive relationship between the companies' bottom line financial success and their ability to effectively develop cross-cultural leadership competencies. At this stage, it is appropriate to introduce the concept of cultural intelligence or CQ.

Earley & Ang (2003: 9) define cultural intelligence as "a person's capability for successful adaptation to new cultural settings, that is, for unfamiliar settings attributable to cultural context." The same principle is echoed in other definitions available in the literature. Thomas & Inkson (2003: 14) define cultural intelligence as "being skilled and flexible about understanding a culture, learning more about it from your ongoing interactions with it, and gradually reshaping your thinking to be more sympathetic to the culture and your behaviour to be more skilled and appropriate when interacting with others from the culture." Peterson's (2004: 89) definition of cultural intelligence is "the ability to engage in a set of behaviours that uses skills (i.e language or interpersonal skills) and qualities (e.g tolerance for ambiguity, flexibility) that are tuned appropriately to the culture-based values and attitudes of the people with whom one interacts."

The common thread in all the above definitions is that it is not sufficient for one to be aware of or understand cultural differences but one has to adapt one's behaviour accordingly to enact the learnings from cultural diversity. This is confirmed by Thomas & Inkson (2003) who state that the understanding of the key dimensions of cultural difference and their relation to differences among countries and how these are displayed in business behaviour is a vital first step towards cultural intelligence. These authors postulate that cultural intelligence is made up of three components viz. knowledge, mindfulness and behaviour.

Firstly, it is required of the culturally intelligent manager to have **knowledge** of culture and the core principles of cross-cultural interactions. Thomas & Inkson (2003) use the term cultural cruise control to define the automatic way of thinking of an individual based on inbuilt cultural assumptions that the latter derives from his/her own experience and culture. This state of being works perfectly in situations where one has interactions with people of the same culture. However, these authors warn that this could be detrimental during cross-cultural interactions as other cultural signals are ignored. The culturally intelligent manager therefore needs to practice **mindfulness**, which is the ability to be attentive to cues in a cross-cultural environment. Mindfulness is a vital component of cultural intelligence as it fulfils the bridging function between knowledge and behaviour. According to Thomas & Inkson (2003), mindfulness comprises of the following:

- Being aware of one's own assumptions, ideas and emotions as well as the selective classification, attribution and perception that one adopts
- Noticing differences in other cultures and tuning in into the assumptions, words and behaviour of people from diverse cultures
- Using all of the senses in perceiving situations
- Having an open mind and viewing situations from different perspectives

- Interpreting situations from a contextual viewpoint
- Creating new mental maps of the personalities of people from diverse cultures as well as creating new categories for them
- Seeking out new information to confirm/disconfirm the mental maps
- Using empathy more frequently and putting oneself in the shoes of people from diverse cultures

Lastly, based on the acquired knowledge and the practice of mindfulness, the culturally intelligent manager adapts his or her **behaviour** accordingly across a wide range of cross-cultural encounters.

Likewise, Peterson (2004) posits that cultural intelligence has three components, which he articulates as knowledge about cultures (facts and cultural traits), awareness (of oneself and others) and specific skills (behaviours). He uses the analogy of a tripod to describe the three components of cultural intelligence and asserts that all three must be in place in order for cultural intelligence to grow. It is clear that both the preceding models of cultural intelligence are fundamentally identical.

For their part, Earley & Ang (2003) propose a four facet approach to cultural intelligence. They contend that cultural intelligence is made up of the metacognitive, cognitive, motivational and behavioural aspects. In a later publication, Earley, Ang & Tan (2006) grouped the metacognitive and cognitive components into what they termed cultural strategic thinking and renamed the two components as cultural thinking & learning and cultural knowledge respectively. Cultural knowledge (cognitive CQ) encompasses the facts that one knows about other cultures and how things operate. The acquisition of this knowledge in the first place is referred to cultural thinking and learning (metacognitive CQ). The motivational aspect of cultural intelligence builds on the cultural strategic thinking component in the sense

that knowledge of a certain culture is not sufficient; one must be able and motivated to use this knowledge to effect culturally appropriate responses. Lastly, the behavioural component of cultural intelligence deals with the enactment of behaviours that fit cultural interactions. This component of cultural intelligence is consistent with the models of Thomas & Inkson (2003) and Peterson (2004). A culturally intelligent individual is expected to have a repertoire of verbal as well as non-verbal behaviours that can be exhibited based on the requirements of the cultural interaction.

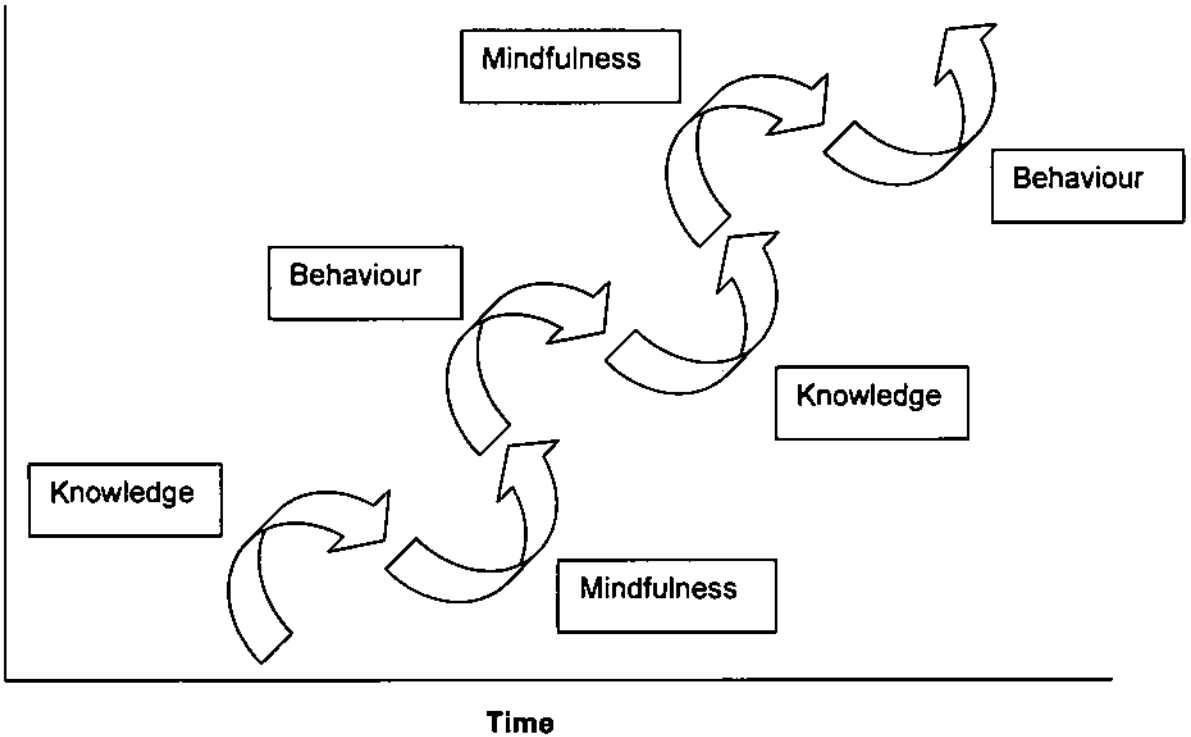
In addition, Triandis (2006) postulates that an important component of cultural intelligence is the ability to suspend judgement in a cross-cultural context until sufficient information has been gathered about the other party.

Hampden-Turner & Trompenaars (2006) propose that a culturally intelligent individual should have the ability to synergise the diverse values of different cultures, the ability to leverage the complementarity of opposing values rather than focus on the contradictory aspect and the ability to understand the relationship between dominant and latent values within a culture. The iceberg is often used by cross-culturalists as an analogy of culture, whereby the tip represents the visible part of culture (five senses) and the major part, which is below the water line, constitutes the latent values within a culture (Peterson, 2004). If one understands the foundation (part of the iceberg below the waterline) upon which people's behaviours are based, then it is more likely that one can anticipate the actions and reactions of these people in a number of situations. For their part, Brislin, Worthley & Macnab (2006) identified four attributes that should form part of cultural intelligence. These are the ability to (a) be observant of behaviours in a different culture, (b) understand these behaviours and provide reasons for the types of behaviours, (c) assess the emotional implications of these behaviours, and (d) transfer the newly acquired knowledge to other situations. Moreover, the same authors identified a further two attributes of cultural intelligence. These are the ability to anticipate and accept ambiguity in cross-cultural encounters and the ability to distinguish between co-operative and competitive cross-cultural encounters.

In their comprehensive review of the cultural intelligence literature, Ng & Earley (2006) classified most of the cultural attributes discussed above as the cultural thinking & learning (metacognitive CQ) component of Earley *et al.*'s (2006) model of cultural intelligence. They posit that these attributes allow the individual to develop strategies to deal with different cultural environments.

According to Thomas & Inkson (2003), five stages guide the development of cultural intelligence. Stage 1 is reactivity to external stimuli. Typically, in this stage, an individual is indifferent to other cultures in the same vein as the defender mindset, a term coined by Kedia & Mukherjee (1999) and previously discussed in this literature review. Stage 2 is the recognition of other cultural norms and the motivation to take time and learn about them. An increased sense of mindfulness prevails and although the multicultural environment is still perceived to be complex, simple rules of thumb guide one's behaviour. Stage 3 is the accommodation of other cultural norms and rules in one's mind. The level of complexity is much lower than in the preceding stages, however, spontaneous adaptive behaviour in different cultural situations is elusive. The penultimate stage 4 is the assimilation of diverse cultural norms into alternative behaviours. At this stage, one develops a repertoire of verbal and non-verbal behaviours to be used based on the requirements of cross-cultural interactions. Lastly, stage 5 entails proactivity in cultural behaviour based on recognition of changing cues that others do not perceive. This stage constitutes the epitome of cultural intelligence, which is rare but nevertheless attainable. Individuals who have the privilege of reaching this milestone can sense changes in the cultural context and adjust their behaviours in anticipation of these changes. The use of intuition is paramount at this stage. The development of cultural intelligence is described as an iterative process in the form of a series of S curves, that can take considerable time, as shown in Figure 4.4.

Figure 4.4: Development of cultural intelligence



Source: Thomas & Inkson (2003)

Peterson (2004) outlines a very comparable process to that of Thomas & Inkson (2003) for gaining cultural intelligence. Essentially, the underlying idea in the development of cultural intelligence is to move from the left end of a scale termed “One way. My way is the only valid way. I refuse to adjust” to the right end of the scale, which is described as “Many ways. There are many valid ways. I am prepared to adjust” (Peterson, 2004: 100). In moving from the left end of the scale to the right, one encounters the following stages (Peterson, 2004: 102):

- Black and white thinking and the refusal or inability to accept other ways
- Dealing in gray areas and being open to differences
- Being able to adapt successfully in any cultural environment
- Making informed decisions of one's own

On the other hand, Earley *et al.* (2006) propose the preparing one's mind, reviewing and learning, identifying one's strengths and weaknesses, setting goals and targets and mobilising one's resources (PRISM) model for developing cultural intelligence depending on the specific work and professional needs of managers. Apart from being less generalised in nature compared to Thomas & Inkson's (2003) and Peterson's (2004) models, it provides a useful starting point in the form of a self-assessment of the manager's cultural intelligence in order to identify his/her strengths and weaknesses. This represents the centre of the PRISM model, which is herewith described:

- **Preparing one's mind (how knowledge is acquired and how one thinks).** The goal is to acquire the rules or the required cultural knowledge for effective adaptation to diverse cultures
- **Reviewing and learning (how one thinks about one's own thinking, plans, monitors and reviews and how one learns).** In this case, the goal is to establish how and when to reconfigure the rules for effective adaptation to diverse cultures
- **Identifying one's strengths and weaknesses.** The goal is to increase one's self-awareness of one's cultural intelligence and develop a plan for training and development in order to effectively adapt to diverse cultures
- **Setting goals and targets (to know what one wants to achieve and to put in the necessary effort and devoting energy to achieve one's goals and targets).** The goal is to establish focus for effective adaptation to diverse cultures
- **Mobilising one's resources (to display appropriate behaviours and actions for adapting to diverse cultures).** In this case, the goal is to be able to use an appropriate repertoire of behaviours (both verbal and non-verbal) in order to effectively adapt to diverse cultures

As previously mentioned, the starting point of the model is the identification of one's strengths and weaknesses followed by setting goals and targets, mobilising resources to achieve these, preparing one's mind for the specific purpose that enhancing one's cultural intelligence is intended for followed by reviewing and learning. The model assumes an iterative form such that the desired level of cultural intelligence is ultimately achieved.

In one's endeavour to develop cultural intelligence, it is beneficial to have certain predispositions (Thomas & Inkson, 2003; Peterson, 2004; Earley *et al.*, 2006). Research conducted in terms of determining antecedents of cultural intelligence is sparse in the literature. One such study conducted by Ang, Van Dyne & Koh (2006) examined the relationship between the Five Factor model of personality and cultural intelligence. These authors used the assertions of Caligiuri (2000) that some form of relationship between the Five Factor model of personality and the success rate of expatriates exists (previously discussed in this literature review), as a basis for their research. Ang *et al.*'s (2006) study revealed that openness to experience is the only personality trait that is positively correlated with all components of Earley & Ang's (2003) cultural intelligence model. This is in agreement with the proposition of Thomas & Inkson (2003) that openness is one of three personality characteristics that are conducive to increasing one's level of cultural intelligence. The other two predispositions that support the development of cultural intelligence are integrity and hardiness. In addition, Ang *et al.* (2006) established positive correlations between individual components of the Five Factor model of personality and specific facets of Earley & Ang's (2003) cultural intelligence model. Conscientiousness was found to be positively correlated with metacognitive CQ. Furthermore, agreeableness was positively related to behavioural CQ as it is expected that agreeable individuals are easygoing in their social behaviours. Lastly, a positive correlation was established between extraversion and cognitive CQ, motivational CQ as well as behavioural CQ. This points out that individuals who are self-confident and sociable seek opportunities to interact with people of diverse cultures, make an effort to

learn about the various cultures and are more flexible in their behaviours during these cross-cultural interactions. Extraversion and openness are traits that were both proposed to be desirable by Peterson (2004) when interacting with people of diverse cultures, thus providing further support for the findings of Ang *et al.* (2006).

Besides personality traits, Ng & Earley (2006) expect various situational variables to influence one's cultural intelligence, although not supported by empirical evidence. Amongst others, the nature of a manager's job, the degree of diversity in a manager's social and work environments, the level of ambiguity or structure of a situation and work assignments involving cross-cultural interactions are all considered relevant in impacting the manager's level of cultural intelligence.

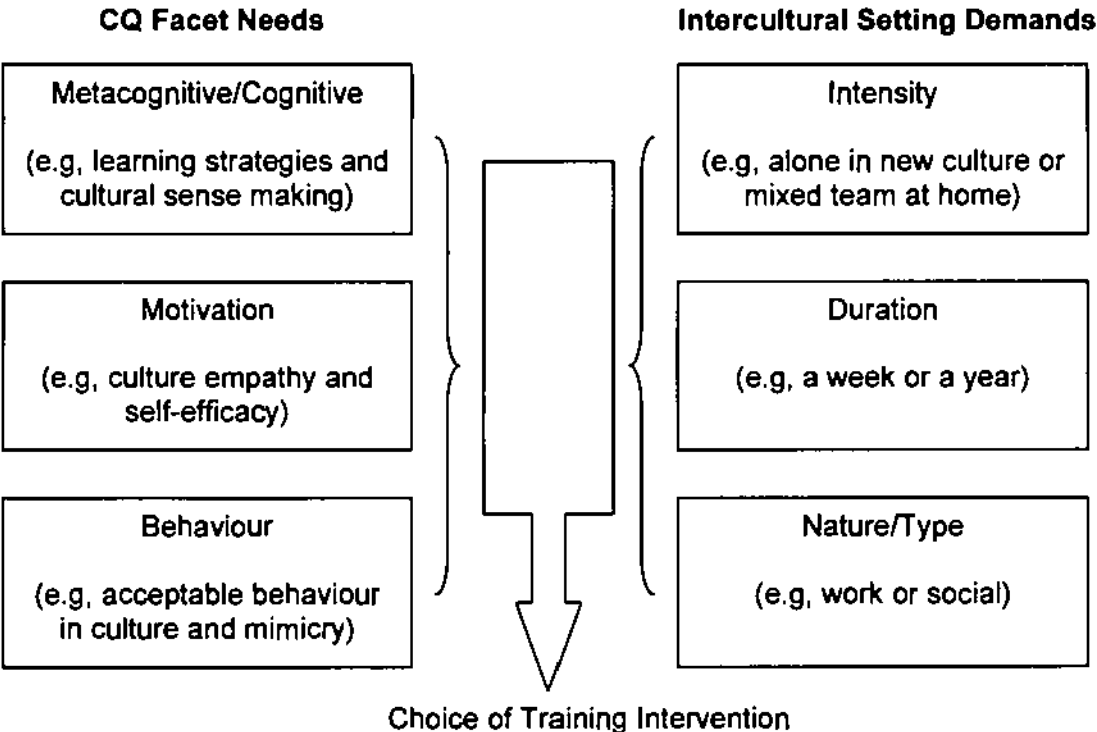
As previously discussed, cultural intelligence, which is an integral component of the global mindset, is a critical attribute that global and expatriate managers need to develop. This can be achieved to an extent through effective cross-cultural training.

The traditional method of cross-cultural training to prepare managers for expatriate assignments involves the teaching of country-specific knowledge, which is judged to be inadequate. Research in the field of cross-cultural psychology and management sciences has shown the positive influence of effective cross-cultural training on expatriates' cross-cultural adjustment (Waxin & Panaccio, 2005). Earley & Peterson (2004) propose that cross-cultural training be made up of the metacognitive/cognitive, motivational and behavioural components of cultural intelligence.

The major drawback of conventional cross-cultural training is that it is general in nature and does not take into account the specific needs of the individual. Earley & Peterson's (2004) argument is that the cultural intelligence approach to cross-cultural training is an improvement over existing training methods as it addresses the strengths and weaknesses of an individual. Furthermore, it

integrates the knowledge and learning, motivational and behavioural aspects in its approach to training. In addition, it is built upon a unifying psychological model of cultural adaptation as opposed to the traditional country-specific approach. Tan & Chua (2003) stipulate three aspects of intercultural setting demands that are unique to the requirement of an individual. These are the intensity, duration and nature of the intercultural interaction. Earley & Peterson (2004) suggest that the three aspects (metacognitive CQ and cognitive CQ are grouped as one aspect) of cultural intelligence be mapped onto the training needs of an individual as postulated by Tan & Chua (2003), as depicted in Figure 4.5, in order to produce a tailored training program that addresses the needs of the individual. Knowledge based training methods together with cultural assimilators are suitable to cater for the metacognitive/cognitive aspect of cultural intelligence. The motivational aspect is addressed by subjecting the trainee to a series of incremental interactions with the new culture in a classroom setting. The use of role plays, performing and visual arts as training methods take care of the behavioural facet of cultural intelligence.

Figure 4.5: Designing an intercultural training



Source: Earley & Peterson (2004)

Based on the foregoing, it is essential that valid assessment tools be available for the measurement of an individual's cultural intelligence in order to provide the appropriate cross-cultural training based on the shortcomings of the individual. However, the assessment of cultural intelligence is not well documented in the literature; a fact that can be ascribed to the nascent nature of the concept. Research is currently ongoing in terms of creating a valid instrument to measure cultural intelligence (Alon & Higgins, 2005). Ng & Earley (2006) recognise that an important task facing cultural intelligence researchers is the validation of the construct. To this effect, they proposed two broad areas that need focus viz. measurement issues and substantive issues. Measurement issues can be subdivided into psychometric and non-psychometric methods such as assessment centres. The establishment of theoretical relationships of other constructs in organisational research with cultural intelligence constitutes the substantive issues.

In terms of the psychometric measurement of cultural intelligence, Earley and Mosakowski (2004) proposed a self-assessment test that allows one to assess the three facets of cultural intelligence in order to determine one's strengths and weaknesses. However, this instrument is restrictive in the sense that it is made up of twelve questions divided into three groups of four to test each facet of cultural intelligence. It is the opinion of the researcher that the proposed instrument is too broad in nature and can only serve as a mere indication of one's cultural intelligence. A much deeper insight is required in order to effectively assess one's cultural intelligence and tailor a cross-cultural training program. This gap seems to have been bridged by a self-assessment of cultural intelligence, as proposed by Van Dyne & Ang (2006). The questionnaire consists of a total of fifty-four questions split into two sections, with the aim of measuring the three components of cultural intelligence and obtaining a total cultural intelligence score. Ng & Earley (2006) assert that this instrument has shown evidence of reliability, cross-cultural equivalence and discriminant validity.

Alon & Higgins (2005) point out that the Cross-Cultural Adaptability Inventory Test is a promising assessment tool as it is designed to assess one's ability to adapt to different cultural environments and interact with people of diverse cultures.

CHAPTER 5
RESEARCH METHODOLOGY

5. Research methodology

5.1 Research design

The body of knowledge on cultural intelligence is not vast. However, as opposed to using a purely qualitative case study approach, both qualitative and quantitative approaches were utilised to answer the research question. The current study is exploratory in nature due to the novelty of the topic and is cross-sectional in terms of the time dimension.

In order to assess the entire domain of cultural intelligence, a very comprehensive quantitative study that has both breadth and depth is needed. Due to time restrictions and the geographical scatter of the population, such a study could not be conducted for the purposes of this research. The qualitative part of the research is intended to verify the validity of the measuring instrument described below. A structured interview was conducted with selected participants as this reduces interviewer's bias, which can influence the results of the study. In addition, Lee & Templer (2003) point out that there exists no single method that is effective in providing data on all aspects of an individual's cultural intelligence, as such multiple assessment methods are a necessity if a complete picture of cultural intelligence is to be developed.

The method of data collection was via interrogation/communication, whereby primary data was collected. In addition, the data collection took place within the participant's normal work schedule to prevent the introduction of any external bias. Since the researcher was not able to manipulate variables, the study follows an *ex post facto* design. The purpose of the study was to produce descriptive data to answer the research question.

Furthermore, the research was conducted under field conditions and no bias to the outcome of the study was introduced through the manipulation of the setting.

5.2 Sample design

The target population consisted of global business unit managers, central function managers (functional managers), company heads (country managers), home country managers and existing expatriates within the global operations of Süd-Chemie. It was the researcher's intention to assess the level of cultural intelligence of the target population and make inferences from the findings based on current/prior expatriate experience, exposure to cross-cultural training, position in the organisation, individualistic/collectivist background and number of years of service with the organisation.

The sampling frame is the same as the target population and since every manager has a known nonzero chance of being selected, probability sampling is evident. Although the self-assessment questionnaire, as described below, was distributed to the entire population, structured interviews were conducted based on stratified random sampling, whereby two candidates were randomly selected from each of the following groups: global business managers, central function managers (global functional managers) and company heads (country managers).

5.3 Measuring instruments

The measuring instrument that was used in this study is in the form of a self-assessment questionnaire (Appendix A). This questionnaire is adapted from literature (Van Dyne & Ang, 2006) and was modified to fit the context of the research as well as to collect primary data in order to test the hypotheses that were put forward. Ng & Earley (2006) assert that this instrument has shown evidence of reliability, cross-cultural equivalence and discriminant validity. The questionnaire was electronically distributed to the target population via the Corporate Human Resources central function of Süd-Chemie, based in Munich, Germany. In order to counteract the possibility of a poor response rate, the researcher sensitised the target group one month before the questionnaires were distributed by sending an introductory e-mail outlining the

purpose of the research. This was followed by an e-mail two weeks after the distribution phase of the questionnaire to offer assistance with and clarify any issues encountered prior to and during the completion of the questionnaires. Finally, a reminder was e-mailed to the target group two weeks before the questionnaire submission deadline. All correspondence with the target population was channelled via the Corporate Human Resources central function of Süd-Chemie in Munich, Germany in order to formalise the study as well as to raise the profile thereof. Furthermore, from a communication viewpoint, it was found more effective to route all correspondence via a central point. These measures were taken to ensure that a desired response rate of 30-40% was achieved.

The researcher personally conducted the structured interviews telephonically with the sample from the target population. The questions posed during the structured interview are listed in Appendix B. The subjects earmarked for the structured interview were contacted by telephone one month before the actual interview to schedule an appropriate date and communicate the format of the discussion to avoid any constraints related to unavailability.

CHAPTER 6

RESULTS

6. Results

The results of the survey that was conducted for the purposes of this research as well as the structured interviews that were carried out with a selected group of participants, are presented in this chapter. Analysis of the data from the survey and the resultant findings are firstly presented, followed by an analysis of the structured interviews.

6.1 Data analysis of survey

The research questionnaire was distributed to 74 managers within the Süd-Chemie group worldwide. It is estimated that the total number of managers within the group is about a thousand. The response rate was 53%, of which 92% of responses were utilised for the purpose of this study. The remaining 8% were discarded due to incomplete submissions. Therefore, the actual usable responses amounted to 49% of the sample, which comfortably exceeded the desired target response rate of 30-40%.

Despite the fact that the distribution of the research questionnaire was not optimally timed, due to the majority of the sample being on vacation leave (holiday season in Europe and the US), the response rate is deemed to be acceptable for the purpose of the study.

The respondents consisted of exclusively male managers, therefore no inference can be made with regards to the influence of gender on cultural intelligence from this study. However, it must be pointed out that this occurrence was purely by default as this study was not deliberately designed around male managers only.

6.1.1 Frequency distribution

The frequency distribution of the respondents in terms of position within SÜD-Chemie, expatriates, expatriate experience, level of cross-cultural training, nationality and years of service is summarised in Table 6.1.

Table 6.1: Frequency distribution of respondents

Variable	Description	Frequency	Percentage
Position	Global Manager	5	14
	Functional Manager	7	19
	Country Manager	5	14
	Other	19	53
	Total	36	100
Expatriate	Current	9	25
	Home country manager	27	75
	Total	36	100
Expatriate experience	Prior	20	56
	None	16	44
	Total	36	100
Cross-cultural training	With	20	56
	Without	16	44
	Total	36	100
Years of service	< 10	20	56
	> 10	16	44
	Total	36	100
Nationality	Austrian	2	6
	German	17	47
	Greek	1	3
	Indian	1	3
	Japanese	1	3
	Mexican	1	3
	SA	5	14
	US	8	22
	Total	36	100

53% of respondents, which constitutes the majority, are home country managers, who either report directly to a country manager and/or a global business unit/functional manager. Although the primary aim of the current study is to assess the level of cultural intelligence of global, functional and country managers only, home country managers in a senior position were included on the distribution list for the research questionnaire for the following reasons:

- The sample size would have been too small for any meaningful insight into the level of cultural intelligence among managers within Süd-Chemie
- More importantly, the home country managers constitute a new breed of managers referred to as "virtual expatriates", who, although based in their home country, have extensive contact with colleagues and customers on a global basis via e-mail/telephone/video conferencing. The foregoing necessitates a global mindset and a certain level of cultural intelligence on the part of these managers, adding another dimension to the current research

Current expatriates represented 25% of the total number of respondents. On a company wide basis, this constitutes more than 30% of the total expatriate population. Additionally, the majority of the respondents viz. 56% have prior expatriate experience. The same proportion of respondents has undergone a form of cross-cultural training. In terms of years of service in the organisation, the percentage of respondents with less than 10 years of service was almost evenly balanced with those who have had more than 10 years of service.

Since Süd-Chemie is an organisation of German origin, it is not surprising that 47% of the respondents are of German nationality. US nationals make up 22% of the respondents and SA citizens another 14%. In order to avoid bias towards respondents of German nationality, no inferences were made regarding the level of cultural intelligence among managers within Süd-Chemie based on nationality alone. Instead, two subgroups were created

whereby respondents of Austrian, German, SA and US origin formed part of the individualistic national subgroup and the remainder of the respondents (Greek, Indian, Japanese and Mexican) made up the collectivist national subgroup. The subgrouping was based on Hofstede's (1980) score of the individualism dimension of culture for the respective countries, as referenced by Hill (2003).

6.1.2 Scoring of research questionnaire

The research questionnaire, shown in Appendix A, is specifically designed to measure the four facets of cultural intelligence (CQ). The cognitive and metacognitive aspects of CQ are grouped under cultural strategic thinking (CST). The remaining two facets, namely the motivational and behavioural facets are abbreviated MOT and BEH respectively. A correct answer to a question scores 3 in terms of either CST, MOT or BEH. The detailed scoring sheet (Earley *et al.*, 2006) is reflected in Appendix C. The overall cultural intelligence score is the sum of the total CST, MOT and BEH scores attained by the respondent.

The interpretation of the scores is as follows (Earley *et al.*, 2006):

Total CQ

- | | |
|--------|--|
| > 125 | Excellent overall CQ in one's ability to work in diverse cultural settings (domestic and/or international) |
| 95-125 | Average overall CQ in one's ability to work in diverse cultural settings (domestic and/or international) |
| < 95 | One needs to develop one's overall CQ to be able to work more effectively in diverse cultural settings (domestic and/or international) |

CST

- | | |
|-----|---------------------------------------|
| >50 | Excellent cultural strategic thinking |
|-----|---------------------------------------|

38-50 Moderate cultural strategic thinking

<38 Red alert – one needs to work on one’s cultural strategic thinking especially if one’s work and life activities involve interactions with people of different cultural backgrounds

MOT

>44 Excellent cultural motivation

38-44 Moderate cultural motivation

<38 Red alert – one needs to work on one’s cultural motivation especially if one’s work and life activities involve interactions with people of different cultural backgrounds

BEH

>29 Excellent cultural behaviour

21-29 Moderate cultural behaviour

<21 Red alert – one needs to work on one’s cultural behaviour especially if one’s work and life activities involve interactions with people of different cultural backgrounds

6.1.3 Descriptive statistics

6.1.3.1 Total CQ score

Table 6.2 reflects the mean total CQ score as well as the corresponding standard deviation of all subgroups within the sample. The mean total CQ score of the sample is 98, which is synonymous with an average overall CQ according to the scale described in paragraph 6.1.2. Within groups, significant

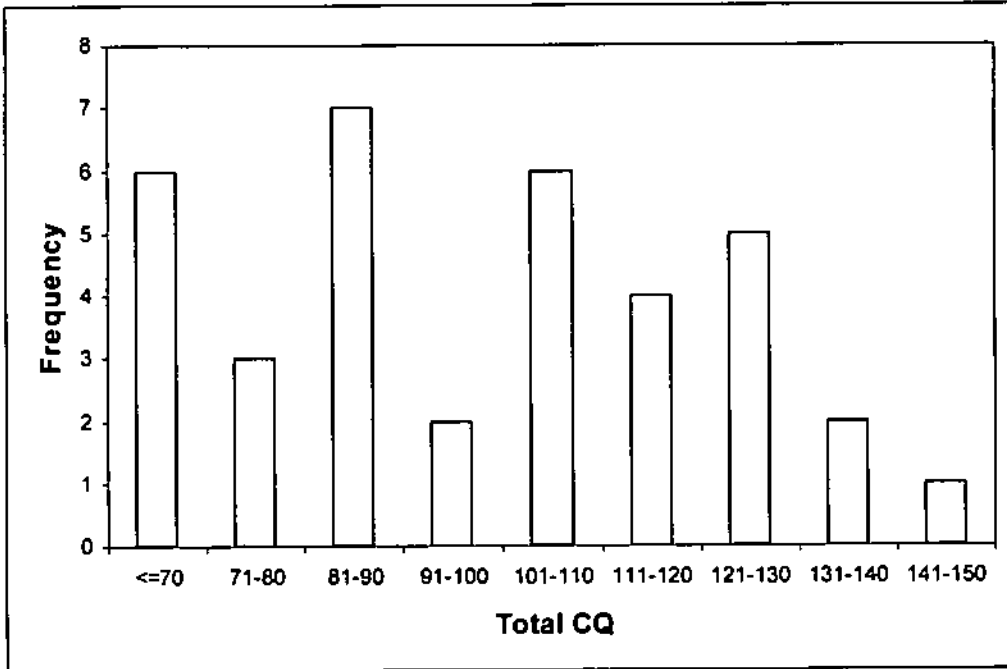
differences in mean total CQ score are noticeable for the expatriate, expatriate experience, years of service and nationality groups.

Table 6.2: Descriptive statistics for total CQ score

Variable	Description	Sample Size	Mean	Standard Deviation
All respondents		36	98	24
Position	Global Manager	5	98	23
	Functional Manager	7	96	21
	Country Manager	5	95	29
	Other	19	99	25
Expatriate	Current	9	106	30
	Home Country Manager	27	95	21
Expatriate experience	Prior	20	106	22
	None	16	88	21
Cross-cultural training	With	20	99	19
	Without	16	96	29
Years of service	< 10	20	95	22
	> 10	16	101	26
Nationality	Individualistic	32	99	24
	Collectivist	4	88	15

Figure 6.1 represents a histogram of the total CQ scores for the sample. As depicted, a weak positive skew is exhibited. The highest percentage (19%) of total CQ scores lies within the 81-90 range. However, this is not an absolute maximum as the percentage of total CQ scores within the 101-110 and ≤ 70 ranges is 17%. The lowest percentage (3%) of total CQ scores lies within the 141-150 range, with only one respondent meeting this criterion.

Figure 6.1: Total CQ score histogram



Based on the data compiled in Table 6.2, a spider diagram of the mean total CQ score of the subgroups within the sample was plotted. This diagram is depicted in Figure 6.2.

Figure 6.2: Spider diagram of mean total CQ score of subgroups



It is clear from Figure 6.2 that the mean total CQ score of most subgroups is at the lower limit of the average overall CQ range, based on the scale described in paragraph 6.1.2. The mean total CQ score of two of the subgroups, namely respondents with no expatriate experience and the collectivist nationals subgroups, lies within the red zone. Referring back to Table 6.2, three subgroups, namely country managers, current expatriates and respondents with no cross-cultural training, showed strong variability, as evidenced by the higher standard deviations in terms of the total CQ score.

6.1.3.2 CST score

Table 6.3 represents the mean CST score as well as the corresponding standard deviation for all subgroups within the sample. The mean CST score of the sample is 41, which according to the CST score scale, corresponds to a moderate level of cultural strategic thinking. Variability within the dataset is pronounced for the global manager and respondents with no cross-cultural training subgroups. There are significant differences in terms of the mean CST score within similar groups viz. expatriate, expatriate experience, years of service and nationality groups as established for the mean total CQ score.

A histogram of the CST score for the sample is depicted in Figure 6.3. The distribution of CST scores is positively skewed with a clear maximum percentage of 28% within the 36-40 range. Three CST score ranges viz. ≤ 20 , 51-55 and 61-65 reflected the lowest percentage of 3%, within the distribution.

The mean CST scores of all subgroups were also plotted on a spider diagram, which is represented in Figure 6.4. The mean CST score of all subgroups, with the exception of the respondents with no expatriate experience and the collectivist nationals subgroups, lies within the range synonymous with a moderate level of cultural strategic thinking. A similar pattern was observed for the total CQ scores.

Table 6.3: Descriptive statistics for CST score

Variable	Description	Sample Size	Mean	Standard Deviation
All respondents		36	41	13
Position	Global Manager	5	43	17
	Functional Manager	7	39	14
	Country Manager	5	42	11
	Other	19	42	13
Expatriate	Current	9	46	14
	Home Country Manager	27	40	12
Expatriate experience	Prior	20	46	13
	None	16	36	12
Cross-cultural training	With	20	41	9
	Without	16	42	17
Years of service	< 10	20	39	12
	> 10	16	44	14
Nationality	Individualistic	32	43	13
	Collectivist	4	32	9

Figure 6.3: CST score histogram

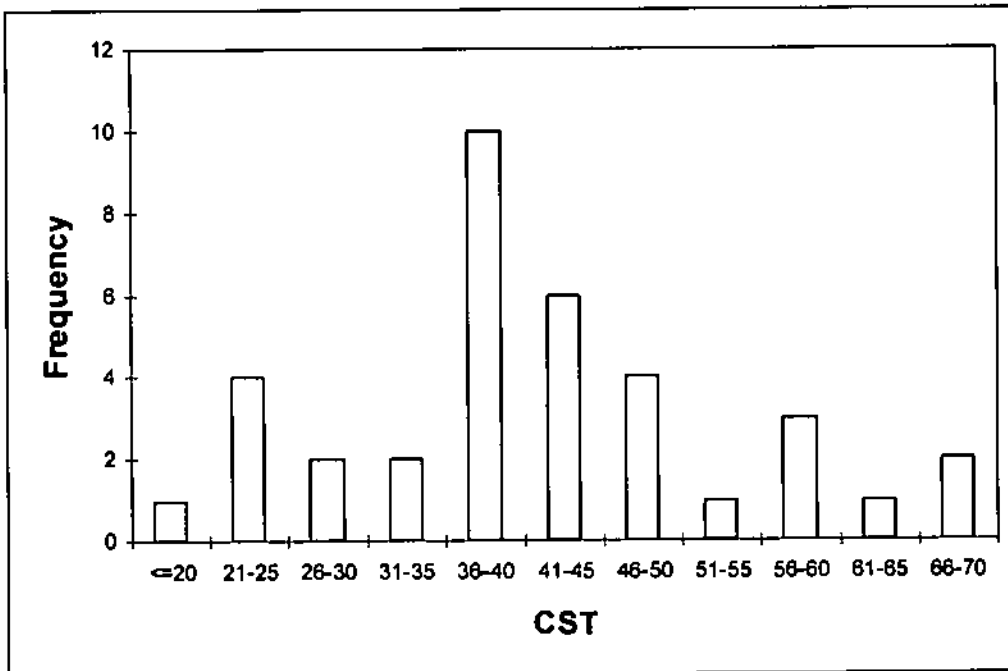


Figure 6.4: Spider diagram of mean CST score of subgroups



6.1.3.3 MOT Score

The mean MOT score of all subgroups within the sample together with the corresponding standard deviation, is tabulated in Table 6.4. The mean MOT score of the sample is 34, which is within the red alert range based on the MOT score scale. The country manager and the current expatriate subgroups show the strongest variability as exemplified by their higher standard deviations in terms of the MOT score. A significant difference in mean MOT score was found within the nationality group only.

Figure 6.5 represents the histogram of MOT scores for the sample. A negative skew is apparent with four MOT score ranges viz. 26-30, 31-35, 36-40 and 41-45 sharing the highest percentage (19%) within the distribution. The MOT scores are fairly evenly distributed, with no clear tendency towards a strong percentage distribution within a specific range.

A spider diagram (Figure 6.6) of mean MOT scores of all subgroups within the sample interestingly reveals that all mean MOT scores, irrespective of subgroup, lie within the red alert zone based on the MOT score scale.

However, most of the mean MOT scores of the subgroups are at the upper limit of the red alert zone of the MOT score scale, with the exception of the country manager and collectivist nationals subgroups.

Table 6.4: Descriptive statistics for MOT score

Variable	Description	Sample Size	Mean	Standard Deviation
All respondents		36	34	9
Position	Global Manager	5	33	8
	Functional Manager	7	35	7
	Country Manager	5	31	12
	Other	19	35	9
Expatriate	Current	9	36	12
	Home Country Manager	27	33	7
Expatriate experience	Prior	20	35	9
	None	16	32	8
Cross-cultural training	With	20	34	7
	Without	16	34	10
Years of service	< 10	20	32	9
	> 10	16	36	9
Nationality	Individualistic	32	35	9
	Collectivist	4	29	7

Figure 6.5: MOT score histogram

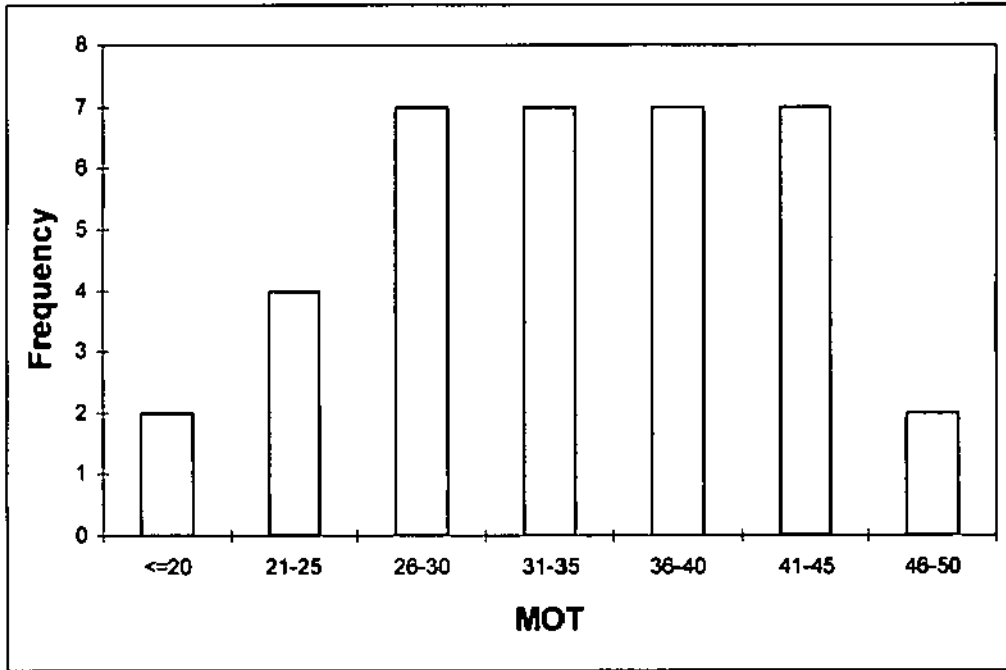


Figure 6.6: Spider diagram of mean MOT scores of subgroups



6.1.3.4 BEH score

The mean BEH scores of all subgroups within the sample as well as the corresponding standard deviation are shown in Table 6.5. The mean BEH

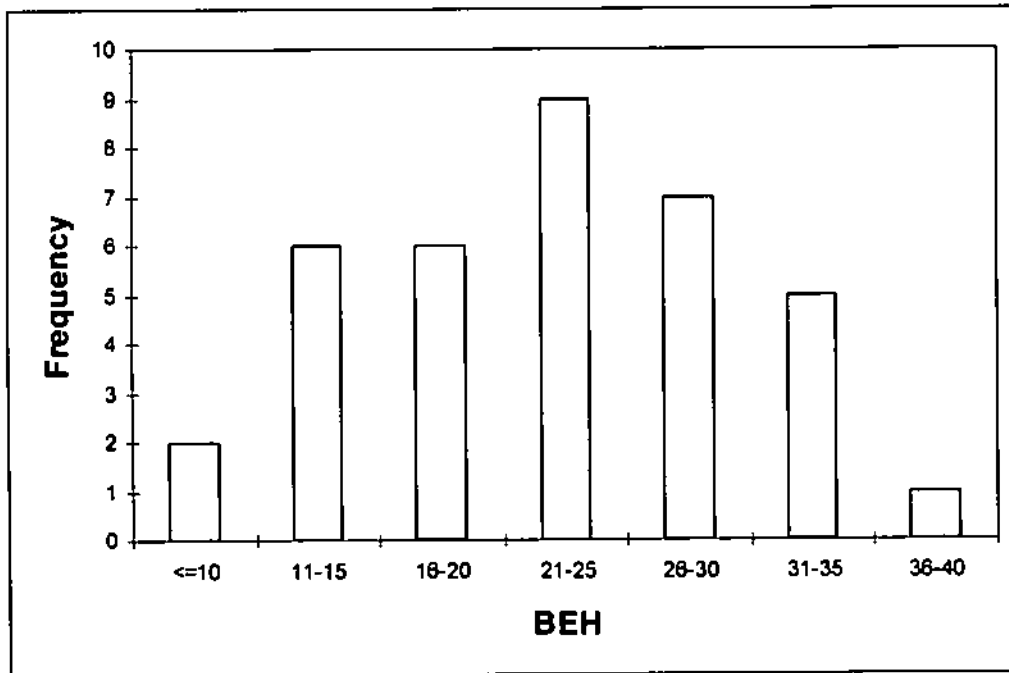
score of the sample is 22, which only marginally breaks into the moderate cultural behaviour range according to the BEH score scale. The country manager subgroup also marginally exhibits a stronger variability within the dataset as compared to the remaining subgroups, based on its slightly higher standard deviation in terms of BEH score. Significant differences are noticeable in terms of the mean BEH score within the expatriate experience and nationality groups.

Table 6.5: Descriptive statistics for BEH score

Variable	Description	Sample Size	Mean	Standard Deviation
All respondents		36	22	8
Position	Global Manager	5	23	9
	Functional Manager	7	22	6
	Country Manager	5	22	10
	Other	19	22	8
Expatriate	Current	9	24	9
	Home Country Manager	27	22	8
Expatriate experience	Prior	20	25	8
	None	16	19	7
Cross-cultural training	With	20	24	7
	Without	16	20	8
Years of service	< 10	20	24	7
	> 10	16	21	9
Nationality	Individualistic	32	22	8
	Collectivist	4	27	7

A histogram of BEH scores for the sample is depicted in Figure 6.7. The data approaches a normal distribution with a clear peak representing 25% of the sample, whose BEH score lies within the 21-25 range. The lowest percentage of 3%, which corresponds to only one respondent, lies within the uppermost BEH score range of 36-40.

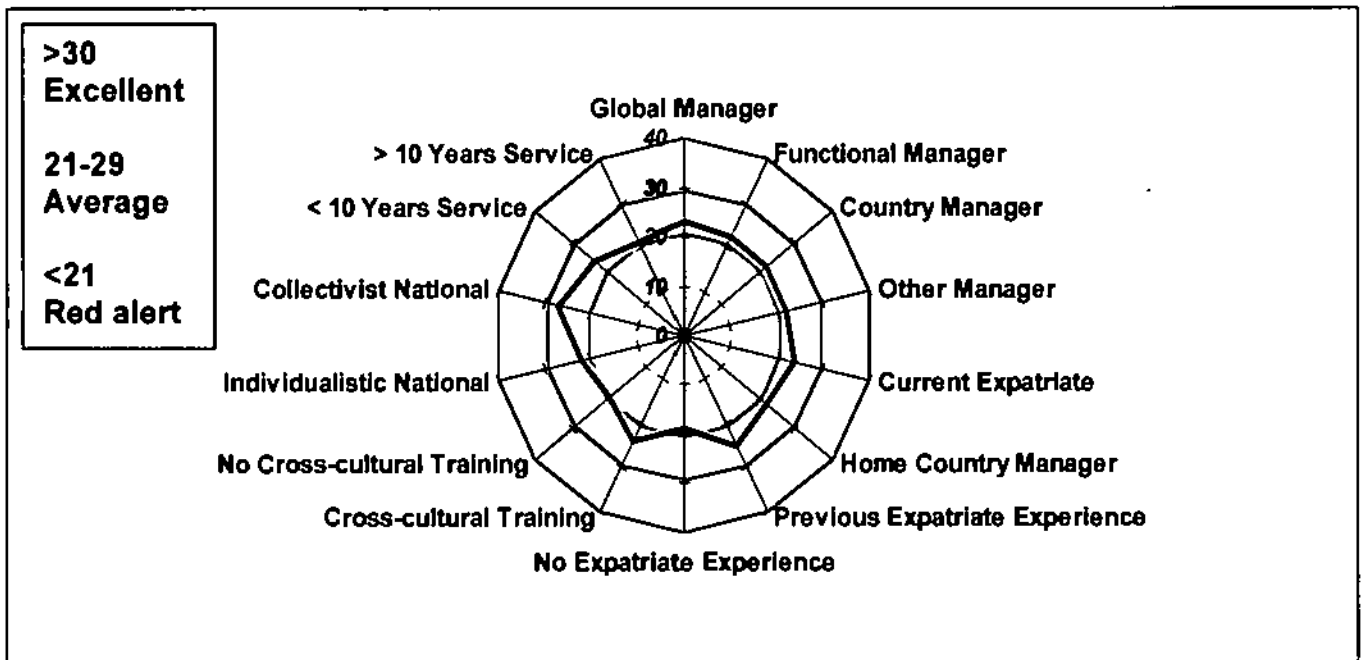
Figure 6.7: BEH score histogram



Similar to the mean scores of total CQ, CST and MOT, a spider diagram was plotted for the mean BEH scores of all subgroups within the sample. This diagram is represented in Figure 6.8.

With the exception of the two subgroups comprising of respondents with no expatriate experience and those that have never undergone any form of cross-cultural training, the mean BEH scores of all subgroups fall within the moderate cultural behaviour range, according to the BEH score scale. Interestingly, the collectivist nationals subgroup has the highest mean BEH score of all the subgroups, which is in contrast with its mean total CQ, mean CST and mean MOT scores, in terms of which, it was ranked the lowest of all subgroups.

Figure 6.8: Spider diagram of mean BEH scores of subgroups



6.2 Hypotheses testing

The hypotheses that were proposed in light of this research were tested with the aid of the Analysis Tool Pack of MS Excel. The detailed outputs from the foregoing are set out in Appendix D. The key findings are summarised in this chapter of the research report. The two independent samples t-test was utilised to test all the proposed hypotheses based on the following:

- The data is interval
- The populations are assumed to be normally distributed
- Since the population variances are unknown, they are assumed to be equal
- In each case, at least one of the independent sample sizes is less than 30

6.2.1 Hypothesis 1

Hypothesis: Managers with prior expatriate experience are more culturally intelligent than managers with no prior expatriate experience.

Null hypothesis: H_0 : Managers with prior expatriate experience are less culturally intelligent than managers with no prior expatriate experience

H_1 : Managers with prior expatriate experience are more culturally intelligent than managers with no prior expatriate experience

Significance level: $\alpha = 0.05$ (one tailed test)

p-value for one tailed test: 0.00952

Since the calculated p-value is lower than the selected 5% level of significance, the null hypothesis is rejected. Even at a 1% level of significance, the calculated p-value is lower. Therefore, at a 1% level of significance, managers with prior expatriate experience have a significantly higher total CQ compared to managers with no prior expatriate experience.

6.2.2 Hypothesis 2

Hypothesis: Current expatriate managers are more culturally intelligent than home country managers.

Null hypothesis: H_0 : Current expatriate managers are less culturally intelligent than home country managers

H_1 : Current expatriate managers are more culturally intelligent than home country managers

Significance level: $\alpha = 0.05$ (one tailed test)

p-value for one tailed test: 0.122

Since the calculated p-value is much higher than the selected 5% level of significance, the null hypothesis is not rejected. In addition, the calculated p-value is also higher, even at a 10% level of significance. Hence, the total CQ of current expatriate managers is not significantly higher than home country managers.

6.2.3 Hypothesis 3

Hypothesis: Managers having undergone a form of cross-cultural training are more culturally intelligent than managers who have not undergone any form of cross-cultural training.

Null hypothesis: H_0 : Managers having undergone a form of cross-cultural training are less culturally intelligent than managers who have not undergone any form of cross-cultural training

H_1 : Managers having undergone a form of cross-cultural training are more culturally intelligent than managers who have not undergone any form of cross-cultural training

Significance level: $\alpha = 0.05$ (one tailed test)

p-value for one tailed test: 0.387

Since the calculated p-value is significantly higher than the selected 5% level of significance, the null hypothesis is not rejected. As a result, the total CQ of managers who have undergone a form of cross-cultural training is not significantly higher compared to managers who have never undergone any form of cross-cultural training.

6.2.4 Hypothesis 4

Hypothesis: Managers from individualistic countries are more culturally intelligent than managers from collectivist countries.

Null hypothesis: H_0 : Managers from individualistic countries are less culturally intelligent than managers from collectivist countries

H_1 : Managers from individualistic countries are more culturally intelligent than managers from collectivist countries

Significance level: $\alpha = 0.05$ (one tailed test)

p-value for one tailed test: 0.190

Since the calculated p-value is much higher than the selected 5% level of significance, the null hypothesis is not rejected. This is also the case at a 10% level of significance. Therefore, the total CQ of managers from individualistic countries is not significantly higher than that of managers from collectivist countries.

6.2.5 Hypothesis 5

Hypothesis: There is a difference in cultural intelligence between managers from individualistic and collectivist countries.

Null hypothesis: H_0 : There is no difference in cultural intelligence between managers from individualistic and collectivist countries

H₁: There is a difference in cultural intelligence between managers from individualistic and collectivist countries

Significance level: $\alpha = 0.05$ (two tailed test)

p-value for one tailed test: 0.380

Since the calculated p-value is significantly higher than the selected 5% level of significance, the null hypothesis is not rejected. Thus, there is no significant difference in total CQ between managers from individualistic and collectivist countries.

6.2.6 Hypothesis 6

Hypothesis: Global business managers are more culturally intelligent than functional managers.

Null hypothesis: H₀: Global business managers are less culturally intelligent than functional managers

H₁: Global business managers are more culturally intelligent than functional managers

Significance level: $\alpha = 0.05$ (one tailed test)

p-value for one tailed test: 0.440

Since the calculated p-value is significantly higher than the selected 5% level of significance, the null hypothesis is not rejected. Hence, the total CQ of global business managers is not significantly higher compared to functional managers.

6.2.7 Hypothesis 7

Hypothesis: Functional managers are more culturally intelligent than country managers.

Null hypothesis: H_0 : Functional managers are less culturally intelligent than country managers

H_1 : Functional managers are more culturally intelligent than country managers

Significance level: $\alpha = 0.05$ (one tailed test)

p-value for one tailed test: 0.456

Since the calculated p-value is significantly higher than the selected 5% level of significance, the null hypothesis is not rejected. As a result, the total CQ of functional managers is not significantly higher compared to country managers.

6.2.8 Hypothesis 8

Hypothesis: Managers with more than 10 years of service with Süd-Chemie are more culturally intelligent than those with less than 10 years of service.

Null hypothesis: H_0 : Managers with more than 10 years of service with Süd-Chemie are less culturally intelligent than those with less than 10 years of service

H_1 : Managers with more than 10 years of service with Süd-Chemie are more culturally intelligent than those with less than 10 years of service

Significance level: $\alpha = 0.05$ (one tailed test)

p-value for one tailed test: 0.236

Since the calculated p-value is much higher than the selected 5% level of significance, the null hypothesis is not rejected. Therefore, the total CQ of managers, with more than 10 years of service with Süd-Chemie, is not significantly higher than those managers with less than 10 years of service with Süd-Chemie.

In order to further probe the differences in total CQ between global business, functional, country and other (mostly home country) managers, a one-way ANOVA test was performed on the data since the latter is interval and there are k independent samples. The assumptions of analysis of variance are also accepted in this case.

Null hypothesis: H_0 : There is no difference in cultural intelligence between global business, functional, country and other (mostly home country) managers

H_1 : There is a difference in cultural intelligence between global business, functional, country and other (mostly home country) managers

Significance level: $\alpha = 0.05$

p-value: 0.989

Since the calculated p-value is significantly higher than the selected 5% level of significance, the null hypothesis is not rejected. Hence, based on the above results, there is no difference in cultural intelligence between global business, functional, country and other (mostly home country) managers within Süd-Chemie.

6.3 Correlation matrix

A correlation test was performed on the collected data in order to establish any correlations between CST, MOT, BEH and total CQ. The results of the test are presented in Table 6.6.

Table 6.6: Correlation matrix

	CST	MOT	BEH	Total CQ
CST	1			
MOT	0.517	1		
BEH	0.350	0.466	1	
Total CQ	0.858	0.806	0.696	1

It can be established that there are strong positive correlations between total CQ and CST as well as between total CQ and MOT. On the other hand, there is a moderate positive correlation between BEH and total CQ. Within the three facets of CQ, positive correlations exist; however, these are weak. Based on the coefficients of determination (r^2) calculated from the correlation coefficients (r) displayed in Table 6.6, 74% of variance in total CQ is explained by CST and vice-versa, 65% of variance in total CQ is explained by MOT and vice-versa and 48% of variance in total CQ is explained by BEH and vice-versa.

6.4 Structured interview analysis

In order to verify the validity of the measurement instrument, structured interviews were carried out with two participants from each of the following subgroup of managers:

- Global business
- Functional
- Country

The results of the structured interviews are detailed herein.

6.4.1 Global business manager structured interview

The global business managers were found to have a high level of cultural intelligence. In terms of the individual components of CQ, both managers that were interviewed have a high degree of CST, MOT and BEH. Keeping in touch with global publications is considered vital. In addition, the importance of a global mindset in today's business environment was rated highly. Cultural diversity in an organisation is valued strongly and considered to be an absolute asset to an organisation. Cultural intelligence was thought to be integral when closing business deals and/or dealing with customers.

Both managers adapt their behaviour during cross-cultural interactions and are generally observant during these encounters. However, the foregoing is practised without compromising one's principles and value system. One of the managers even attended a two-week language (mandarin) training program, which is an indication of a high BEH. In general, cross-cultural interactions were assessed as being far more rewarding than challenging due to the ability to learn about and appreciate new cultures. Despite being of German origin, both managers did not find difficulty to adapt when dealing with colleagues/customers of Asian origin.

The managers have undergone cross-cultural training in their professional careers as they have both had expatriate experiences. Interestingly, it was established that cross-cultural training is not highly rated as a means to develop one's CQ and is considered stereotypical and too broad. Rather, it is the opinion of both managers that real learning takes place when one lives in a foreign culture. Also, learning through interactions with returning expatriate managers was considered important.

Both managers thought that Süd-Chemie's global mobility policy is inadequate. In addition, it is thought that Süd-Chemie's current infrastructure

is not conducive to global manager development due to restricted opportunities.

6.4.2 Functional manager structured interview

The functional managers were found to have a moderate to high level of cultural intelligence. Business publications are not read as often as in the case of the global business managers. The importance of a global mindset in today's business environment is fairly highly rated. There is agreement that cultural diversity is an absolute asset to an organisation. Cultural intelligence is considered to be of extreme importance when closing business deals and/or dealing with customers.

One of the managers pointed out that the fact that one learns about oneself more during expatriate assignments and uses this self-assessment as a developmental tool, is an indication of high BEH. Furthermore, one of the managers only adapts his behaviour to a certain degree (moderate BEH) during cross-cultural interactions but is however, observant during these encounters. Adapting to the Asian culture was found to be relatively difficult compared to the global managers. Incidentally, both functional managers who were interviewed are from German origin. Moreover, the language barrier was found to be most challenging during cross-cultural interactions.

Although both managers have expatriate experience, only one has undergone a form of cross-cultural training and the latter thought that this form of training is highly important in today's business environment. Furthermore, Süd-Chemie's global mobility policy is judged to be a suitable platform for further improvement. In addition, it is felt that Süd-Chemie does not fully have the infrastructure to develop global managers.

6.4.3 Country manager structured interview

The country managers have the lowest level of cultural intelligence of the three subgroups of managers, who were interviewed. Business publications are read on a less regular basis compared to the preceding two groups of managers. A global mindset is considered to be vital to operate within today's business environment. Cultural diversity is judged to be a prerequisite for the effectiveness of a global organisation. Furthermore, the importance of cultural intelligence in closing business deals and/or dealing with customers is highly rated.

Both managers adapt their behaviour and are generally observant during cross-cultural interactions (high BEH). Similar to the functional managers, the language barrier is considered to be the highest hurdle during cross-cultural encounters. One of the country managers, who was interviewed, is South African and the other Mexican. Adaptation during interactions with individuals of Asian origin is most difficult.

One of the managers has undergone a form of cross-cultural training since he has previous expatriate experience, while the other manager has not undergone any form of cross-cultural training or been on expatriate assignment. The importance of cross-cultural training in today's business environment was thought to be important.

Süd-Chemie's global mobility policy is considered quite adequate as is the infrastructure provided by the organisation for the development of global managers.

CHAPTER 7
DISCUSSION, CONCLUSIONS AND
RECOMMENDATIONS

7.1 Discussion

Results that are referred to herein are from Chapter 6 of this research report.

The total CQ of the sample is at the lower limit of the average CQ band of Earley *et al.* (2006). However, this can be explained by the strong negative influence of the MOT score of the sample on total CQ. Furthermore, this is reinforced by the fact that 65% of the variance in total CQ is explained by MOT and vice-versa, as determined from the correlation matrix (Table 6.6). On the other hand, the CST and BEH scores of the sample are within the moderate cultural strategic thinking and moderate cultural behaviour ranges respectively. Nevertheless, these are not high enough to offset the negative impact of MOT on total CQ. The below average cultural motivation of the sample can be explained by the fact that 53% of the latter is made up of home country managers, who do not have regular face to face contact with individuals of diverse cultures as compared to the other subgroups within the sample. For the majority of these home country managers, their present positions does not necessitate extensive physical interactions with various cultures other than their own. Earley *et al.* (2006) contend that MOT is developed through perseverance arising from cross-cultural misunderstandings. Managers with high MOT tend to set themselves challenging goals, following early setbacks in cross-cultural interactions. In addition, past experiences play a key role in shaping MOT. A fair proportion (44%) of home country managers making up the sample have not had any expatriate experience and therefore, are unable to draw from significant past encounters with diverse cultures. Also, this subgroup is unlikely to be faced with challenging cross-cultural situations as most of the interactions with diverse cultures are on a virtual basis.

The fact that the CST of the sample falls within the moderate cultural strategic thinking band of Earley *et al.* (2006) suggests that managers within Süd-Chemie have been able to successfully acquire facts about diverse cultures and have this knowledge at their disposition for cross-cultural interactions.

This is also confirmed by the structured interviews that were carried out for the purpose of this research. Since 74% of the variance in total CQ can be explained by CST and vice-versa, the total CQ of the subgroups follows a similar pattern to that of CST, as expected. Earley *et al.* (2006) propose that the CST facet of CQ is made up of cultural knowledge and strategic thinking, which further consists of two complementary elements, namely meta-level knowledge and meta-level experience. Cultural knowledge corresponds to acquired knowledge about cultures including practices, beliefs and values. Caligiuri (2006) further confirms the foregoing by proposing that global leaders need not only be knowledgeable about international business, which is topic specific knowledge related to conducting business on a global scale but also require culture general knowledge, which is the level of understanding of differences between cultures as well as culture specific knowledge which pertains to the level of understanding of a particular country's culture. On the other hand, strategic thinking is the development of ways to gain new cultural knowledge. Meta-level knowledge is the general information one has about cultures and how things operate globally as well as strategies used to figure these out. Meta-level experience however is a manager's intuition or subtle insights about new cultural interactions, which serve as a guide for future interactions. In terms of the composition of the sample for the current study, it is very likely that the level of cultural knowledge is above average based on the fact that these managers would have acquired such knowledge through continued interaction, whether on a virtual or physical basis, with individuals from diverse cultures. However, in order to have a high level of strategic thinking, it is prerequisite that one has regular physical interaction with other cultures. Hence, as a fair proportion of the sample (44%) consists of mostly home country managers with no expatriate experience, it can be postulated that their lower level of strategic thinking would have had a negative influence on the CST score of the sample, thereby resulting in an overall CST score towards the lower end of the moderate cultural strategic thinking band.

Likewise, the BEH score of the sample is at the lower limit of the moderate cultural behaviour band of Earley *et al.* (2006). According to these authors,

managers with low BEH often display extreme forms of behavioural deficits or excesses in unfamiliar cultural settings and are perceived by locals as displaying autistic like behaviours. The BEH score of the sample suggests that the level of cultural behaviour is far from being autistic like. However, the fact that the overall BEH approaches the lower limit of the moderate cultural behaviour band can be again attributed to the composition of the sample. In this case also, the lack of expatriate experience seems to weigh heavily in favour of the lower BEH. This is expected based on the recommendations of Earley *et al.* (2006) with regards to developing one's cultural behaviour. These authors stipulate that in order to develop one's cultural behaviour, one needs to firstly know oneself and understand the origin and culture one's communicating partner comes from. Secondly, it is advisable to learn a foreign language or at the very least some common foreign phrases. Third, one needs to speak slowly in verbal communications and make use of visual aids to supplement one's communication. Fourth, one needs to be attentive to body language and always be observant of any signs of confusion on one's listener's part. Lastly, one needs to conduct research and try to mimic the foreign culture. Caligiuri (2006) supports Earley *et al.* (2006) by postulating that foreign language skills and an advanced level of cognitive ability are required of global leaders. "It has been suggested that to be effective globally, individuals must possess cognitive complexity and intuitive perceptual acuity to accurately perceive and interpret behaviours across multiple cultural contexts" (Caligiuri, 2006: 222). Besides the first point proposed by Earley *et al.* (2006), it is imperative that one has regular physical contact with people of diverse cultures in order to put the remaining points, as prescribed above, into practice. As such, since 44% of the sample has never had any expatriate exposure, their low BEH score negatively impacted the overall BEH of the sample.

Building on the discussion regarding the overall total CQ, CST, MOT and BEH of the sample and based on the results of the two independent samples t-test that was utilised to test Hypothesis 1, it can be deduced that managers who have had prior expatriate experience have a significantly higher total CQ

compared to their counterparts, who have not had any expatriate experience. This is further reinforced in terms of the individual components making up total CQ. It was found that managers who had prior expatriate experience have a significantly higher CST and BEH (at a 5% level of significance – refer to Appendix D) compared to managers with no expatriate experience. The foregoing is in agreement with studies conducted by Black *et al.* (1999) and Cassidy (2005), who established the crucial role of international assignments in the development of a global mindset and hence CQ. The results of the structured interview with global managers at Süd-Chemie support the fact that expatriate experience is vital in the development of CQ. Furthermore, one of the country managers, who was interviewed felt that his level of preparedness increased as he progressed through expatriate assignments.

In contrast, it was established from testing Hypothesis 2, that current expatriate managers do not have a significantly higher total CQ compared to current home country managers. However, this can be attributed to the difference in sample sizes. The home country manager sample size is three times that of current expatriate managers. On the other hand, the sample size of managers with prior expatriate experience compared to that of managers without expatriate experience is more evenly balanced.

Cross-cultural training has been shown by Waxin and Panaccio (2005) to have a positive influence on expatriates' cross-cultural adjustment. However, based on the findings of the current research, there was no significant difference in the total CQ of managers who had undergone a form of cross-cultural training compared to those who had not. This finding can be extended to the individual components of total CQ (refer to Appendix D). Of note is that within the sample, the respondent with the highest total CQ has not undergone any form of cross-cultural training. The foregoing can be ascribed to the type of cross-cultural training provided to managers prior to expatriate assignments within Süd-Chemie. The emphasis is on teaching a manager what he/she needs to know in order to operate effectively in a foreign country. In essence, a list of cultural dos and don'ts forms the basis of such a training

program. Earley & Peterson (2004) stipulate that the major drawback of this form of conventional cross-cultural training is that it is general in nature and does not take into account the specific needs of the individual, thus proving to be inadequate as confirmed by the findings of the current study. In order to address this issue, Earley & Peterson (2004) propose the cultural intelligence approach to cross-cultural training as an improvement over existing training methods as it takes into account the strengths and weaknesses of an individual based on Tan & Chua's (2003) aspects of intercultural setting demands that are unique to the requirement of the individual. These are the intensity, duration and nature of the intercultural interaction.

Interestingly, it was established from Hypotheses 4 and 5 of the current study that there is no significant difference in total CQ between managers from individualistic countries as opposed to managers from collectivist countries. Earley *et al.* (2006) assert that the thinking that a manager from a group-focused culture should have a higher CQ compared to his/her counterpart from a self-focused culture, owing to the fact that getting along in groups requires social skills, is not necessarily correct. They contend that a self-focused manager is continuously moving between social groups and is therefore faced with excessive demands. Hence, a self-focused manager is likely to be more motivated to learn about a new culture compared to a group-focused manager, who perceives group memberships as long term and virtually permanent. This translates into the assertion that the MOT of a manager from an individualistic culture is higher than that of a manager from a collectivist culture. The findings from the current research are in contradiction with the foregoing (refer to Appendix D). In addition, the mean BEH score of managers from collectivist countries was highest among the subgroups within the sample. A tentative explanation for this finding is that since Süd-Chemie is an organisation of German origin, managers from collectivist countries are placed under more pressure to exercise the appropriate behaviour during cross-cultural encounters. In fact, the recommendations of Earley *et al.* (2006) to develop one's BEH, as previously discussed, hold more strongly for managers from collectivist cultures as opposed to those from individualistic

cultures, in Süd-Chemie's case. Importantly, owing to the significantly larger sample size of managers from individualistic countries compared to those from collectivist countries (32 v/s 4), findings pertaining to these two subgroups within the context of the current study have to be interpreted with caution.

A previously unexplored parameter in the development of CQ for global managers, in the form of years of service in a global organisation, was proposed in the context of the present research. The findings from Hypothesis 8 revealed that the total CQ of managers with more than 10 years of service with Süd-Chemie, is not significantly higher than that of managers with less than 10 years of service in the organisation. It would have been expected that the longer one is in the employ of a truly global organisation like Süd-Chemie and through sustained interaction with diverse cultures, irrespective of the nature of the interaction, that the CQ of managers would be positively correlated with years of service, although it is understood that the development of CQ is finite. In fact, Kedia & Mukherji (1999) point out that the development of a global mindset and hence CQ is evolutionary. Further support is provided by the IB maturity curve (Figure 4.1) proposed by Coetzee (2005). However, the findings of the current study do not support the foregoing. This points to the fact that the development of CQ is to a certain extent dependent on the personality traits of an individual. This is in agreement with the findings of Ang *et al.* (2006), who established positive correlations between individual components of the Five Factor model of personality and specific facets of Earley & Ang's (2003) cultural intelligence model. There is also consistency with the works of Caligiuri (2006), who stipulates that global leaders need to possess a certain set of knowledge, skills, abilities and other personality characteristics (KSAOs) and Pucik & Saba (1998), who identified five fundamental factors that contribute to successful expatriate and global managers. These are "professional and technical competence, relational abilities, leadership factors, family situation and cultural awareness" (Pucik & Saba, 1998: 51). Besides personality traits, the findings from the current research also support the proposition of Ng &

Earley (2006) that various situational variables influence one's cultural intelligence. The nature of a manager's job, the degree of diversity in a manager's social and work environments, the level of ambiguity or structure of a situation and work assignments involving cross-cultural interactions are all considered relevant in impacting the manager's level of cultural intelligence.

The essence of the present research is to assess the level of cultural intelligence of the three groups of managers of Bartlett & Ghoshal's (1992) triad model within the Süd-Chemie group. It was also deemed necessary to include a fourth group of managers, namely home country managers (virtual expatriates), in the research in order to make the findings more meaningful. It was respectively established from Hypotheses 6 and 7 that there are no significant differences between the total CQ of global managers compared to functional managers and that of functional managers compared to country managers. By way of corollary, it can be deduced that there is no significant difference in the total CQ of global managers compared to country managers.

Furthermore, as demonstrated by the one-way ANOVA test that was utilised to verify differences in total CQ between global business, functional, country and other (mostly home country) managers, no differences in cultural intelligence between these subgroups were apparent. This is further confirmed by one-way ANOVA tests that were performed on data for the individual components of total CQ, viz. CST, MOT and BEH. A similar trend was observed with regards to differences in CST, MOT and BEH between the various subgroups (refer to Appendix D). Although, the foregoing strongly suggests that within the Süd-Chemie group, no differences exist in terms of the cultural intelligence of managers, irrespective of hierarchy or position, the results of the structured interviews do not support this assertion. Distinct differences in cultural intelligence between the various subgroups were gauged from the structured interviews in the following order: CQ global manager > CQ functional manager > CQ country manager. One of the limitations of this study is that structured interviews were not conducted with home country managers that do not form part of the triad model of Bartlett &

Ghoshal (1992). However, a plausible explanation for the discrepancy in the findings from the survey that was conducted and the structured interviews is the relative sample size of global v/s functional v/s country v/s other (home country) managers. The sample size of the other (home country) manager subgroup is almost four times that of the groups that represent Bartlett & Ghoshal's (1992) triad model. It is also the opinion of the researcher that the subjects, who were interviewed, are a better representation of their respective subgroups as compared to the participants of the survey.

The findings from the structured interviews are consistent with both Bartlett & Ghoshal's (1992) and Drotter & Charan's (2001) models of global strategies and the leadership pipeline respectively. The progression from a country manager to a functional manager (passage 3 in case of the leadership pipeline) and ultimately to a global business manager (passage 4 in case of the leadership pipeline) calls for increased CQ from one level to another. Furthermore, the assertion that a global mindset starts at the top of the organisation (Kedia & Mukherji, 1999; Paul, 2000) is supported by the findings of the structured interviews.

7.2 Conclusions

Based on the preceding discussion, it can be concluded that in general, managers within the Süd-Chemie group have a moderate level of cultural intelligence. According to Paul's (2000) categorisation of organisations, Süd-Chemie is part of truly global companies that need to continue to build and expand their global mindset, of which CQ is an integral component, in order to keep pace with globalisation. As such, there needs to be a continuous supply of culturally intelligent global managers in order to sustain the growth of the business according to Drotter & Charan's (2001) leadership pipeline. All facets of cultural intelligence require development to the extent that these can be individually positioned within the excellence range, based on the scale proposed by Earley *et al.* (2006). More importantly, the cultural motivation aspect of CQ requires the most development, irrespective of the position held

by a manager within Süd-Chemie. Based on Gupta & Govindarajan's (2002) conceptual framework of alternative mindsets (Figure 4.2), it can be concluded that there is more tendency for managers at Süd-Chemie to have a parochial mindset as opposed to a global mindset based on the below average cultural motivation of the sample, which has a direct influence on the level of differentiation.

Furthermore, following the findings of the current research, it can be deduced that managers within Süd-Chemie are at stage 3 of Thomas & Inkson's (2003) five-stage development model of cultural intelligence, which is the accommodation of other cultural norms and rules in one's mind. At that stage, the level of complexity is much lower than in the preceding stages, however, spontaneous adaptive behaviour in different cultural situations is elusive.

The key finding of this research is the fact that expatriate experience plays a vital role in the development of CQ. Managers with prior expatriate experience consistently scored higher, if not highest within the sample, in terms of the individual components of CQ compared to their counterparts who have not had expatriate experience. Other findings of note include the fact that cross-cultural training does not have a significant effect on the development of CQ in Süd-Chemie's case. Hence, there is a need to review the cross-cultural training program within the organisation in order to enhance its effectiveness in developing the CQ of managers. Owing to the vast difference in sample size of managers from individualistic countries compared to those from collectivist countries, an element of bias would be introduced if any conclusions would be drawn from the findings regarding these two subgroups. This is a limitation of the current study that needs to be addressed in future research.

The fact that it was established that years of service within Süd-Chemie does not have a significant impact on CQ provides support for the assertion in the literature that CQ is dependent on personality traits as well as situational variables amongst others. The primary aim of the current research in

investigating differences in cultural intelligence between the groups of managers within Süd-Chemie based on Bartlett & Ghoshal's (1992) triad model, was achieved. Although the findings from the survey did not explicitly reveal any differences in the level of CQ between these groups of managers, the findings from the structured interview clearly pointed out differences in CQ according to the expected order in terms of hierarchy, in agreement with Bartlett & Ghoshal's (1992) triad model and Drotter & Charan's (2001) leadership pipeline.

7.3 Recommendations

Following the findings of this study and based on the conclusions drawn in the preceding section, suitable recommendations are made herein in respect of enhancing the CQ of both prospective global managers and current managers within Süd-Chemie.

There is a need for Süd-Chemie to identify managers that have the propensity to develop into global managers early in their careers. The career path of those candidates must be clearly mapped out at this early stage and definite milestones must be set in the progression to becoming a truly global manager. Also, it is mandatory that sufficient time be spent with current global managers such that the potential candidates are groomed to take over immediately after suitable positions within the organisation become vacant. Hence, it is imperative that a well-defined developmental program for global managers be formalised by the Corporate Human Resources central function of Süd-Chemie as part of its succession planning strategy.

Taking into account the context of this study, a well-defined leadership pipeline, based on Drotter & Charan's (2001) work, can be used as a useful tool in the development of global managers by firstly identifying gaps that exist from one passage to the other and tailoring training programs accordingly and secondly, accelerate the growth of those managers that already exhibit skills that are required at the next level.

The developmental program must be made a permanent fixture of the agenda at the annual meeting of company heads, whereby potential candidates for development should be recommended by the respective country managers. It is crucial to identify and select potential candidates for global leadership positions based on personality as cautioned by Caligiuri (2006) since it was established, in an earlier study by the same author, that personality traits such as openness, sociability and emotional stability are predispositions that are desirable in an individual in order to reap the benefits of a developmental program. To this effect, the Five-Factor model of personality should be used as a basis to screen candidates that fit the required profile. Thereafter, it is recommended to assess the level of cultural intelligence of these candidates using the instrument that was utilised for the purpose of this study, which should serve as a baseline to identify gaps, following Drotter and Charan's (2001) recommendation, as well as individual strengths and weaknesses.

Following the identification of strengths and weaknesses of each candidate, the PRISM model proposed by Earley *et al.* (2006) is recommended for the development of CQ. Clear targets must be identified for the training requirements in each aspect of CQ. At that stage, it is appropriate to assign mentors to the candidates. Ideally, these mentors should be returning expatriates. Therefore, it is recommended that a clause be included in expatriates' contracts of employment whereby the latter would fulfil the role of mentors at the end of their assignments. Mendenhall & Stahl (2000) point out that returned expatriates are a valuable resource to the organisation, whose skills are vastly underutilised. In addition, Cassidy (2005) points out that the information gleaned from the returning expatriate can help the organisation understand the logistical and educational support required in various parts of the world. Furthermore, the expatriate's knowledge can be utilised to prepare managers earmarked for foreign assignments. This sentiment is echoed by the global managers, who were interviewed for the purpose of this study.

Based on the findings of the current study, there is a need to develop all facets of CQ with regards to managers within Süd-Chemie, with particular emphasis on cultural motivation. As such, an elaborate training program aimed at developing CQ should replace the conventional cross-cultural training program, that is currently provided by Süd-Chemie. The CST facet of cultural intelligence can be developed through knowledge based training methods together with cultural assimilators. It is thus recommended that Süd-Chemie procures commercially available cultural assimilators in this regard. Cultural assimilators are typically cultural scenarios that are presented to trainees and the latter are then asked to interpret the situations. Cultural assimilators often employ a critical-incident approach to present examples of culture clashes between individuals from different cultural backgrounds.

Gupta & Govindarajan's (2002) model of a global mindset has cultural motivation at its very basis as one needs to be open to and be aware of diversity across cultures. Since it was established from the findings of the current research that the cultural motivation of managers within Süd-Chemie needs the highest degree of improvement, it follows that Gupta & Govindarajan's (2002) recommendations to cultivate a global mindset are very pertinent in Süd-Chemie's case, in order to effect the transition from a generally parochial mindset to a global mindset. Hence, it is recommended that the following be implemented:

1. Immersion programs in foreign cultures ranging from two to three months training assignments such that an extensive understanding of local cultures can be gained and used to improve managers' foreign language skills.
2. Job rotations across operations in terms of location, division and function in order to promote interpersonal and social ties among employees in different locations. In essence, this is defined as intensive cultural experiences by Caligiuri (2006) and consists of rotational programs that are offered to prospective global managers at

an early stage in their careers such that the appropriate knowledge, skills and abilities to successfully manage on the global stage can be gained through these experiences.

The above measures should also serve to enhance the cultural behaviour of managers.

Since it was convincingly established that expatriate experience is invaluable in shaping the cultural intelligence of managers at Süd-Chemie, it is further recommended that expatriate opportunities be ultimately afforded to prospective global managers within the organisation in order for the latter to develop their cultural intelligence and more importantly, the cultural behaviour aspect of cultural intelligence as it is clear that it is only by way of extensive physical interactions with individuals of diverse cultures that one can enhance cultural behaviour. One of the functional managers, who was interviewed, is strongly in favour of providing shorter international assignments to managers early in their careers in order to afford this opportunity to a greater number as opposed to lengthy assignments, which only privileges a select few. According to Paul (2000), the hallmark of a global company is to drive international assignments and mobility (Table 4.1) from a learning viewpoint in order to benefit from local market and cultural differences as opposed to a demand viewpoint for the sole provision of know-how and consolidation of corporate control.

Lastly, it is fitting that recommendations be made in respect of future research on the topic of this study. A survey consisting of the measurement of personality traits based on the Five-Factor model in conjunction with all the facets of CQ is recommended. One of the limitations of the instrument that was used to assess the level of CQ, as pointed out by a few participants, is the fact that some of the questions only present the two extremes of variables, which led to incomplete submissions. Hence, there is a need to review the measuring instrument in order to address the preceding deficiency.

In the current research, structured interviews were not conducted with those home country managers, who did not fit into the categories stipulated by Bartlett & Ghoshal's (1992) triad model. As such, it is recommended that structured interviews be conducted with individuals from every subgroup of a sample in future research.

A major limitation of the current study is that due to the significant difference in sample size of managers from individualistic countries compared to those from collectivist countries, conclusions could not be drawn from the findings regarding these two subgroups. In order to conclusively establish the difference in total CQ between managers from individualistic countries as opposed to collectivist countries, a similar study needs to be carried out within Süd-Chemie subsidiaries in Latin America and Asia.

Furthermore, in order to ascertain the assertion from literature that a global mindset starts at the helm of an organisation, it is recommended to include CEO's in a similar study in future. In addition, it is recommended to also include female managers in future studies such that the influence of gender on CQ can be verified. Moreover, an increased number of in house responses is also desired for future studies.

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APPENDICES

Appendix A- Questionnaire design, with consistency matrix

Questionnaire

A SELF- ASSESSMENT OF YOUR CQ*

*Van Dyne & Ang (2006), adapted by the Author for the purpose of this research

Which of the following choices best describes you when you are in situations characterised by cultural diversity? Circle either a or b (not both) for each question to indicate which better describes you as you are most of the time.

Question	Relevance
1. Would you rather work with someone who is from a. the same or similar culture or b. a very different culture?	Hypotheses 1-8
2. When you are with a person from a different culture, do you a. plan what you say, or b. act spontaneously?	Hypotheses 1-8
3. Do you like to a. travel in your home country, or b. travel to faraway places?	Hypotheses 1-8
4. When you know you will be meeting someone from a different culture, do you a. script what you want to say before you start, or b. treat them as you would any other person from your own culture?	Hypotheses 1-8
5. Do you typically a. assume many roles, or b. adopt one primary role?	Hypotheses 1-8
6. At parties with people from diverse cultural backgrounds, do you a. mimic other people, or b. maintain your own style?	Hypotheses 1-8
7. In your daily work, would you prefer a job in a culture that is a. similar to your own, or b. different from your own?	Hypotheses 1-8
8. When thinking about understanding people from different cultures a. an expert, or b. a novice?	Hypotheses 1-8
9. Do you view yourself as a. beginning to learn more about culture, or b. having lots of cultural expertise?	Hypotheses 1-8
10. When speaking to people from diverse cultures, do you use a a. consistent speaking style, or b. variety of accents?	Hypotheses 1-8
11. Would you say are a. not really aware when people are from other cultures, or b. very aware when people are from other cultures?	Hypotheses 1-8
12. Which best describes you? a. I read more than two languages, or b. I read one or two languages.	Hypotheses 1-8

13. Are you a. alert to the possibility that someone might be from a different culture, or b. indifferent that someone might be from different culture?	Hypotheses 1-8
14. When you are in groups of people who have diverse backgrounds, do you a. usually stick to your normal way of speaking, or b. change the way you speak depending on the group?	Hypotheses 1-8
15. When you work on a project, do you find you prefer to work with a. people from similar cultures, or b. people from different culture?	Hypotheses 1-8
16. When you are with people who have a different cultural background, do you a. think about the differences, or b. forget they are different?	Hypotheses 1-8
17. In getting a job done, which describes you better? a. I am indifferent to working with people from other cultures. b. I celebrate cultural differences.	Hypotheses 1-8
18. When it comes to knowing how to cope with cultural diversity, would you say you are a. a very knowledgeable, or b. a neophyte?	Hypotheses 1-8
19. In your spare time, would you choose to a. upgrade your technical skills, or b. learn about cultural differences?	Hypotheses 1-8
20. Given the choice, would you select working with people who are a. not that competent technically, but are from similar cultures, or b. technically very competent, but from very different cultures?	Hypotheses 1-8
21. In terms of knowing how to navigate new cultures, do you see yourself as a. highly experienced, or b. at the entry level?	Hypotheses 1-8
22. Do you tend to a. be aware that people from another culture are different, or b. pay very little attention to whether or not they are different?	Hypotheses 1-8
23. Is it your habit a. not to plan in advance when interacting with those from different cultures, or b. to take charge of your interactions when with those from different cultures?	Hypotheses 1-8
24. Do you typically a. stick to our own mannerisms, or b. modify your mannerisms when you talk with people from different cultures?	Hypotheses 1-8
25. Would you rank working with people from different cultures as a. one of your many interests, or b. a top interest?	Hypotheses 1-8
26. Do you a. eat what is familiar to you, or b. try what others eat when having meals with people from other cultures?	Hypotheses 1-8
27. Are you more likely to a. set clear goals before you start working with others from different cultures, or b. work with them as if they were your regular colleagues?	Hypotheses 1-8

<p>28. When you have to meet strangers from another culture, do you</p> <ul style="list-style-type: none"> a. go with the flow and according to the situation, or b. carefully plan your conversation in advance? 	<p>Hypotheses 1-8</p>
<p>29. Would you say that you enjoy</p> <ul style="list-style-type: none"> a. striking up conversations with culturally diverse people, or b. having conversations with those who are more similar? 	<p>Hypotheses 1-8</p>
<p>30. In your work, do you</p> <ul style="list-style-type: none"> a. use uniform style of interacting with everyone in the group, or b. change the way you interact depending on the cultural backgrounds of those in the group? 	<p>Hypotheses 1-8</p>
<p>31. In business situations that require cross-cultural negotiations, do you have</p> <ul style="list-style-type: none"> a. deep knowledge, or b. basic knowledge? 	<p>Hypotheses 1-8</p>
<p>32. When visiting different cultures, do you</p> <ul style="list-style-type: none"> a. modify the way you dress, or b. dress the way you do in your home country? 	<p>Hypotheses 1-8</p>
<p>33. When conflicts arise with those from other cultures, do you</p> <ul style="list-style-type: none"> a. learn from failures and build on successes, or b. pay little attention to cultural sources of failures and success? 	<p>Hypotheses 1-8</p>
<p>34. In keeping a conversation going with someone from another culture, do you</p> <ul style="list-style-type: none"> a. have a difficulty dealing with ambiguity and differences or b. deal successfully with ambiguity and differences? 	<p>Hypotheses 1-8</p>

Section B:**Instructions**

Imagine that you are in a situation where you are interacting with people from different cultural backgrounds. Circle the answer (a or b) that best describes you.

35. In culturally diverse situations, you are a. spontaneous b. planful.	Hypotheses 1-8
36. In culturally diverse situations, you are a. Predictable b. flexible.	Hypotheses 1-8
37. In culturally diverse situations, you feel a. involved b. indifferent.	Hypotheses 1-8
38. In culturally diverse situations, you are a. systematic b. casual.	Hypotheses 1-8
39. In culturally diverse situations, you are a. neutral b. engaged.	Hypotheses 1-8
40. In culturally diverse situations, you have a. cultural knowledge b. technical knowledge.	Hypotheses 1-8
41. In culturally diverse situations, you a. anticipate b. react.	Hypotheses 1-8
42. In culturally diverse situations, you are a a. learner b. professional.	Hypotheses 1-8
43. In culturally diverse situations, you feel a. highly interested b. somewhat interested.	Hypotheses 1-8
44. In culturally diverse situations, you a. go with the flow b. prepare in advance.	Hypotheses 1-8
45. In culturally diverse situations, you are a. reserved b. a good actor.	Hypotheses 1-8
46. In culturally diverse situations, you are a. broad b. narrow.	Hypotheses 1-8
47. In culturally diverse situations, you are a. excited b. neutral.	Hypotheses 1-8
48. In culturally diverse situations, you are a. current b. dated.	Hypotheses 1-8

49. In culturally diverse situations, you are a. unsure b. energized.	Hypotheses 1-8
50. In culturally diverse situations, you are a. confident b. uncertain.	Hypotheses 1-8
51. In culturally diverse situations, you a. speak one language b. speak many languages.	Hypotheses 1-8
52. In culturally diverse situations, you are a. experienced b. a novice.	Hypotheses 1-8
53. In culturally diverse situations, you view interaction as a. an activity b. a priority.	Hypotheses 1-8
54. In culturally diverse situations, you are a. conscious b. unaware.	Hypotheses 1-8

Additional Questions

Relevance

55. What position do you hold in the organisation? (Please circle)
1.Global business manager
2.Global functional manager (central function)
3.Country manager (company head)
4.Other
Hypotheses 6,7
56. Are you currently on expatriate assignment?
1.Yes
2.No
Hypothesis 2
57. Have you been on an expatriate assignment in your career?
1.Yes
2.No
Hypothesis 1
58. Have you had any form of cross-cultural training in your career?
1.Yes
2.No
Hypothesis 3
59. How many years of service have you had with SÖd-Chemie?
1.<10
2.>10
Hypothesis 8
60. State your nationality
Hypotheses 4, 5
-

Consistency Matrix

Research Problem: Managers who operate effectively in a local setting are not guaranteed to exhibit the same astuteness when operating on a global basis or in cross-cultural settings. This gap exists because organisations in general, have not kept pace with the phenomenon of globalisation in relation to the development of global managers for the latter to attain an adequate level of cultural intelligence and develop a global mindset. Lack of these attributes can seriously hamper the ability of the global manager in leveraging diversity for organisational effectiveness.					
Sub-problem	Hypothesis Number	Hypothesis	Source of Proposition	Source of data	Analysis
To examine the differences in the level of cultural intelligence of managers with or without expatriate experience	1	Managers with prior expatriate experience are more culturally intelligent than managers with no prior expatriate experience.	Ng & Earley (2006), Ang, Van Dyne & Koh (2006)	Quantitative measurement instrument	One-tailed t test on quantitative analysis
	2	Current expatriate managers are more culturally intelligent than home country managers.	Ng & Earley (2006), Ang, Van Dyne & Koh (2006)	Quantitative measurement instrument	One-tailed t test on quantitative analysis
To examine the differences in the level of cultural intelligence of managers who have undergone a form of cross-cultural training and those who have not	3	Managers having undergone a form of cross-cultural training are more culturally intelligent than managers who have not undergone any form of cross-cultural training.	Waxin & Panaccio (2005)	Quantitative measurement instrument	One-tailed t test on quantitative analysis
To examine the differences in the level of cultural intelligence of managers who are from individualistic countries as opposed to collectivist countries	4	Managers from individualistic countries are more culturally intelligent than managers from collectivist countries.		Quantitative measurement instrument	One-tailed t test on quantitative analysis
	5	There is a difference in cultural intelligence between managers from individualistic and collectivist countries.		Quantitative measurement instrument	Two-tailed t test on quantitative analysis
To examine the differences in the level of cultural intelligence between global business managers, global functional managers and country managers	6	Global business managers are more culturally intelligent than global functional managers.	Ng & Earley (2006)	Quantitative measurement instrument	One-tailed t test on quantitative analysis

	7	Global functional managers are more culturally intelligent than country managers.	Ng & Earley (2006)	Quantitative measurement instrument	One-tailed t test on quantitative analysis
To examine the differences in the level of cultural intelligence of managers with regards to the number of years of service at SÜd-Chemie	8	Managers with more than 10 years of service with SÜd-Chemie are more culturally intelligent than those with less than 10 years of service.		Quantitative measurement instrument	One-tailed t test on quantitative analysis

Appendix B – Structured interview and questionnaire covering letter

Structured Interview

1. What is your understanding of a global mindset?
2. What is your understanding of cultural intelligence?
3. How often do you keep in touch with global business publications?
4. How do you rate the importance of having a global mindset in today's business environment on a scale of 1 to 10, with 1 being unimportant and 10 being critically important? Why?
5. In your opinion, is cultural diversity an asset to an organisation? If so, why?
6. How do you rate the importance of cultural intelligence when closing business deals/dealing with customers?
7. Do you adapt your behaviour during cross-cultural encounters?
8. Are you generally observant during cross-cultural interactions?
9. What do you find most challenging in these cross-cultural interactions?
10. What do you find most rewarding in these cross-cultural interactions?
11. Do you experience varied levels of adaptation when dealing with people from different geographical clusters e.g Europeans, Americans, Asians? If so, please rate the level of difficulty.
12. Have you had any form of cross-cultural training?
13. How do you rate the importance of cross-cultural training in today's global business environment?
14. Have you had any prior expatriate experience?
15. If the answer to the above is in the affirmative, what were the highlights and lowlights of the experience?
16. If you had the opportunity, what would you change before and during the expatriate experience?
17. In your opinion, is Süd-Chemie's global mobility policy adequate?
18. Do you find that your sensitivity to diverse cultures has changed since joining the organisation?

19. How open are you to proposals from employees of different cultures with regards to strategy formulation and/or policy implementation for the group? Do you take into account the impact of cultural differences?
20. In your opinion, what is a global manager?
21. What skills must a global manager possess in order to operate effectively within Süd-Chemie and today's business world?
22. In your opinion, does Süd-Chemie have the right infrastructure in place to develop global managers? If not, what would you change?
23. Do you take time to learn about a different culture prior to an overseas business trip?

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Dear Mr Kiekenbeck,

Research Project on Cultural Intelligence

I am a final year MBL student at the UNISA Graduate School of Business Leadership (www.unisa.co.za), in South Africa. In order to complete my studies, I have to submit a comprehensive piece of research. The research project that I have chosen is entitled: "***Cultural Intelligence Considerations in the Development of Global Managers – The Case of Süd-Chemie***".

In today's globalised world, it is vital for managers of multinational corporations such as Süd-Chemie to have a global mindset, of which cultural intelligence forms an integral part. Cultural intelligence or CQ is "the ability to engage in a set of behaviours that uses skills and qualities that are tuned appropriately to the culture-based values and attitudes of the people with whom one interacts." It is imperative that global managers are able to leverage cultural diversity for organisational effectiveness. It transpires from the available body of knowledge on the subject that organisations in general have not kept pace with the advent of globalisation in the development of their global managers. As a result, it is critical to measure the levels of cultural intelligence of global managers and use the learnings to equip the latter with the ability to face a tough and demanding global environment. This study is being conducted for Süd-Chemie for that very purpose. An ***Executive Summary*** of my research proposal is attached.

I therefore request that you assist my research by distributing the attached questionnaire for completion to the target sample. It is estimated that the required time to complete the questionnaire is not more than 10 minutes. Please return the completed questionnaires to me at soovi.hurgobin@sc-world.co.za. I will abide by any confidentiality requirements that you may impose.

Thank you sincerely for your kind assistance. Please do not hesitate to contact me should you require further assistance or clarification.

Yours faithfully,

Soovi Hurgobin

Date: 27 June 2006

Executive Summary

This research is company specific and its aim is to provide Süd-Chemie, a specialty chemicals MNC (multinational corporation), with a basis to enhance the development of its global managers through the assessment of the cultural intelligence of the latter.

It is clear that the development of a global mindset with emphasis on cultural intelligence is key to managing across cultures in this era of globalisation. However, the fact that organisations have not kept pace with the advent of globalisation in the development of their global managers, transpires from the available body of knowledge. As a result, it is critical to measure the levels of cultural intelligence of managers and use the learnings to equip today's global managers with the ability to face a tough and demanding global environment.

The research objectives are as follows:

1. To identify those cultural intelligence learnings that may be relevant to Süd-Chemie from the existing body of knowledge namely, accredited journals and industry publications.
2. To identify relevant cultural intelligence measuring tools and construct a questionnaire specific to Süd-Chemie.
3. To measure the levels of cultural intelligence at Süd-Chemie.
4. To synthesise the learnings from 2. and 3. above into suitable conclusions.
5. To develop recommendations to address the research question.

There exists a distinct gap in research on cultural intelligence in the sense that emphasis has been placed on cross-cultural training methods but not on

the assessment of cultural intelligence to establish the effectiveness of these methods and to leverage the learnings to improve on existing training programs. The proposed research aims to address this gap and identify company specific antecedents of cultural intelligence that can be extended to organisations that share similarities with Süd-Chemie. In addition, this study will serve to contribute to the restricted body of knowledge on cultural intelligence and can be used as a platform to conduct future research.

Appendix D – Output of hypotheses testing

Hypothesis 1

H₀ CQ (prior expatriate experience) ≤ CQ (no prior expatriate experience)
 H₁ CQ (prior expatriate experience) > CQ (no prior expatriate experience)

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Prior Expatriate Experience	No Prior Expatriate Experience
Mean	105.75	87.5625
Variance	504.8289474	459.8825
Observations	20	16
Pooled Variance	484.9908088	
Hypothesized Mean Difference	0	
df	34	
t Stat	2.462237781	
P(T<=t) one-tail	0.00851831	
t Critical one-tail	1.890823455	
P(T<=t) two-tail	0.01903262	
t Critical two-tail	2.032243174	

CBT

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Prior Expatriate Experience	No Prior Expatriate Experience
Mean	45.8	38.1875
Variance	161.6210526	138.5825
Observations	20	16
Pooled Variance	151.4481618	
Hypothesized Mean Difference	0	
df	34	
t Stat	2.280324875	
P(T<=t) one-tail	0.014489452	
t Critical one-tail	1.890823455	
P(T<=t) two-tail	0.028978904	
t Critical two-tail	2.032243174	

MOT

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Prior Expatriate Experience	No Prior Expatriate Experience
Mean	35.25	32.25
Variance	85.14473894	59.4
Observations	20	16
Pooled Variance	73.78878471	
Hypothesized Mean Difference	0	
df	34	
t Stat	1.041251788	
P(T<=t) one-tail	0.152553312	
t Critical one-tail	1.890823455	
P(T<=t) two-tail	0.305106825	
t Critical two-tail	2.032243174	

BBH

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Prior Expatriate Experience	No Prior Expatriate Experience
Mean	24.9	19.125
Variance	58.83157895	49.05
Observations	20	16
Pooled Variance	54.51617647	
Hypothesized Mean Difference	0	
df	34	
t Stat	2.331919702	
P(T<=t) one-tail	0.012882645	
t Critical one-tail	1.890823455	
P(T<=t) two-tail	0.025765291	
t Critical two-tail	2.032243174	

H₀ CQ (prior expatriate experience) <= CQ (no prior expatriate experience)
H₁ CQ (prior expatriate experience) > CQ (no prior expatriate experience)

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	<i>Prior Expatriate Experience</i>	<i>No Prior Expatriate Experience</i>
Mean	105.75	87.5625
Variance	504.8289474	459.8625
Observations	20	16
Pooled Variance	484.9908088	
Hypothesized Mean Difference	0	
df	34	
t Stat	2.482237781	
P(T<=t) one-tail	0.00951831	
t Critical one-tail	2.441147444	
P(T<=t) two-tail	0.01803262	
t Critical two-tail	2.728393158	

CST

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	<i>Prior Expatriate Experience</i>	<i>No Prior Expatriate Experience</i>
Mean	45.6	38.1875
Variance	181.8210528	138.5625
Observations	20	16
Pooled Variance	151.4481818	
Hypothesized Mean Difference	0	
df	34	
t Stat	2.280324876	
P(T<=t) one-tail	0.014489452	
t Critical one-tail	2.441147444	
P(T<=t) two-tail	0.028978904	
t Critical two-tail	2.728393158	

MOT

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	<i>Prior Expatriate Experience</i>	<i>No Prior Expatriate Experience</i>
Mean	35.25	32.25
Variance	85.14473884	59.4
Observations	20	16
Pooled Variance	73.78876471	
Hypothesized Mean Difference	0	
df	34	
t Stat	1.041251788	
P(T<=t) one-tail	0.152553312	
t Critical one-tail	2.441147444	
P(T<=t) two-tail	0.305106625	
t Critical two-tail	2.728393158	

BEH

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	<i>Prior Expatriate Experience</i>	<i>No Prior Expatriate Experience</i>
Mean	24.9	19.125
Variance	58.83157895	49.05
Observations	20	16
Pooled Variance	54.51617647	
Hypothesized Mean Difference	0	
df	34	
t Stat	2.331816702	
P(T<=t) one-tail	0.012882845	
t Critical one-tail	2.441147444	
P(T<=t) two-tail	0.025765291	
t Critical two-tail	2.728393158	

Hypothesis 2

H₀

CQ (current expatriates) ≤ CQ (home country managers)

H₁

CQ (current expatriates) > CQ (home country managers)

Significance Level

0.05

t-Test: Two-Sample Assuming Equal Variances

	Current Expatriates	Home Country Managers
Mean	105.6666667	95
Variance	877	447.9230769
Observations	9	27
Pooled Variance	548.8823529	
Hypothesized Mean Difference	0	
df	34	
t Stat	1.182880782	
P(T<=t) one-tail	0.122531073	
t Critical one-tail	1.680923455	
P(T<=t) two-tail	0.245062146	
t Critical two-tail	2.032243174	

CST

Significance Level

0.05

t-Test: Two-Sample Assuming Equal Variances

	Current Expatriates	Home Country Managers
Mean	48.33333333	38.77777778
Variance	207.25	153.4102584
Observations	9	27
Pooled Variance	166.0764314	
Hypothesized Mean Difference	0	
df	34	
t Stat	1.321614429	
P(T<=t) one-tail	0.097560463	
t Critical one-tail	1.690823455	
P(T<=t) two-tail	0.195120925	
t Critical two-tail	2.032243174	

MOT

Significance Level

0.05

t-Test: Two-Sample Assuming Equal Variances

	Current Expatriates	Home Country Managers
Mean	35.66666667	33.33333333
Variance	140.5	54.92307692
Observations	9	27
Pooled Variance	75.05882353	
Hypothesized Mean Difference	0	
df	34	
t Stat	0.699729652	
P(T<=t) one-tail	0.244429403	
t Critical one-tail	1.690923455	
P(T<=t) two-tail	0.488858807	
t Critical two-tail	2.032243174	

BEH

Significance Level

0.05

t-Test: Two-Sample Assuming Equal Variances

	Current Expatriates	Home Country Managers
Mean	23.66666667	21.88888889
Variance	79.75	57.33333333
Observations	9	27
Pooled Variance	62.60764314	
Hypothesized Mean Difference	0	
df	34	
t Stat	0.583733998	
P(T<=t) one-tail	0.281626057	
t Critical one-tail	1.690923455	
P(T<=t) two-tail	0.563252114	
t Critical two-tail	2.032243174	

Hypothesis 3

H₀ CQ (managers with CC training) <= CQ (managers with no CC training)
 H₁ CQ (managers with CC training) > CQ (managers with no CC training)

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Managers with CC Training	Managers with no CC Training
Mean	98.7	96.375
Variance	350.4315789	846.25
Observations	20	16
Pooled Variance	570.0573529	
Hypothesized Mean Difference	0	
df	34	
t Stat	0.290326896	
P(T<=t) one-tail	0.386864763	
t Critical one-tail	1.690923455	
P(T<=t) two-tail	0.773329565	
t Critical two-tail	2.032243174	

CST

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Managers with CC Training	Managers with no CC Training
Mean	40.65	42.375
Variance	85.71315789	285.45
Observations	20	16
Pooled Variance	173.6323529	
Hypothesized Mean Difference	0	
df	34	
t Stat	-0.390074476	
P(T<=t) one-tail	0.349457281	
t Critical one-tail	1.690923455	
P(T<=t) two-tail	0.698914562	
t Critical two-tail	2.032243174	

MOT

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Managers with CC Training	Managers with no CC Training
Mean	34.2	33.5625
Variance	53.43157895	104.6625
Observations	20	16
Pooled Variance	76.03345588	
Hypothesized Mean Difference	0	
df	34	
t Stat	0.217972428	
P(T<=t) one-tail	0.414376779	
t Critical one-tail	1.690923455	
P(T<=t) two-tail	0.828753558	
t Critical two-tail	2.032243174	

BEN

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Managers with CC Training	Managers with no CC Training
Mean	23.85	20.4375
Variance	51.60769474	71.0625
Observations	20	16
Pooled Variance	60.19080882	
Hypothesized Mean Difference	0	
df	34	
t Stat	1.311388314	
P(T<=t) one-tail	0.099256975	
t Critical one-tail	1.690923455	
P(T<=t) two-tail	0.198513951	
t Critical two-tail	2.032243174	

Hypotheses 4 and 5

H₀ CQ (managers from individualistic countries) <= CQ (managers from collectivist countries)
H₁ CQ (managers from individualistic countries) > CQ (managers from collectivist countries)

Significance Level

T-Test: Two-Sample Assuming Equal Variances

	<i>Managers from Individualistic Countries</i>	<i>Managers from Collectivist Countries</i>
Mean	88.90825	87.75
Variance	591.958684	212.25
Observations	32	4
Pooled Variance	558.454832	
Hypothesized Mean Difference	0	
df	34	
t Stat	0.890180127	
P(T<=t) one-tail	0.189812501	
Critical one-tail	1.690923455	
P(T<=t) two-tail	0.379625001	
Critical two-tail	2.032243174	

CST

Significance Level

T-Test: Two-Sample Assuming Equal Variances

	<i>Managers from Individualistic Countries</i>	<i>Managers from Collectivist Countries</i>
Mean	42.85625	31.5
Variance	189.3941532	81
Observations	32	4
Pooled Variance	161.5846891	
Hypothesized Mean Difference	0	
df	34	
t Stat	1.854848328	
P(T<=t) one-tail	0.033579373	
Critical one-tail	1.690923455	
P(T<=t) two-tail	0.107158746	
Critical two-tail	2.032243174	

MOT

Significance Level

T-Test: Two-Sample Assuming Equal Variances

	<i>Managers from Individualistic Countries</i>	<i>Managers from Collectivist Countries</i>
Mean	34.5	29.25
Variance	76.08451613	44.25
Observations	32	4
Pooled Variance	73.25735294	
Hypothesized Mean Difference	0	
df	34	
t Stat	1.156811289	
P(T<=t) one-tail	0.127746691	
Critical one-tail	1.690923455	
P(T<=t) two-tail	0.255493382	
Critical two-tail	2.032243174	

BEH

Significance Level

T-Test: Two-Sample Assuming Equal Variances

	<i>Managers from Individualistic Countries</i>	<i>Managers from Collectivist Countries</i>
Mean	21.75	27
Variance	61.5483871	48
Observations	32	4
Pooled Variance	60.35294118	
Hypothesized Mean Difference	0	
df	34	
t Stat	-1.274278923	
P(T<=t) one-tail	0.105603226	
Critical one-tail	1.690923455	
P(T<=t) two-tail	0.211206453	
Critical two-tail	2.032243174	

Hypothesis 6

H₀ CQ (global managers) ≤ CQ (functional managers)
 H₁ CQ (global managers) > CQ (functional managers)

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	<i>Global Managers</i>	<i>Functional Managers</i>
Mean	98.4	96.42857143
Variance	632.8	445.2857143
Observations	5	7
Pooled Variance	480.2914286	
Hypothesized Mean Difference	0	
df	10	
t Stat	0.153626584	
P(T<=t) one-tail	0.440479304	
t Critical one-tail	1.812461505	
P(T<=t) two-tail	0.880958608	
t Critical two-tail	2.228139238	

CST

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	<i>Global Managers</i>	<i>Functional Managers</i>
Mean	42.8	39
Variance	278.3	163
Observations	5	7
Pooled Variance	220.32	
Hypothesized Mean Difference	0	
df	10	
t Stat	0.414208435	
P(T<=t) one-tail	0.343733015	
t Critical one-tail	1.812461505	
P(T<=t) two-tail	0.687466031	
t Critical two-tail	2.228139238	

MOT

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	<i>Global Managers</i>	<i>Functional Managers</i>
Mean	33	35.14285714
Variance	67.5	53.14285714
Observations	5	7
Pooled Variance	58.88571429	
Hypothesized Mean Difference	0	
df	10	
t Stat	-0.478904748	
P(T<=t) one-tail	0.321840242	
t Critical one-tail	1.812461505	
P(T<=t) two-tail	0.643680484	
t Critical two-tail	2.228139238	

BEH

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	<i>Global Managers</i>	<i>Functional Managers</i>
Mean	22.8	22.28571429
Variance	74.7	35.57142857
Observations	5	7
Pooled Variance	51.22285714	
Hypothesized Mean Difference	0	
df	10	
t Stat	0.122720173	
P(T<=t) one-tail	0.462380009	
t Critical one-tail	1.812461505	

Hypothesis 7

H₀ CQ (functional managers) ≤ CQ (country managers)
 H₁ CQ (functional managers) > CQ (country managers)

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Functional Managers	Country Managers
Mean	96.42857143	94.8
Variance	445.2857143	817.2
Observations	7	5
Pooled Variance	594.0514286	
Hypothesized Mean Difference	0	
df	10	
t Stat	0.114113805	
P(T≤t) one-tail	0.455703098	
t Critical one-tail	1.812461505	
P(T≤t) two-tail	0.911406196	
t Critical two-tail	2.228139236	

CST

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Functional Managers	Country Managers
Mean	39	42
Variance	183	121.5
Observations	7	5
Pooled Variance	158.4	
Hypothesized Mean Difference	0	
df	10	
t Stat	-0.407086842	
P(T≤t) one-tail	0.348280585	
t Critical one-tail	1.812461505	
P(T≤t) two-tail	0.69252117	
t Critical two-tail	2.228139236	

MOT

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Functional Managers	Country Managers
Mean	35.14285714	30.8
Variance	53.14285714	138.8
Observations	7	5
Pooled Variance	88.60571429	
Hypothesized Mean Difference	0	
df	10	
t Stat	0.833876859	
P(T≤t) one-tail	0.211063894	
t Critical one-tail	1.812461505	
P(T≤t) two-tail	0.423927389	
t Critical two-tail	2.228139236	

BEH

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Functional Managers	Country Managers
Mean	22.28571429	22.2
Variance	35.57142857	92.7
Observations	7	5
Pooled Variance	58.42285714	
Hypothesized Mean Difference	0	
df	10	
t Stat	0.019151807	
P(T≤t) one-tail	0.49284848	
t Critical one-tail	1.812461505	

Hypothesis 8

H₀ CQ (managers with more than 10 years of service) ≤ CQ (managers with less than 10 years of service)
 H₁ CQ (managers with more than 10 years of service) > CQ (managers with less than 10 years of service)

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Managers with more than 10 years of service	Managers with less than ten years of service
Mean	100.875	85.1
Variance	870.65	477.9684211
Observations	18	20
Pooled Variance	562.7514706	
Hypothesized Mean Difference	0	
df	34	
t Stat	0.725800742	
P(T<=t) one-tail	0.236463665	
t Critical one-tail	1.690923455	
P(T<=t) two-tail	0.472927729	
t Critical two-tail	2.032243174	

CST

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Managers with more than 10 years of service	Managers with less than ten years of service
Mean	44.25	39.15
Variance	192.8	148.2394737
Observations	18	20
Pooled Variance	167.8102941	
Hypothesized Mean Difference	0	
df	34	
t Stat	1.173774352	
P(T<=t) one-tail	0.124321139	
t Critical one-tail	1.690923455	
P(T<=t) two-tail	0.248642277	
t Critical two-tail	2.032243174	

MOT

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Managers with more than 10 years of service	Managers with less than ten years of service
Mean	35.8125	32.4
Variance	72.5625	73.51578947
Observations	18	20
Pooled Variance	73.09522059	
Hypothesized Mean Difference	0	
df	34	
t Stat	1.190013555	
P(T<=t) one-tail	0.12114222	
t Critical one-tail	1.690923455	
P(T<=t) two-tail	0.242284441	
t Critical two-tail	2.032243174	

BEH

Significance Level

t-Test: Two-Sample Assuming Equal Variances

	Managers with more than 10 years of service	Managers with less than ten years of service
Mean	20.8125	23.55
Variance	78.5625	47.62894737
Observations	18	20
Pooled Variance	61.27810294	
Hypothesized Mean Difference	0	
df	34	
t Stat	-1.042834988	
P(T<=t) one-tail	0.152237268	
t Critical one-tail	1.690923455	

ANOVA Test

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Global Managers CQ	5	492	98.4	532.8
Functional Managers CQ	7	875	96.42857143	445.2857143
Country Managers CQ	5	474	94.8	817.2
Other CQ	19	1875	96.88421053	826.8947368

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	74.18045113	3	24.72681704	0.040879599	0.986770859	2.901117588
Within Groups	19355.81955	32	804.8693609			
Total	19430	35				

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Global Managers CST	5	213	42.8	276.3
Functional Managers CST	7	273	39	183
Country Managers CST	5	210	42	121.5
Other CST	19	795	41.84210526	177.4736842

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	53.02368421	3	17.6745614	0.096127171	0.991816346	2.901117588
Within Groups	5883.728316	32	183.8684474			
Total	5936.75	35				

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Global Managers MOT	5	165	33	67.5
Functional Managers MOT	7	246	35.14285714	53.14285714
Country Managers MOT	5	153	30.6	136.8
Other MOT	19	657	34.57694737	76.38842105

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	78.0612782	3	26.02042607	0.331843516	0.802497981	2.901117588
Within Groups	2510.686722	32	78.45902258			
Total	2588.75	35				

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Global Managers BEH	5	114	22.8	74.7
Functional Managers BEH	7	156	22.28571429	35.57142857
Country Managers BEH	5	111	22.2	92.7
Other BEH	19	423	22.26315789	70.31578947

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1.287218045	3	0.429072682	0.008390024	0.999282212	2.901117588
Within Groups	2148.712782	32	67.14727444			
Total	2150	35				

Appendix E – Süd-Chemie group structure and organisational charts

Figure 2.3: Süd-Chemie group global operating structure

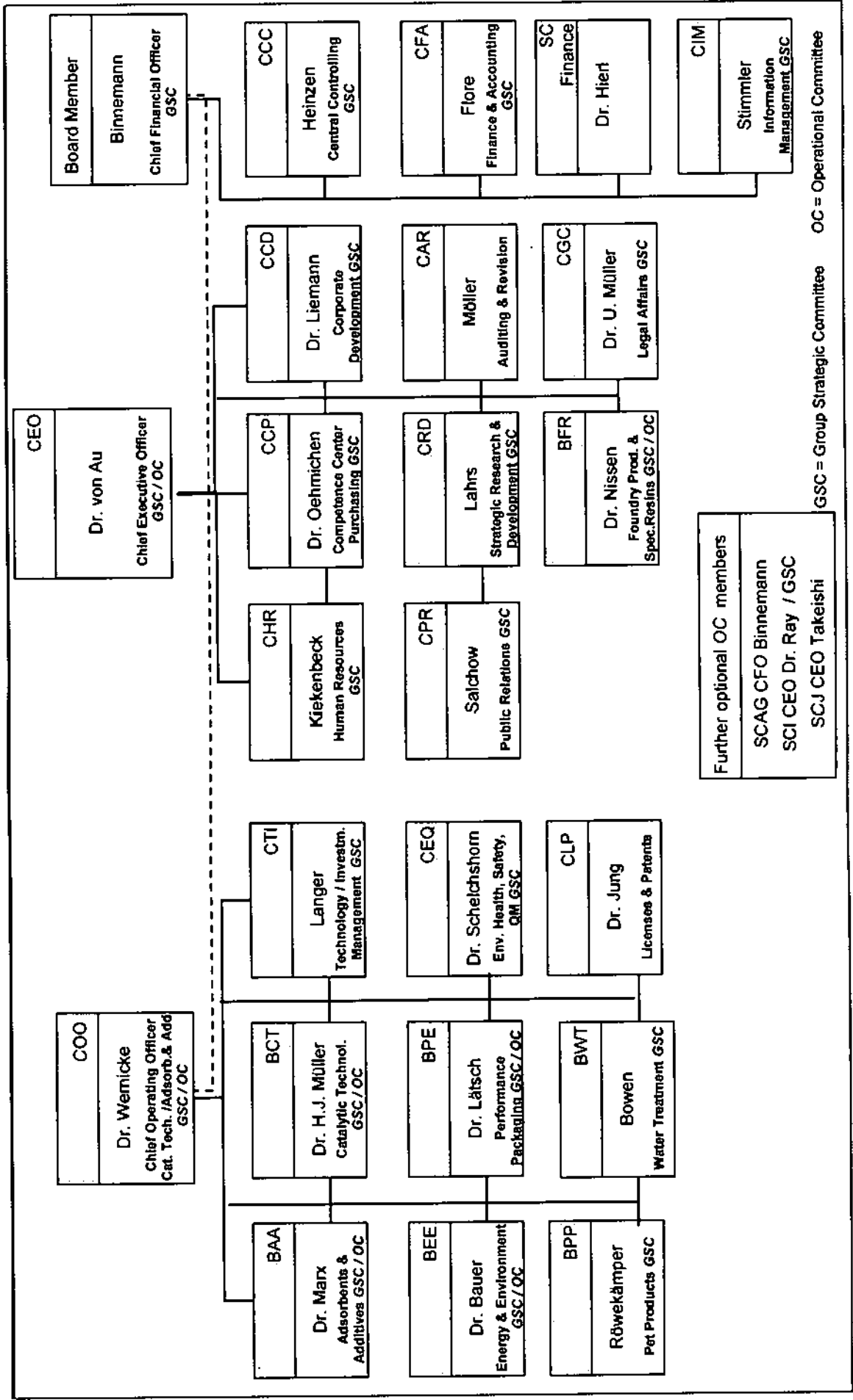


Figure 2.4: BAA organisational chart

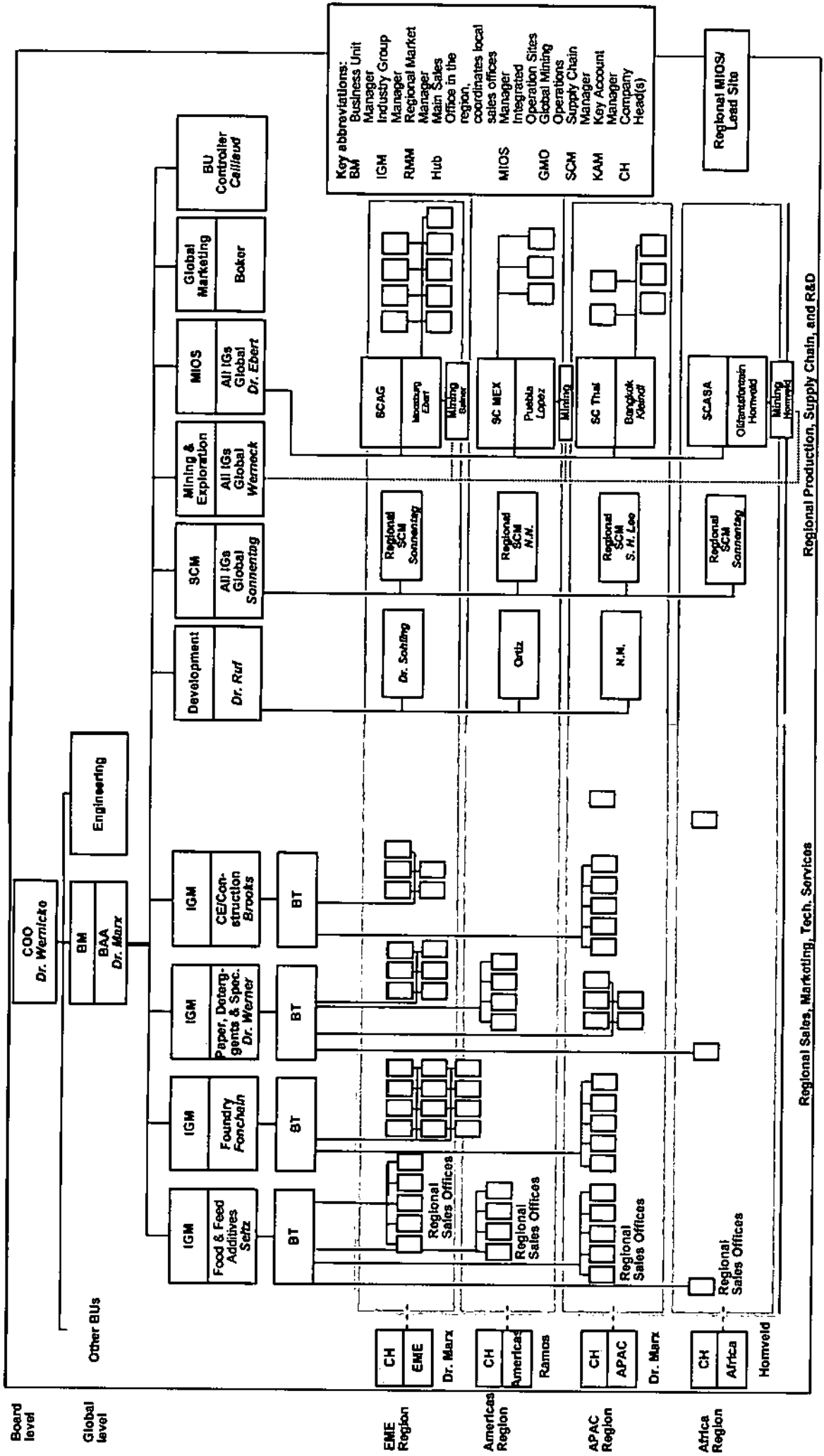


Figure 2.5: BCT organisational chart

