

**THE EFFECTIVENESS OF CAPACITY
BUILDING FOR WATER SERVICES
DELIVERY OBJECTIVES IN A MUNICIPAL
AUTHORITY**

By

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ABSTRACT

The Department of Water Affairs and Forestry (DWAF), as a sector leader and regulator in the water sector, embarked on an accredited training project to supply the municipalities with urgently needed water and sanitation treatment works skilled operators and supervisors. This addressed the identified need for skills/capacity development in the municipal water and sanitation treatment works operators.

However, the ineffectiveness of capacity building that resulted within the municipal authorities was expected due to the lack of operators' aligned-commitment. The result is that municipal water and sanitation works operators fail to apply and further develop their knowledge gained from theoretical training received during capacity-building programmes.

This study outlined the objectives, framework, methodology, literature review, empirical research and the recommendations of the study in which the effectiveness of capacity building for water services delivery objectives in municipal authorities was evaluated.

The effectiveness of capacity building depends on the level of employees' commitment to the organisational practice. Theoretical training is not a cure-all for the employees' capacity building to improve their job performance and organisational effectiveness on water service delivery.

This study focused on the water/wastewater works operators' information, recognition, and empowerment concerning their duties as being responsible for poor effectiveness of capacity building within municipal authorities for water service delivery. It also focused on evaluating theories and the nature of organisational and employee commitment emphasising alignment to commitment.

Evaluating the level of employees' commitment to the capacity-building programme contributes to the further recommendations for developing a comprehensive plan for creating an effective employee (operator) capacity-building programme.

Reviewed literature shows that, in modern organisations, more concern is being directed towards stimulating employees to enhance their job skills in an effort to ensure continual effective capacity-building training and highly committed employees. There seem to be several reasons why the topic of employee commitment receives attention when it comes to job performance. In this study, the focus has been firstly on the theories and nature of organisational and employee commitment, emphasising the alignment to commitment (aligned-commitment) and the elements constituting the aligned-commitment equation. The relationship between employee commitment and effectiveness outcome measures received attention, where the general assumption was that in organisational and employee commitment literature, job performance/job satisfaction induces motivation/commitment, and that the committed employee will be dedicated to greater work effort. Finally, a study was conducted as to the role of management in employee commitment, seeing that the role of management is the factor that underlies the commitment of employees/plant-operators.

Considering the literature reviewed, the empirical data gathered from the survey of municipalities' operators in the Free State were statistically analysed and interpreted. A response rate of 64 percent realised. The factor analysis of items that measured aligned-commitment indicated that items for each factor (knowledge, information, empowerment, rewards and recognition, and shared vision) clustered in a satisfactory manner. The Cronbach Alpha Coefficient was applied to determine the reliability of the aligned-commitment measuring instrument (Section A of the questionnaire). Subsequently, it was found that the instrument was indeed reliable. From the inter-correlations between each factor of aligned-commitment resulted low to moderate inter-correlations.

The findings of the study produced evidence that the levels of employees' aligned-commitment within the Free State municipalities' operators were weak, when

benchmarking it to the commitment levels of the Coetsee model. The response indicated the greater extent existence of each factor in which shared vision constituted a higher percentage, while empowerment, and rewards and recognition constituted lower percentages.

The correlation between participants' organisational commitment and aligned-commitment was also found to be very weak, where only 3.7 percent variance in organisational commitment could be explained by operators' aligned-commitment.

Additional findings include the overall perception of the participants on the benefit of capacity-building training, showing it to be beneficial 'to some extent' and 'to a much greater extent'. Additionally, most of the participants regarded their supervisors as being able to identify and address the basic needs of the operators to improve work performance to some extent, and described the relationship between them and their supervisors as being neither good nor bad.

In this study, employees' aligned-commitment levels explained variance in employees' job performance. To address this does not only require capacity building through training, which only provides knowledge, but engagement of practices resulting in all five elements of aligned-commitment as described by Coetsee. However, this study also suggests that high levels of employee job satisfaction will be present where employees' levels of education are low, irrespective of the level of organisational and/or employee commitment present. These suggestions offer additional opportunities for future research to establish the relationship among aligned-commitment, organisation commitment, and job satisfaction, comparing both findings from employees with adequate levels of education and employees with inadequate levels of education. Therefore, this study contributes to growing literature on the influence of aligned-commitment and organisational commitment on job performance and job satisfaction.

Key words: capacity building, aligned-commitment, organisational commitment, job satisfaction/performance, water, sanitation, operators, municipality

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LIST OF ABBREVIATIONS

DWAF Department of Water Affairs and Forestry

KPA Key performance area

KPI Key performance indicator

SANS South Africa National Standard

WRC Water Research Commission

CHAPTER 1

NATURE AND SCOPE OF THE STUDY

1.1 INTRODUCTION

Statistics in the Free State Province show that, most of the water and sanitation works operated by local municipality authorities, as compared to those operated by water boards (as the water service providers), fail to comply with compulsory national standards and norms in terms of water quality management (Department of Water Affairs and Forestry [hereafter referred to as DWAF], 2005; 2007:5). In her parliamentary speech, Lindiwe Hendricks (2008) mentioned that non-compliance of sanitation and water works is due to the lack of human capacity (trained engineers and scientists) within the municipalities.

Water service delivery in the water industry is strongly dependent on the degree of capacity that exists within the industry. This means that the municipalities' (water service authorities) capacity is the ability of municipalities to fulfil its constitutional duties and perform its powers and functions in terms of water supply and sanitation services.

However, there is a significant lack of human capacity to deliver water services at municipal level. Most municipalities will require some form of support and capacity building if they are to be able to give effect to efficient, effective, affordable and sustainable water service delivery (Water Research Commission [hereafter referred to as WRC], 2005:10; 2003; 2000).

Due to the identified need for skills/capacity development in the municipal water and sanitation treatment works operators, the DWAF, as a sector leader and regulator in the water sector, embarked on an accredited training project to supply the municipalities with urgently needed water and sanitation treatment works skilled operators and supervisors. A number of training providers were appointed to conduct the training of the selected municipalities that required immediate intervention in the Free State. The training would

provide the operators with the knowledge required for water and sanitation treatment works operation and maintenance.

This capacity-building project of training the operators came as a corrective measure in addressing challenges faced by the DWAF of non-compliance by municipalities with the compulsory national standards and norms in terms of water quality management. This need, to build capacity at the municipalities' level, was also made imperative by the 1999 transfer policy of the DWAF, which sets the framework for the transfer of the water schemes to municipalities' institutions (DWAF, 1998; DWAF, 1999). The overall aim of the project is to upgrade the operational effectiveness and efficiency of water and sanitation treatment works in the Free State province, and to enable municipalities responsible for these treatment plants to effectively plan and manage their operations in such a way that improvements in water quality are achieved.

Capacity has been defined in terms of both activities that an organisation should be performing, and the results it should be achieving (Storey, 2004:207; Labonte & Laverack, 2001:113; Light, 2004:23). However, when looking at the compliance to water quality standards, water produced by municipalities of whom their operators had undergone training programmes, still show the records and experiences of non-compliance with none to very little improvements in water quality supplied and water and sanitation plant maintenance (DWAF, 2007:5). This implies that a capacity-building objective to improve water quality results through training and development of operators on operation and maintenance of the water and sanitation plants, is not achieved; therefore, capacity building is ineffective.

Institutional capacity building is a means of enhancing performance. At the basic conceptual level, building capacity involves empowering and equipping people and organisations with appropriate tools and sustainable resources to solve their problems, rather than attempting to fix such problems directly. When capacity building is successful, the results lead to more effective individuals and institutions that are better able to provide products and services on a sustainable basis (Taigbenu, 2007:2-11).

Human resources development through training, education, and provision of information is the key dimension of capacity building. Training is not, however, enough. If new skills or ideas are going to be employed, then institutions and individuals need incentives to change practices and approaches; such incentives will need to be consistent with the broader goals of the institutions concerned. Improved human resources is a key factor in bringing about institutional capacity building. The ability of an institution to adapt to changing demands depends on how to adapt its human potential (the knowledge, perspectives and skills of its staff) (Taigbenu, 2007:2-11).

Building capacity features numerous references to the development and maturation of individuals within an organisation, not only as a means of self-fulfilment but also as a primary component of meeting the larger goals of the organisation (Jurie, 2000:268). For the efficiency and effectiveness of capacity building for the municipalities to achieve the goals aimed at, there are compulsory elements or factors that also should be considered to be in place. These compulsory elements result in organisational commitment when applied simultaneously. Theoretical training of water and wastewater works operators', therefore, only contribute to acquiring knowledge (which is one of the compulsory elements) of the operation and maintenance of water and sanitation works for operational effectiveness and efficiency.

On the relationship between commitment to stay in the job and organisational performance, previous research has found that *highly committed employees may perform better than less committed ones*. Higher levels of organisational commitment also are linked to higher levels of job performance. This is particularly true of effective commitment correlated positively with the performance of lower-level managers in a large food service company (Brewer & Lee, 2005:7). Therefore, in this study it is assumed that operators' commitment is positively correlated with organisational performance.

The concept of organisational commitment has been defined in various ways in the literature depending on the background of the scholar (Yousef, 2003:132). According to Yousef (2003:134), the most frequently used definition of organisational commitment is that of Porter, Steers, Mowday, and Bouliia (1974:604) who defined it as strong belief in and acceptance of the organisational goals and values, a willingness to exert considerable effort on behalf of the organisation and a definite desire to maintain organisational membership.

Coetsee (2002:28) defined commitment as shared vision, ownership, or full identification, being part of, also being passionately attached and co-creating. Coetsee (2002:29) further described alignment to commitment as aligned-commitment, which implies that all members of the work team are in line in their commitment. This definition of commitment by Coetsee is the one that is considered primarily in this study, assuming that Coetsee's model of aligned-commitment is correct.

Consequently, in the service sector organisational commitment may be considered a scarce trait. Organisational commitment to the employer constitutes an intangible resource, as its value has its roots in a complex network of social relationship between individuals reflected in performance management, recognition, compensation practices or communication programmes, which are not easy to identify and which have developed over a period of years (Roca-Puig, Beltran-Martin, Escrig-Tena and Bou-Liusar, (2005:2079).

Beyond attempts to control employees, managers and supervisors must focus on giving employees the required organisational support and resources in order to facilitate task performance (Roca-Puig et al., 2005:2091). These characteristics define the human resource management model oriented towards commitment to employees. Managers should evaluate the role of human resource management practices, leadership style and trust in influencing commitment to the organisation and organisational trust (Laka-Mathebula, 2004:174).

Coetsee (2002:30) described successful aligned-commitment of employees as effectiveness of capacity in the form of the following equation:

$$\textit{Aligned-Commitment} = \textit{Knowledge} \times \textit{Information} \times \textit{Empowerment} \times \textit{Performance} \\ \textit{Strengthening (Rewards \& Recognition)} \times \textit{Shared Vision (Shared Goals \& Values)}$$

It is very important to note that the aligned-commitment formula is a multiplication (x) equation and not an addition (+) equation. This indicates that if one element (e.g. Information) is not present, the product will be zero (0). All five elements must be present (Coetsee, 2002:30).

Intervention by the DWAF for training the operators and supervisors to operate water and sanitation works effectively (addressing non-compliance by municipalities with the compulsory national standards and norms in terms of the water quality management) only provides knowledge to operators as a corrective measure in addressing challenges the Department face.

If one has the knowledge but cannot use it and cannot properly connect the knowledge with the practical problem or challenge one is faced with, it is like knowing enough to be aware you have a problem but not enough to understand the real nature of the problem, or to see how best to tackle it. Knowledge is regarded as something that is valuable for its own sake rather than something where the value is in its use (Scott, 2003:6). Therefore, most of that extra knowledge comes from actually getting involved in trying to use whatever knowledge one already has, and this can only be supported by engaging other elements of aligned-commitment. For example, effective knowledge application needs the intensive communication between managers and employees (sharing information), employee participation in decision-making (employee empowerment) and an explicit recognition of cooperation on the part of management (performance strengthening) which are all vital requirements for service delivery (shared vision).

From the commitment literature review, the challenges that mitigate against effective capacity building to operators include a lack of aligned-commitment instruments, which would be information, empowerment, rewards and recognition, and shared vision.

The author, while conducting municipalities' water and sanitation works audits in the Free State, has physically observed the following (table 1.1):

Table 1.1: Physical observances from Free State municipalities' water and sanitation works

Elements	Findings
Information	Operators not exposed to or engaged in information-sharing processes like meetings, operation manuals and more, wherein they would be informed of answers to "what, why, how, when and who" equations about their work performance and its improvement.
Rewards and recognition	Operators are not motivated to work and have a weak attitude towards work due to the lack of recognition for a job done well.
Empowerment	There are fewer considerations of most significant importance of empowering operators to develop the ability to perform their duties more effectively, as most of the decisions to perform a task are not made by operators.

Netshidaulu (2008: March)

1.2 STATEMENT OF THE PROBLEM

Coetsee's (2002:30) aligned-commitment literature/research has suggested that knowledge developed through education and training, as part of the capacity-building programme in the municipalities is one of the important element of employees' commitment required for effective skills development (capacity development). Ineffectiveness of capacity building due to the lack of employees' commitment is expected within the municipality authorities since the improvement of quality water service delivery in terms of water quality supplied is un-noticeable. This is supported by reports from the media reported during the month of January 2008 and reports by the Department of Water Affairs (Free State regional offices) discussing water quality supplied to consumers in the Free State (DWAF, 2007:1).

Therefore, the problem statement is the following: *municipality water and sanitation works operators fail to apply and further develop their knowledge gained from theoretical training of a capacity-building program, to effectively operate, manage, and improve water service delivery. The question that needs to be answered is whether a lack of aligned-commitment within Free State municipalities is responsible for the ineffectiveness of operators' capacity-building training intervention programmes aimed at improving water service delivery to strengthen organisational performance.*

1.3 RESEARCH OBJECTIVE

1.3.1 General objective

The relationship between employee aligned-commitment and capacity-building training effectiveness can, at best, be explained by stating that capacity-building training effectiveness is displayed by employees' effectiveness, demonstrating their level of commitment to the organisation and job satisfaction/performance. Thus, this study was directed to evaluate the level of aligned-commitment of water and sanitation works operators, which displays effectiveness of capacity building for water service delivery.

The required results and information were obtained by means of research at specific municipalities. The results of the study should assist the management of the municipalities to adopt the prescribed way to induce and maintain aligned-commitment on the part of their operators/employees.

1.3.2 Specific objectives

In attempting to answer the research problem, this study was directed at the following objectives:

1. To describe the most significant model (aligned-commitment equation) of needs assessment to support employees' capacity-building programme (training and development) effectiveness that will enhance municipal water service delivery.
2. To describe elements of aligned-commitment as they may apply to municipalities for effective and efficient training and development.
3. To determine the level of water and sanitation works operators' aligned-commitment.
4. The results of this study suggest recommendations for developing a comprehensive plan for the creation of effective employee (operator) aligned-commitment for a capacity-building programme to be effective.

1.4 RESEARCH METHOD AND PROCEDURE

Martin and Petty (2000:91) define the research method as a blueprint for the implementation and management of a given research project. The research findings were based on primary data. The primary data were collected from the responses of:

1. Operators who were trained under the project of capacity building (implemented by DWAF) to determine the level of aligned-commitment of the operators that lead to effectiveness of capacity-building training;
2. Untrained operators; and
3. Trained operators from the water board (water service provider).

This method has been chosen because comprehensive information is easily gathered in a systematic way. The investigation involved the Phumelela and Xharip District municipality where training for capacity building was conducted. Chapter 3 presents the results of the study.

The research methods used within this study are the following:

1.4.1 Literature review

A literature study provided an understanding of organisational commitment. The literature study focused on the elements of aligned-commitment as described by Coetsee (2002:30).

1.4.2 Questionnaire

A questionnaire was constructed from the literature by establishing questionnaire items to fit the objectives of the study. This study investigated the population of water works operators who had undergone the training for capacity building. A survey questionnaire was delivered personally to operators who were available for any clarification on the questions because of language difficulties.

1.4.3 Primary data collection: the evaluation of the level of operators' aligned-commitment for water service delivery

The researcher performed this function in order to reduce the cost of the research project. The primary data collection was conducted through questionnaires to ascertain the following information:

1. Knowledge: Creation of a learning climate whereby skills and abilities of employees are developed and trained through integrated methods leading to the efficient contribution of wisdom rather than information;
2. Information: Horizontal and vertical communication should be understandable for employees to accept it;
3. Empowerment: Based on trust, the delegation of some responsibility by the supervisor and/or management to operators, leads to a better understanding of some of the realities facing the development and motivation of operators to feel more part of the team, as well as applying knowledge gained during training;
4. Rewards and recognition: Assurance of fair recognition, praise, increases, promotions, and fair labour practices are expected;
5. Shared vision: Assurance that goals are clearly defined, well-communicated, understood, and accepted by all operators.

1.4.4 Data analysis

The primary data were captured and processed in a single database, as designed by the North-West University's Statistical Services. The researcher analysed the data. During the research, any encountered problems were resolved by the researcher in order to capture the reliable data, hence quality output was ensured. The information had to be transparent. Tables and statistics were applied in the research study.

The participants were requested to complete a prepared questionnaire. All responses were used for data and statistical analyses.

1.5 LIMITATIONS OF THE STUDY

This study was confined to the municipality authorities in the Free State province where training of operators had already been held. Therefore, generalising the results reported in this research to other municipalities around South Africa should be done cautiously. Since the results presented in this study were based on a small number of participants, the

reader should treat findings with caution. This limitation may affect the validity and reliability of the study. This study largely explores an attempt to build a foundation on which to base investigations that is more comprehensive with larger participant samples.

Concerning the proposed research design, some major limitations were the following:

First, this study was directed at the individual capacity (training) as an integral component for capacity building for operators to be able to deliver water services effectively. However, the effect of a lack of institutional capacity (for example, operational resources) and enabling environmental capacity (e.g. strategy, politics, policies, and so forth) within some of the municipalities that require efficient water service delivery did not receive any consideration in this study. Second, there is a national limitation. No empirical investigation of the topic has been undertaken in municipalities' authority in South Africa before. Hence, the findings of the research are only limited to municipalities where training occurred. Third, this study utilised a sample of water and sanitation works operators trained under the capacity-building programme, and the responses were from the operators whom are employed by those selected municipalities. Hence, the findings may not extend to other training programmes done by the municipalities in other provinces. Fourth, the sampling frame involved operators with and without a post Grade 12 level (college) qualification, which may lead to bias in the results of the empirical implication since their expectations, options, and level of understanding are different.

1.6 ASSUMPTIONS OF THE STUDY

- A key assumption of this research study was that the responses of water and sanitation works operators reflect the situation underlying operators' commitment measurement and knowledge.
- It was also assumed that the operators were willing to provide true information of their situation through a survey instrument.

- This study assumed that the research problems, as stated, were faced by municipalities where operators' training was conducted, and it accounts for the majority of factors that inhibit the effectiveness of the capacity-building objective.
- Another assumption in this study was that the adopted theoretical model (aligned-commitment equation) and method could be modified to fit in the municipality service delivery culture.
- It was assumed also that DWAF-Free State and management of the municipalities in the Free State recognise and acknowledge this problem, and would commit to support recommendations that this study proposed.

1.7 DEFINITION OF CONCEPTS

Effectiveness – is the achievement of a certain goal irrespective of the method and techniques followed to achieve the goal, while **efficiency** on the other hand implies that the correct method or techniques were followed to achieve a certain goal(Coetsee, 2002).

Capacity building - is only referring to the potential and competency found within a person; that is, individual capacity. This is reflected as specific technical and generic skills, knowledge, attitudes, and behaviour accumulated through education, training, experience, and so forth, directed towards helping municipalities to acquire the ability to undertake tasks (plan and manage their water service affairs more effectively), for achieving water and sanitation delivery targets (Taigbenu, 2007:2-11).

Aligned-commitment – is referred to as a shared vision, ownership, or full identification, being part of, being passionately attached to and co-creating (Coetsee, 2002:29).

Water treatment operators – refers to municipality personnel/employees who perform day-to-day operations and maintenance duties in water treatment plants on site and who have undergone the capacity-building training programme.

Municipality – refers to water service authorities and providers who were involved in capacity-building projects in the Free State.

1.8 LAYOUT OF THE STUDY

CHAPTER 1: *Introduction*

In this chapter, the aim was to set the context of why the specific topic had been chosen. The problem statement was formulated and the research objectives and method were given.

CHAPTER 2: *Aligned-commitment theory*

The aim was to present the literature reviews carried out for this study and provide a theoretical background to employees' aligned-commitment. The research objectives outlined in section 1.3 above were addressed within this chapter.

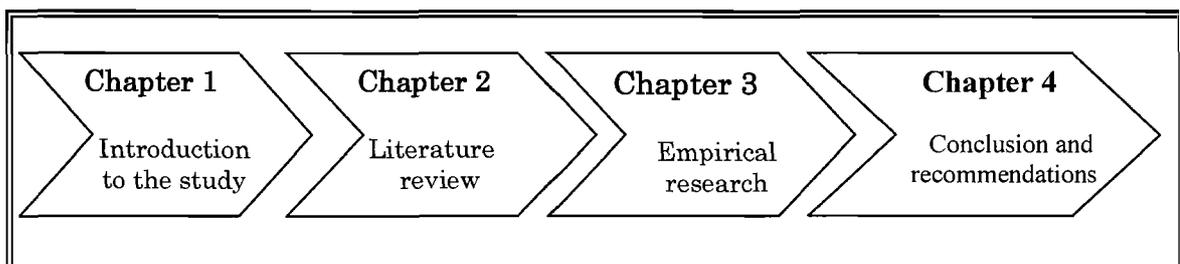
CHAPTER 3: *Empirical research results and data analysis*

This chapter contained an empirical study that was undertaken to assess the level of operators' aligned-commitment to capacity building for effective water service delivery within the selected municipalities in the Free State.

CHAPTER 4: *Conclusion and recommendations*

Specific findings and conclusions derived from the research were discussed. Recommendations for further improvement and DWAF feedback and/or municipality management feedback on the effectiveness of a capacity-building intervention project and the implementation of aligned-commitment elements were also made within this chapter.

Figure 1.1: A conceptual outline of the dissertation



1.9 CHAPTER SUMMARY

The chapter outlined the background of the research, its objectives, framework of the study, methodology, and layout of the study. The effectiveness of capacity building depends on the level of employees' commitment to the organisational practice. Theoretical training is not a cure-all for the employees' capacity building to improve their job performance and organisational effectiveness in water service delivery.

This research focused on the water/wastewater works operators' information, recognition, and empowerment in their duties as being responsible for poor effectiveness of capacity building within municipal authorities for water service delivery. It also focused on evaluating theories and the nature of organisation and employee commitment emphasising the alignment to commitment.

The evaluation of the level of employees' commitment to the capacity-building programme contributes to the further recommendations for developing a comprehensive plan for the creation of an effective employee (operator) capacity-building programme.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This literature review offers a comprehensive look at the effectiveness of employees' capacity building as it may apply to water services municipalities in the Free State. One overarching concept that offers an integrated approach to measure the effectiveness of employee capacity building is employee commitment (Brown, 2003:28). Furthermore, the literature describes aligned-commitment as the most significant method of needs assessment for capacity-building programmes for employees, and also describes elements of aligned-commitment for effective and efficient capacity building. It will also provide a clear understanding of how to implement a successful capacity-building programme in the municipalities.

Research has linked employees' commitment to measures of effectiveness such as job performance and job effectiveness. The conclusions from many organisational commitment studies have been that employees who have high levels of commitment to the organisation are more effective (Brown, 2003:71).

Since human resource capacity affects individual and organisational effectiveness, it should be related to employees' level of commitment. An investigation into the relationship between employees' capacity building and organisational commitment can add to the knowledge of individual and organisational effectiveness.

2.2 ROLE AND FUNCTION OF CAPACITY BUILDING IN THE ORGANISATION

Definitions of the concept “capacity building” in the literature has often referred to as any and all skills development efforts directed towards helping an organisation to plan and manage work more effectively to achieve organisational purpose. Moreover, it is facilitated through the provision of technical support activities, including coaching, training, specific technical assistance and resource networking (Light, 2004:23). The management capacity of an organisation is its ability to identify problems, develop and evaluate procedures and alternatives for dealing with them, and operate organisational programmes. The effectiveness of existing staff might increase through the introduction of tools, such as information systems, that contribute to management control, problem analysis, program evaluation, or strategic planning (Steinhoff, 2001:28; Honadle & Howitt, 1986:149).

Jurie (2000:271) emphasised that capacity building features numerous references to the development and maturation of individuals within the organisation, not only as a means of self-fulfilment but also as a primary component of meeting the larger goals of the organisation.

In too many cases, however, capacity building is conceived as the application of a particular approach to every management problem in any context, or it is considered as the improvement of a facet of management, which is equated with organisational capacity (Light, 2004:22). One of the most intriguing aspects of the construction of organisational competence is the concept of capacity. Used at times interchangeably with capability, capacity may be understood as the inherent endowment possessed by individuals or organisations to achieve their fullest potential. Clearly, capacity and capability are interrelated concepts, implying a transformative process required to bring about an improvement in status, with capability developing and expanding capacity to attain competence (Jurie, 2000:273).

Staff capability can be achieved through staff training and development. Staff development relates to bringing knowledge and expertise to the ground level in order to improve the efficiency and effectiveness of the human element in every direction within an organisation, and it is characterised by such qualities as competence, effectiveness and a high degree of personal responsibility (Manu, 2004:12). Capability could be described as involving both commitment and participation, and can also be described as the enhancement of problem solving (Jurie, 2000:273). In other words, attracting knowledge inputs are vital to organisational capacity, but alone it is an insufficient concept of capacity. Good capacity building is more likely when students (employees/operators) have several opportunities and challenges concerning a particular skill. For example, municipalities that seek to develop their operators' competency in preparing their water treatment skills should provide operators with a number of opportunities and challenges to try their hands at this task. Without repeated opportunities and challenges, a capacity-building framework is less likely to become encoded in operators' long-term memories. The research of Binder, Moore and Bergman (2007:888) demonstrates that students accumulate knowledge through many opportunities of observing similarities and differences across diverse events. For example, one can enhance the likelihood that operators will transfer understanding of how to analyse water quality by giving them opportunities to be involved (committed) in different factual water quality management contexts.

The internal development of employees, open and intensive communication between managers and employees, employee participation in decision-making and an explicit recognition of this cooperation on the part of management are vital requirements for managing services (Roca-Puig et al., 2005:2089). Jurie (2000:269) also states that people cannot realise their values or goals without power. Power is the capacity to act publicly and effectively to bring about positive change, and to build hope. Manu (2004:12) indicated that, not only is training and development of employees an attempt to improve product quality and service delivery, but also a way to make the employees feel valued and part of the organisation, which can raise the employees' morale and encourage their commitment to the organisation. Therefore, capacity building is more effective when

employees are committed to their organisational operation. Employee commitment and motivation are highly regarded as important to the training and development measurement of organisation performance (Manu, 2004:20).

2.3 COMMITMENT MODEL FOR EFFECTIVE CAPACITY-BUILDING TRAINING

2.3.1 Three types of organisational commitment

Meyer and Allen (as quoted by Brown, 2003:21) offer the following definition of their three types of organisational commitment:

Affective Commitment: refers to employees' emotional attachment to, identification with, and involvement in the organisation. Employees with a strong affective commitment continue employment with the organisation because they **want** to do so.

Continuance Commitment: refers to an awareness of the costs associated with leaving the organisation. Employees whose primary link to the organisation is based on continuance commitment, remain because they **need** to do so.

Normative Commitment: reflects a feeling of obligation to continue employment. Employees with a high level of normative commitment feel that they **ought** to remain with the organisation.

According to Brown (2003:31), arguing for the three separate types of commitment that Meyer and Allen offered, affective, continuance and normative commitment are best viewed as disguisable components, rather than types of attitudinal commitment; that is, employees can experience each of these psychological states to varying degrees. Some employees, for example, might feel both a strong need and a strong obligation to remain, but no desire to do so; others might feel neither a need nor obligation but a strong desire,

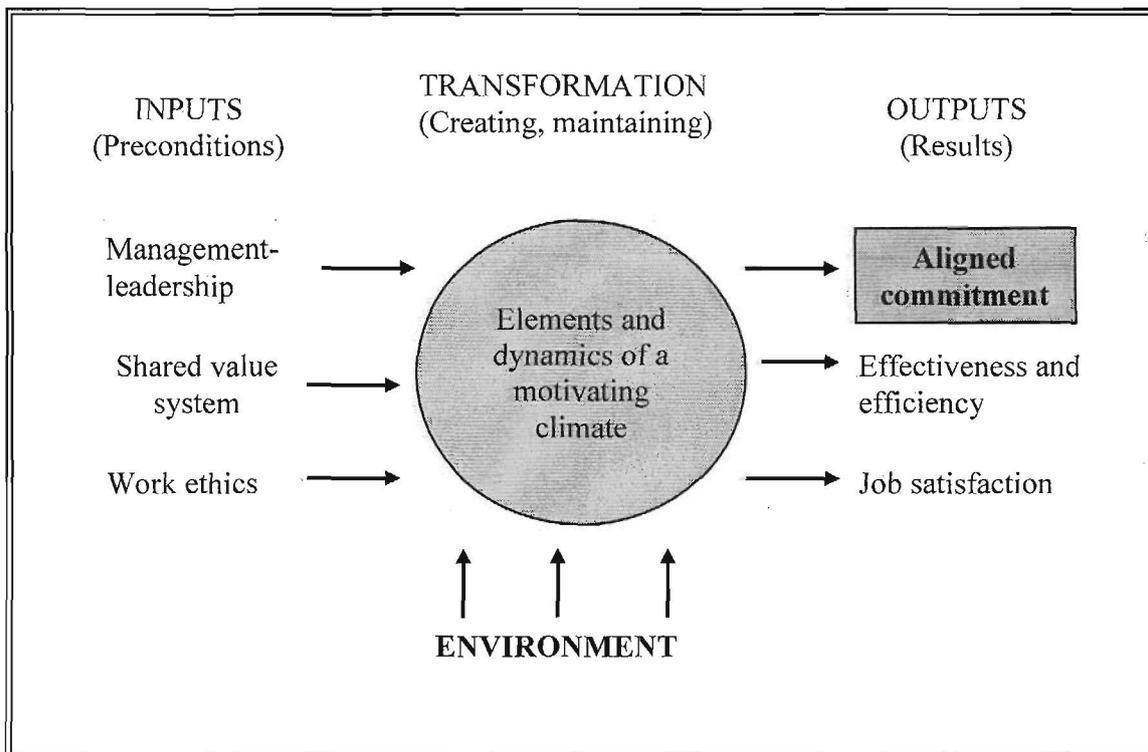
and so on. Therefore, the result of employees' commitment to the organisation reflects each of these separable psychological states.

2.3.2 Theories of commitment

2.3.2.1 Commitment vs. motivating climate

The product of the elements in the aligned-commitment equation is aligned-commitment, which means that aligned-commitment is the result of the multiplication of those five elements. Moreover, according to the open system model of a motivating climate (Coetsee, 2002:25), aligned-commitment is the result or the outcome of a motivating climate, in which the five elements of the multiplicative aligned-commitment equation are all either inputs or elements of the transformational process of the model.

Figure 2.1: Open system model of a motivating climate



Source: Coetsee (2002:25)

2.3.2.2 The nature of motivational theories

The theories of motivation focus on the behaviour of an individual in relation to his/her surroundings. The theories below provide helpful elements to support the study.

The Mc Gregor Theory X – Theory Y

Theory X holds that the average person has an inherent dislike of work effort. Work is looked upon as an economic necessity; responsibility is avoided and the effort brought on task performance will be just sufficient to keep out of trouble. Whatever personal ambition workers may have to lead a meaningful life they will seek to satisfy outside the work environment. Those who hold this view about worker motivation will adopt a style of management that relies on centralised authority, close control of behaviour at work, and the use of rewards, threats, punishment, and other coercive measures to get an acceptable level of performance from employees. Whatever the truth about this work motivational generalisation may be, if work is organised in accordance with this belief, it leaves employees with little option but to behave in the expected manner for effective work effort.

Theory Y on the contrary holds that people will voluntarily make an effort in their job if they are committed to its objectives. This commitment will be forthcoming if the worker is made to realise that there need be no conflict between the satisfaction of his own needs and those of the organisation in the work situation. This demand, in the first place, recognition by management that the worker seeks to satisfy more than an economic need through the performance of this daily task. Secondly, it requires work to be organised in a non-authoritarian way and active seeking of responsibility, by self-direction and self-control, and a willingness to go all-out in making the organisation successful (McGregor, 1967 and Biesheuvel, 1984:52).

In consideration of these two theories (X and Y), the role of supervision should be directive and supportive, not threatening or punitive as it is inclined to be in Theory X.

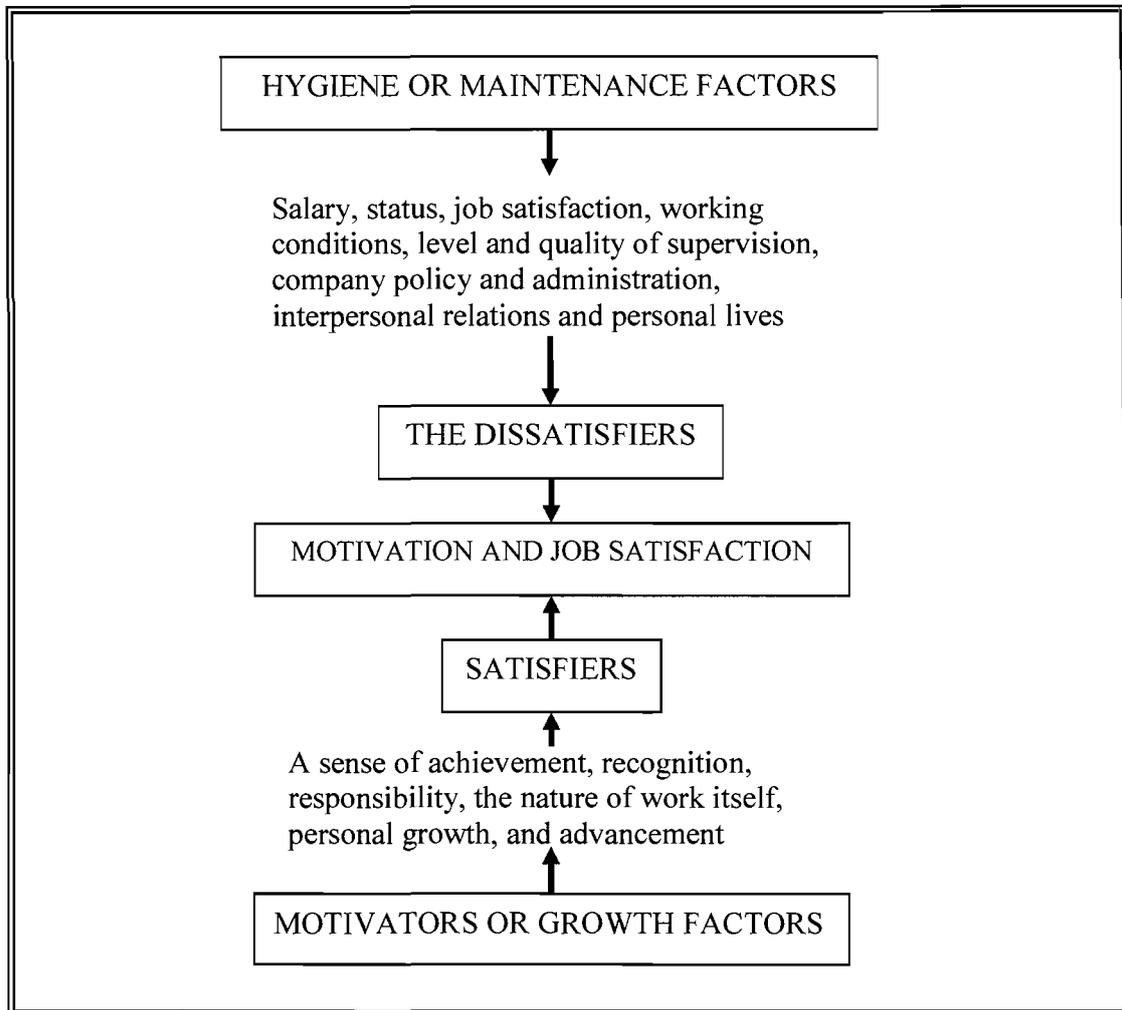
The notion that, in due course, through the practice of Theory Y, employees can become self-directive, is unrealistic, but could indeed happen within homogeneous, knowledgeable and dedicated employees who are capable of a good deal of internalised control in accordance with organisational values.

Hertzberg's Two-Factor Motivational Theory

Hertzberg's two-factor theory is seen as one of the more sophisticated motivational theories. Hertzberg believed that an individual's relationship to his/her work is a basic one and that his or her attitude towards work can very well determine the individual's success or failure (Hertzberg, Mausner & Snyderman, 1959; Beukes, 2001:19).

The motivators are all intrinsic to the job: they relate to its content, to the scope it offers for the development of interests; for the exercise of skills, intelligence and responsibility, for opportunities to achieve, to receive recognition for achievement, and to advance to levels where the individual can realise his capacities to the fullest extent. In the jobs that are intrinsically satisfying, the employee needs no external pressure to perform; the job generates the necessary effort. The employee motivates himself, hence the designation of the intrinsic job factors as motivators. The extrinsic factors, on the other hand, are the motive force that pushes the individual to perform a job that has no intrinsic meaning or attraction (Biesheuvel, 1984:59).

Figure 2.2: A representation of Herzberg's two-factor motivational theory



Source: Adapted from Biesheuvel (1984:59) and Beukes (2001:20)

Maslow's Need-Hierarchy Theory

Maslow's theory (first published in 1943) proposed that a person's motivational needs could be arranged in a hierarchical order of importance (Beukes, 2001:13). As generally presented, the theory holds that human needs form a hierarchical progression through five levels. There are pre-potency relationships between the levels, meaning that a lower level need is dominant over the next higher one, which will not emerge until the lower one has been fully satisfied. At the bottom of the hierarchy are the needs that are indispensable

for physical needs. The physical needs are followed by safety/security needs, which ensure survival in the longer term. Needs at the third level relate to the nature of man as a social being. They are variously referred to as a need for affiliation, belongingness and for love, the term preferred by Maslow as the most appropriate for this cluster of needs. The higher-level needs of the self are located at the fourth level. Beukes (2001:19) and Biesheuvel (1984:47) indicated that they consist of two groups. One cluster comprises the need for self-esteem, which expresses itself in the form of the desire for:

- Strength;
- Achievement;
- Adequacy;
- Mastery and competence;
- Confidence;
- Freedom.

The other cluster is concerned with the need to be esteemed by and to enjoy deference from people in one or other of the group to which one:

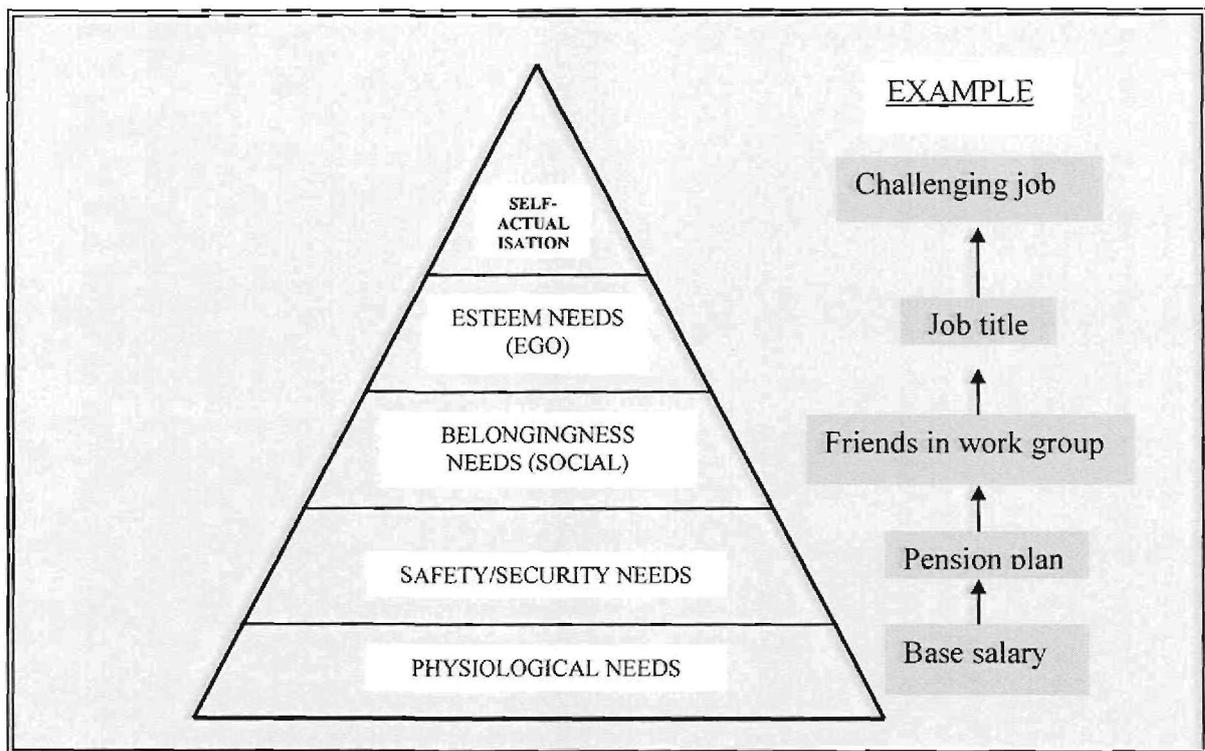
- Belongs;
- Activates a desire for reputation;
- Holds dominance;
- Gets recognition;
- Gets attention;
- Has importance; or
- Shows appreciation.

Together they are referred to as the esteem or ego needs.

At the top of the hierarchy, there is the need for self-actualisation, the pinnacle of human endeavour, which is referred to as the desire to become more and more what one is, to become everything that one is capable of becoming. Maslow (1954:9), Beukes (2001:21) and Biesheuvel (1984:48) indicated that there are two kinds of self-actualisation: the doers – who want to do the best they can in the world of everyday affairs according to

their abilities – and the contemplators, who seek to transcend basic and ego needs. This is achieved by means of peak experiences of an ecstatic kind in which one moves towards perfect justice, or towards perfect values.

Figure 2.3: Maslow's need-hierarchy theory



Source: Adapted from Beukes (2001:20)

Maslow, McGregor, and Herzberg, in their motivational theories, believe that all people are capable of being motivated by desire for achievement, responsibility, and growth.

2.3.3 Significant commitment model of needs assessment

A needs assessment is the systematic process of determining goals, identifying discrepancies between actual and desired conditions, establishing priorities for actual and desired conditions, and establishing priorities for action (Manu, 2004:30). The needs may be for correcting the current deficiency, such as an ineffective operator/employee performance, or can be for adapting to a new challenge that demands a change in the way

the municipalities' water services operate. Since the workplace is changing dramatically and demands for the highest quality products and services are increasing, to remain competitive in the face of these pressures, employee commitment is crucial. Without employee commitment to the organisation, there can be no improvement in any area of organisational activity. Organisational commitment is a construct potentially useful for characterising, understanding, willing, and active service of employees despite the associated hardships (Tremble, Payne, Finch and Bullis, 2003:167).

The concept of organisational commitment has been defined in various ways in the literature depending on the background of the scholar (Yousef, 2003:132). According to Yousef (2003:134), the most frequently used definition of organisation commitment is that of Porter et al. (1974:603) who defined it as a strong belief in and acceptance of the organisational goals and value, a willingness to exert considerable effort on behalf of the organisation and a definite desire to maintain organisational membership.

The relationship between commitment and effective capacity-building training can best be explained by stating that effective capacity-building training is displaced by employees' commitment. Employees' commitment to organisation goals and values should thus be seen as an important/most significant model, which leads to the display of employee effectiveness resulting in 'water service operation' effectiveness. Therefore, aligned-commitment is assumed to be a significant model needed for assessing operators' commitment to the municipality's water service goals.

2.4 ALIGNED-COMMITMENT MODEL

One can have commitment without alignment and agreement, but the commitment will be superficial. Commitment without alignment and agreement has no teeth, and is often a way for someone to say no by saying yes, and finding out afterwards that without alignment and agreement, a commitment is empty (Anon., 2007b:25). Aligned-commitment enables the employee to meet the goal on the job while also doing a fair

share of the work to meet performance requirements. This motivates an employee where he/she has to attain certain goals.

2.4.1 Coetsee's aligned-commitment model

Coetsee (2002:30) identified factors of various organisational practices in building employee commitment. The identified practices include five elements, namely knowledge, information, empowerment, rewards and recognition, and shared goals and values. The following is the example of the way of applying Coetsee's model for improving aligned-commitment in an organisation:

- Knowledge: Create a learning climate whereby skills and abilities of employees are developed and trained through integrated methods leading to the efficient contribution of wisdom rather than information;
- Information: Communicate horizontally and vertically in such a way that employees understand and accept it;
- Empowerment: Based on trust, this forces management to delegate some of the responsibilities. It leads to a better understanding of some of the realities facing management, develops abilities of individuals, and motivates individuals to feel more part of the team;
- Rewards: Ensure fair recognition, praise, increases, promotions, and disciplinary steps. Ensure that remuneration is tied to performance measures;
- Shared vision: Ensure that goals are clearly defined, well-communicated, understood, and accepted by all employees.

Aligned-commitment of employees is described in the form of the following equation:

$$\textit{Aligned-Commitment} = \textit{Knowledge} \times \textit{Information} \times \textit{Empowerment} \times \textit{Performance Strengthening (Rewards \& Recognition)} \times \textit{Shared Vision (Goals \& Values)}$$

Aligned-commitment is a product of employees' knowledge, the information they possess, the extent to which they are empowered, the rewards and recognition they receive and the extent to which they understand and live the shared vision (goals and values) of the organisation.

Therefore, the effort of applying each element of the aligned-commitment equation for any reason to enhance organisation effectiveness, for example, water and sanitation works operators' knowledge provision through capacity-building training is only possible if all the elements of the aligned-commitment equation are focused on, unlike the capacity-building training process, which only focuses on knowledge while other elements are ignored.

2.4.2 Kotzé's aligned-commitment model

As outlined in the article by Kotzé (2002:514; 2005), the following is the example of the way of applying Kotzé's model for improving aligned-commitment in an organisation:

- Ensure the vision is short, unleashes energy, expresses a dream, is symbolic and educational, provides direction, is emotional and motivational, and addresses values as well as performance;
- Create a strategic plan that is appropriate and aimed at winning;
- Ensure that the organisational structure suits the strategy, is efficient and effective, and supports excellent horizontal and vertical communication;
- Clearly identify the core values of the organisation, and communicate these with team members so that its applicability to the functioning of the unit is better understood;
- Have a performance management system whereby KPAs are clearly identified, and KPIs are closely monitored in order to ensure equity and fairness in the evaluation process;
- Tie performance measures to the objectives of the strategic plan;

- Reward good performance suitably, and ensure transparency;
- Ensure that potential is identified and unlocked. Target employees' self-concept, their locus of control, their abilities, and their needs;
- Have a supplementary incentive compensation scheme to address outstanding contributions in line with the ultimate vision.

After comparing the two models outlined above, Coetsee's model of aligned-commitment is assumed the most significant model needed for assessing operators' commitment to the municipalities' effective and efficient water service goals.

2.5 ELEMENTS OF THE ALIGNED-COMMITMENT EQUATION

2.5.1 Information

Information is the basic element of knowledge; if the meaning of the information is developed, it results into knowledge. Coetsee (2002:32) pointed out that aligned-commitment is directly dependent on how well information is distributed in the organisation and especially how well it is understood, accepted and used by the people involved.

According to Scheeder (2008:3) and the Oxford Advanced Learner's Dictionary (1989:641), information is understood as facts told, heard, or discovered. Information leads to understanding and understanding leads to a sharing of goals. When managers do not share information with their employees, they let imagination run wild, which leads to frustration, lack of innovation and involvement (Bouthillier & Shearer, 2002:3). Sharing information must have a business purpose at its roots. Sharing information should support business decision making or propel innovation. To support this, there must also be a structured process by which to capture and use the uncovered information. Beneficial information-sharing activities are capturing problem-solving conversations by other

employees so that others in the organisation can benefit from their expertise (Achterberg, 2001:1).

Hoarding information is identified as a huge barrier to optimal productivity. When job security or power is at stake, employees tend to hoard information as a means to protect that security or power. This makes an information-sharing culture nearly impossible to attain, inhibiting needed information reaching the right employees in time to act, resulting in the organisation failing to meet deadlines or productivity goals (Anon., 2007a:29). One of the most counterproductive rules in business is to distribute information based on a “need to know” basis. This severely, unnecessarily, and destructively restricts the flow of information in an organisation (Sirota, Mischkind and Meltzer, 2006:1).

Information integration, as well as information sharing, offers organisations a greater capacity to share information across organisational boundaries, to discover patterns and interactions, and to make better-informed decisions based on more complete data (Gil-Garcia, Schneider and Prado, 2004:5). Decentralisation, improved decision-making, high quality services, empowerment and greater productivity have been mentioned as potential gains from information integration projects.

In the process of learning, employees require specific information to help them make correct adjustments, be able to recognise their errors/mistakes, and be aware of how to take the proper steps to correct their mistakes. This will refine employees’ skill, after which the skill will become habitual or automatic (Mannie, 1997:1). Mistakes will still be made, even when this level of learning (skill) has been achieved. However, the individual will be able to tell what he/she did wrong, why and where he/she did it wrong, what should have been done, and describe the proper techniques or ways for doing it right in future.

Workplaces are characterised by constant change and people are now knowledge workers. In this environment, people need to be informed. They need the technical

information required to do their jobs, but they also need to be shown the bigger picture. “We are not just buying muscles; we are buying hearts and minds” (Garrun, 2008:2).

Effective information sharing benefits everyone in a workplace. Feedback, teamwork, and communication advocates will be good equippers to develop programmes that offer true solutions to organisations’ pervasive lack of information-sharing (Cresswell, Prado, Canestrato and Dawes, 2005:1). Two heads are better than one; likewise, when employees share information to get other employees’ input, they could do their job even better, which will make them more valuable. Good communication requires managers to be attuned to what employees want and what they need to know. The best way to identify employees’ needs is by asking them. Managers must discipline themselves to communicate regularly, and schedule regular employee meetings that have no purpose other than two-way communication.

2.5.2 Knowledge

Knowledge may be defined as information where validity has been established through test of proof and can therefore be distinguished from opinion, speculation, beliefs, or other types of unproven information (Murray, 2007: 121). According to Chaffey and Wood (2005:179), knowledge is understanding, all that is known, familiarity gained by experience, and an organised body of information. Coetsee (2002:31) outlined the level of knowledge as the following:

- Information – the first level of knowledge which can be shared from meeting;
- Insight – the second level of knowledge, which implies knowing about the elements, their interrelationship and dynamics of a greater whole; and
- Understanding is the third level of knowledge, which is a prerequisite for evaluating something. For example, when employees understand the operation of a plant, they have experienced it and they are able to evaluate it. Therefore, if one understands something he/she is able to answer the “Why is” question.

Knowledge is generated through training and development programmes, and knowledge sharing can be managed by selecting appropriate communication media for the type of knowledge to be transferred. Murray (2007:121) mentions that communication media is classified as most likely to be chosen to share information or explicit knowledge.

It is important to encourage a continuous learning environment since the effectiveness of skills development is dependent on the knowledge gained through learning. Research by psychologists suggests that the same amount of overall practice is much more effective for long-term retention when the practice is distributed over time (Binder, Moore and Bergman, 2007:879). For example, four 30-minute practice sessions spread over two days are more effective than the same four 30-minute practice sessions in one day. This can be achieved by encouraging employee aligned-commitment, by holding meetings (information sharing), and employee empowerment is practiced within the organisation.

Many researchers have written that knowledge is the ingredient in gaining a competitive advantage and that knowledge is a firm's main inimitable resource. Moreover, the idea that knowledge transfer is necessary for an organisation's success has become the focal point of strategy and the strategic planning process (Murray, 2007:122). However, in this study, even though knowledge is most important for employee commitment, other elements of the aligned-commitment equation must also be considered seeing that the ability of knowledge to achieve productivity is supported.

Fearfull (2003:140) indicates that there are many ways of considering skill and knowledge, and this whole area might be considered a minefield in which there are many frameworks and models available to build up a picture of skill. Additionally, Fearfull states the need to understand what knowledge is required in order for workers to know when and why action must be taken. Therefore, job knowledge measurement should not be restricted to the technical knowledge an employee is required to bring to a specialised job. It is much broader and it includes the range of pertinent policies, regulations, and procedures related to his/her assignments. It does not relate to the mental or physical skills required in a given position.

2.5.3 Empowerment

Empowerment is giving lawful power or authority to act (Anon., 2008b:1). There is evidence that learners who have a high degree of self-regulation also tend to be highly motivated and competent in using their knowledge productively (DeCarte, 2003:142).

Just as the leadership of the organisation can have a task or relationship orientation, so can the rest of the organisation. The trickling down of decision-making authority tends to strengthen the fibre of an organisation. Granted, this also means trickling down the accountability for success as well. Well-trained and well-informed employees are essential to the successful empowered organisation.

2.5.4 Rewards and recognition

The meaning of reward is something given or received in return for work, merit or services, and the meaning of recognition is recognising or being recognised (Baer, Oldham and Coming, 2003:570)

When giving rewards or recognition, the focus should be on rewards and/or forms of recognition that are valuable to employees. Give the kind of rewards and recognition that employees regard as significant, since different individuals have different needs and expectations (Coetsee, 2002:166). Rewards and recognition are closely linked to each other in a sense that they are seen to constitute strengthening or reinforcing the employee's effort as well as the performance behaviour. In the workplace, the supervisor provides the subordinate with support and rewards and/or recognition, while in exchange the subordinate contributes personal devotion and expertise. Rewards and/or recognition must therefore satisfy employees' preference, and there should be realistic and significant expectations to have a high value for them.

Recognition and rewards programmes sponsored by upper management in an organisation help sustain employee motivation. McDermott (2002:42) defines an

incentive as a way of motivating employees to perform at a level that is above what is expected as normal. When compensations are low, most labourers are not motivated to work and possess weak attitudes towards work (Manu, 2004:24). Rewards and recognition are of paramount importance as it reinforces the required behaviour (Baer et al., 2003:570).

2.5.5 Values and goals

Values and goals are closely linked to each other in a sense that they are seen to constitute a vision: goals indicating what to be achieved, and values how to achieve it (Coetsee, 2002:77). Companies that emphasise 'vision' values such as creativity, development, adaptability and initiative, are likely to generate productive employee commitment. Caruana, Money and Berthon (2000:1342) describe 'value' as a quality of being useful or worth-while or important, and 'goal' as the object of one's efforts.

2.6 RELATIONSHIP BETWEEN EMPLOYEE COMMITMENT AND EFFECTIVENESS OUTCOME MEASURES

Employee commitment literature abounds and most studies have centred on organisational commitment and its relationship to job performance, turnover intent, and other motivational outcomes (Lee, 2002:20). Organisational commitment is considered a useful measure of organisational effectiveness and has the potential to predict organisational outcomes such as job performance, employees' involvement, and organisational goals achievement (Strees et al., as quoted by Brown, 2003:28). The common findings and implications of commitment studies are that employee commitment is the key to achieving productivity and performance in any organisation.

For example, Chem, Lin, Lu and Tsao (2007:1129), in their study investigating how employee-level human resource practices affect employee commitment and eventually influence their job performance (the study involved 119 participants) they found that job performance was significantly related to employee commitment.

DeCotiis and Summers (1987:445) undertook a study of 367 managers and their employees. The researchers examined the outcome measure of individual motivation, desire to leave, turnover, and job performance. Organisational commitment was found to be a strong predictor for each of these outcomes.

Arnolds and Boshoff (2002:7) conducted a study to assess the interactive impact of four types of commitment: commitment to the organisation, job, profession, and supervisor. The participants in their study were 382. The researchers reported that employees' commitment types significantly affect one another in a positive direction. Their results also showed a positive relationship between job commitment and organisational commitment.

Becker et al. (1996:464), in their study exploring whether commitment to the supervisor or to the organisation had the greatest impact on the performance, they pointed out that in previous research, employee commitment and job performance were largely unrelated as prior work has failed to distinguish among individual foci of commitment. Based on their empirical findings, they agreed that commitment to the supervisor was positively related to performance and was more strongly associated with performance than was commitment to the organisation.

Nevertheless, the mixed findings do suggest that a closer and more rigorous look at the structure of employee commitment is necessary. It also should be kept in mind that when measuring commitment to an organisation as a whole, one is probably measuring employees' commitment to top management (Reichers, quoted by Brown, 2003:30). Evidence claims that by creating a working environment in which employees identify with their organisation's values, goals and objectives, they develop a positive attitude towards their jobs, identify with their superiors, and identify with their professional group (Arnolds & Boshoff, 2002:15). In other words, by developing employee commitment the objective of organisation effectiveness could be achieved.

Organisation effectiveness depends on more than simply maintaining a stable workforce. Employees must perform assigned duties dependably and willing to engage in activities that go beyond role requirements. When employees are committed, it reduces the perception of “that’s not my job” with respect to activities that are critical, but not formally enforced (Dessler, 1993:102). However, this is more easily said than done, since employees and their managers have different ideas on defining various behaviours as in-role or extra-role, and consequently how broadly they define the employees’ job responsibilities.

It thus seems reasonable to assume that employee willingness to contribute to organisational effectiveness will be influenced by the nature of the commitment they experience. Employee commitment is the primary factor affecting willingness to make an extra effort on behalf of the organisation (Lee, 2002:7), and therefore, commitment changes the way in which employees define job requirements. Extra-role behaviour is more likely to be seen as in-role behaviour and part of one’s job.

2.7 ROLE OF MANAGEMENT IN EMPLOYEE COMMITMENT

In many municipalities, there is a growing gap between the expectations of employers and what they are prepared to do (Anon., 2008c). There are a number of reasons for this erosion of employee commitment, the most common one being a failure on the part of management in some or other way. To succeed in the face of improving water services delivery, municipalities need improved job performance. This requires commitment on the part of all employees, which can only be achieved through better management practices. Poor supervision and failure to create a committed workforce can lead to the ineffectiveness of the effort for operators’/employee capacity-building training.

Management have a greater responsibility to ensure that all employees are suitably trained for their jobs. They must ensure that the work is done correctly, safely, timeously and according to the predetermined standards of quality and quantity. It is their task to

develop and enhance the potential of employees by improving their attitude, habits, skills, knowledge, and experience (Englene, Dawes and Schneider, 2007:164).

Not only is management's commitment to the capacity-building training of its water and sanitation works operators an attempt to improve water quality and service delivery, but also a way to make the operators/employees feel valued and a part of the organisation. It can raise the operators'/employees' morale and encourage their commitment to the organisation.

Although capacity-building training may produce better operators' effectiveness on job performance, it is as important for management to encourage operators' commitment in the workplace. This will allow municipality water and sanitation works operators to apply and further develop their knowledge gained from theoretical training of the capacity-building programme, and in the long term enhance the organisation's productivity.

2.8 CHAPTER SUMMARY

In modern organisations, more concern is being directed towards stimulating employees to enhance their job skills in an effort to ensure continual effective capacity-building training and highly committed employees. There seem to be several reasons why the topic of employee commitment receives attention when it comes to job performance. In this chapter, the focus has been firstly on the theories and nature of organisational and employee commitment emphasising the alignment to commitment (aligned-commitment) and the elements constituting the aligned-commitment equation. Attention was also given to the relationship between employee commitment and effectiveness outcome measures, wherein it is generally assumed in organisational and employee commitment literature that job performance/job satisfaction induces motivation/commitment and that the committed employee will also be dedicated to greater work effort. Finally, the role of management in employee commitment is studied, seeing that the role of management is the factor that underlies the commitment of employees/plant-operators for this study.

CHAPTER 3

EMPIRICAL RESEARCH

3.1 INTRODUCTION

The chapter addresses the approach to the study. It provides an explanation of the research design, details regarding the sample, instrumentation, means of data collection, and data analysis. The chapter concludes with a summary of the research questions and analysis used to answer them.

A thorough theoretical orientation of organisational and employee commitment forms the core of this study. Through an analysis of an aligned-commitment model for commitment, and some theories of commitment (Chapter 2), the background was established for this study and its findings from the operators' sample in the Free State municipal authorities.

3.2 GATHERING OF DATA

3.2.1 Research design

The type of research used was the rational survey that seeks to explore the relationship between employee aligned-commitment and capacity-building effectiveness. Unlike descriptive surveys, which are designed to provide a snapshot of the current state of affairs, relational surveys are designed to empirically examine relationships among two or more constructs either in an exploratory or confirmatory manner (Laka-Mathebula, 2004:94). The survey design was used in this study, because it is regarded the most appropriate research design to measure the perception of respondents. A survey is the most appropriate research design as it can enable the researcher to collect information from a large population. The information obtained from the sample can then be generalised to an entire population (Kerlinger & Lee, 2000:2).

3.2.2 Measuring instrument

By using the survey procedure and the use of a questionnaire (Annexure A), the desired data were collected. The design of the questionnaire used in this research is based on the research undertaken by the researcher.

- Section A (Aligned-commitment elements scale): measures how participants perceive the extent to which aligned-commitment exists in their organisation.
- Section B (Job satisfaction/performance scale): measures how satisfied operators are in their jobs.
- Section C (Affective, Continuance, and Normative commitment scale): The questionnaire was adopted from an organisational commitment scale, developed by Meyer and Allen (1991:70). It was used to measure the extent to which the participant is emotionally attached to the organisation, to an awareness of the costs associated with discontinuing the relationship with the organisation, and the feeling of obligation to continue the relationship with the organisation.
- Section D (Capacity-building scale): This questionnaire was designed to gauge the benefit of training that an operator may have undergone. This was not intended to be a comprehensive list of questions.
- Section E (Manager/Supervisor's role scale): This questionnaire was constructed with the consideration that in order to motivate employees, managers should take proper cognisance of the needs of the employees as to develop effective motivational strategies (Brown, 2003:29), and managers' motivating role in human resource management.
- Section F (Demographic questions): Demographic data of the participants were collected regarding whether participants had been trained for water and/or wastewater treatment operation, length of time working for the municipality, and whether the participant is an operator or supervisor of the plant (works).

Table 3.1: Summary of measuring instruments

Research concept	Original instrument Author	Subscales	Number of items
Aligned-commitment	Coetsee (2002:40)	• Knowledge	5 items
		• Information	5 items
		• Rewards and recognition	5 items
		• Empowerment	5 items
		• Shared values	5 items
Human resource management		• Job security	7 items
		• Job satisfactory	6 items
Organisational commitment	Meyer and Allen (1991:70)	• Affective commitment	6 items
		• Normative commitment	6 items
		• Continuance commitment	6 items
Capacity building		• Benefit	4 items
		• Definition	4 items
Trust		• Trust in supervisor and co-worker	16 items
Demographic		• Demographic	5 items

The questionnaires were analysed and approved by the Statistical Consultation Services of the North-West University (Potchefstroom). Most questionnaires were completed with the aid of a researcher assistant as language difficulties of the respondents had to be taken into consideration. The survey was undertaken, whereby data were collected from the operators' responses of water and wastewater treatment plants in the Free State.

3.2.3 Dependent and independent variables

Table 3.2 lists the dependent and independent variables that were part of this research. Five elements of aligned-commitment were used as independent variable measures. These elements are the knowledge, information, empowerment, rewards and recognition, and shared vision scale of the Section A aligned-commitment questionnaire. Variables measuring job satisfaction/performance, organisational commitment, and the manager/supervisor role were considered. The subscales for these variables were contained in Section B, C and E of the questionnaire.

Table 3.2: Dependent and independent variables

Independent Measures (Predictor)		
<i>Instrument</i>	<i>Variables</i>	<i>Scales</i>
Section A	Aligned-commitment	Knowledge Information Empowerment Rewards and recognition Shared vision
Dependent Measures (Criterion)		
<i>Instrument</i>	<i>Variables</i>	<i>Subscales</i>
Section B	Job satisfaction/performance	-Job security -Income -Job interest and importance -Job opportunity and skill improvement
Section C	Organisational commitment	-Affective commitment -Continuance commitment -Normative commitment
Section F	Manager/Supervisor role	-Operators' needs identification and addressing -Factors indicating motivated employee -Relation between operator and management as well as workmate

3.2.4 Description of the sample

The sample for this study was drawn from the municipalities in the Free State province. As it was not possible to reach all water and wastewater plant operators of all municipalities in the Free State because of the shifts working schedules of operators in each plant and the larger population (over 60 municipality water plants in the Free State), it was decided to use the convenience sampling method to obtain the study sample. A total of 100 questionnaires were distributed and reserved, which is considered most satisfactory. This was possible because of the fact that a convenience sample was obtained by distributing questionnaires to the operator/s found at the plant by the researcher during his visit at that particular time. The respondents were approached individually to complete the questionnaires at their convenience. The municipalities and the respective number of research participants were as follows:

1. municipality trained operators (40)
2. Water board trained operators (10)
3. municipality not-trained operators (50)

Participants were asked to send back the completed questionnaire to the researcher in the postage paid envelope distributed together with the questionnaire. The returned number of questionnaires were 64 (41 out of 50 from trained operators and 23 out of 50 from not-trained operators), providing a return rate of 64 percent.

The response rate of 64 percent is high when compared to guidelines in the literature. A 50 percent response rate is adequate, a 60 percent response is considered good, while a 70 percent response rate is considered very good (Laka-Mathebula, 2004:126). The total response rate in this study was good, most probably also because the questionnaire length was neither short nor long. Frochlich (2002:555) suggested that a questionnaire length of 40-50 items spread over four-five pages would elicit high response rates, and he argues that if a survey is under four or five pages, resistance to participate would be lower and the response rate higher. The reason for the low response rate of 46 percent (23 out of 50

questionnaires returned) from the sample of untrained operators could be that some of the operators are illiterate or had received poor education. According to the records, 40 percent of the water and wastewater works operators had poor education with lower primary education level.

Response rates are important for three reasons. First, a high non-response rate is associated with a real risk that the data will be biased. If the data are biased, there is a risk that the low responses might only reflect the perspective of certain types of municipal water services and not all municipalities' water services in the Free State Province. Second, many statistical tests require a suitable number of cases. For example, at least 10 degrees of freedom are generally required for each variable in a Multiple Regression model to achieve sufficient statistical power (Frochlich, 2002:555).

The completed questionnaires were collectively handed to the Statistical Consultation Services of the North-West University (Potchefstroom). The consultation service was also involved with the processing of the given results. The obtained results of the factor analysis, frequency distribution, and correlation statistical analysis were presented and discussed.

3.2.5 Description of analyses

3.2.5.1 Research questions

- 1.** What is the level of aligned-commitment in the organisation (municipality water and wastewater plants) as perceived by the operators?
- 2.** What is the relationship between operators' (participants) perception of their job satisfaction and/or performance, and employee aligned-commitment?

Table 3.3 below indicates the subscale used to evaluate the relationship between job satisfaction/performance and aligned-commitment variables.

Table 3.3: Job satisfaction and/or performance vs. aligned-commitment

<i>Job satisfaction/performance was initially measured as representing:</i>	<i>Aligned-commitment levels were initially measured as representing the existence of:</i>
<ul style="list-style-type: none"> • Job security • Income • Job interest and importance • Job opportunities and skill improvement 	<ul style="list-style-type: none"> • Knowledge • Information • Empowerment • Rewards • Shared vision

3. What is the relationship between operators' (participants') perception of organisational commitment and employee aligned-commitment?

Table 3.4 below indicates the subscale used to evaluate the relationship between organisational commitment and employee commitment variables.

Table 3.4: Organisational commitment vs. employee commitment

<i>Organisational commitment levels were initially measured as representing:</i>	<i>Aligned-commitment levels were initially measured as representing the existence of:</i>
<ul style="list-style-type: none"> • Affective commitment • Continuance commitment • Normative commitment 	<ul style="list-style-type: none"> • Knowledge • Information • Empowerment • Rewards • Shared vision

4. What are the benefits and/or effectiveness of capacity-building training as perceived by operators (participants)?
5. What is the relationship between operators' (participants') perception of their immediate supervisors' role of creating a motivating climate, and employee aligned-commitment?

Table 3.5 below indicates the subscale used to evaluate the relationship between immediate supervisors' role (leadership style) of creating a motivating climate and employee aligned-commitment variables.

Table 3.5: Immediate supervisors' role (leadership style) of creating a motivating climate vs. employee aligned-commitment

<i>Manager/supervisor levels were initially measured as representing:</i>	<i>Aligned-commitment levels were initially measured as representing the existence of:</i>
<ul style="list-style-type: none"> • Operators' needs identification and addressing • Factors indicating motivated employee • Relationship between operator and management as well as workmate 	<ul style="list-style-type: none"> • Knowledge • Information • Empowerment • Rewards • Shared vision

3.2.5.2 Data analyses

Results from the factor analysis were used to perform the data analyses necessary to determine construct validity and internal reliability of the instruments used. Factor analysis offers a means of examining the interrelationships among the items of scale that are used to reveal the clusters of items that have sufficient common variation to justify their grouping together as a factor (Laka-Mathebula, 2004:129). The process was applied for confidence of condensing a group of items into a smaller set of composite factors with a minimum loss of information.

As it is commonly done, items that do not load greater than 0.25 on any factor in any solution and those items loading greater than 0.25 in any of the solutions are identified and omitted from the analysis.

3.2.5.3 Factor structure of the aligned-commitment scale

The purpose of doing the factor analysis was to see if the 25 items measuring aligned-commitment (A21, A22, A23, A24, and A25) from the questionnaire loaded together under five factors. Five factors were retained and its analysis shows/confirms that:

- All items clustering in factor 1 have to do with Knowledge.
- All items clustering in factor 2 have to do with Information.
- All items clustering in factor 3 have to do with Empowerment.
- All items clustering in factor 4 have to do with Performance Strengthening, in which two items loaded as Rewards (.855 and .791) and the other two items loaded as Recognition (.129 and .442).
- All items clustering in factor 5 have to do with Shared Vision.

The five factors had low to moderate inter-correlations. Table 3.6 shows the results of the inter-factor correlation of five factors of the aligned-commitment questionnaire; factors having an inter-correlation ranging from $r = -.043$ to $r = .775$, with statistically significant at the $p < 0.05$ and $p < 0.01$ level.

Table 3.6: Inter-factor correlations of the five-factor structure of aligned-commitment

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1	1.00				
Factor 2	.473*	1.00			
Factor 3	.324	.775**	1.00		
Factor 4	-.041	.257	.284	1.00	
Factor 5	.510**	.271	.223	-.043	1.00

* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

Table 3.7 shows the factor pattern explaining which item belongs to the different factors and the reliability of the factors as measuring instrument. The reliabilities were conducted

by examining the total alpha (Cronbach Alpha) for the subscales. The results revealed reasonably high alphas for each of the subscales:

- Knowledge was .867
- Information was .682
- Empowerment was .707
- Shared vision was .698

These five factors can thus be used as a measure of the importance of the factors.

Table 3.7: Five factor rotated structure of aligned-commitment scale (N = 64)

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
A212	.925				
A211	.912				
A213	.842				
A214	.696				
A221		.786			
A222		.778			
A224		.679			
A223		.627			
A231			.830		
A234			.756		
A232			.755		
A233			.581		
A241				.855	
A242				.791	
A244				.129	
A243				.442	
A251					.801
A252					.776
A253					.738
A254					.636
Cronbach Alpha	.867	.682	.707	-	.698
Validity	98.2	96.5	100	-	100

3.3 RESULTS AND DISCUSSION

3.3.1 Introduction

This section contains the results of the study. Findings about demographics of study participants and statistical analyses were used to answer the research questions.

The primary aim of this research was to determine the level of aligned-commitment in the Free State municipality. A secondary aim was to explore the relationship between aligned-commitment as dependent variable and job satisfaction/performance, organisational commitment and supervisors' role (leadership style) as independent variables. Capacity building and demographic variables were used in further analyses, aimed at finding answers to other research questions as indicated in section 3.2.4.1.

3.3.2 Sample

Demographic data were collected in the area of gender, time worked, and education (see Table 3.8). These statistics revealed that 84 percent and 78 percent (mean of 1.16 and 1.22) of the study participants from the municipality trained and not-trained operators respectively were male and 16 percent and 22 percent were female, while participants from trained water board operators revealed that 29 percent (mean of 1.71) were male and 71 percent were female. The average working period of operators (whole sample), is 6.5 years.

Education levels varied with most of the participants having high school equivalents (the mean of 2.3), and none of the participants having some bachelor's degree credits or a bachelor's degree (maximum value is 4).

Description

Gender: 1 = Male
2 = Female

Time worked: Each number represents the number of years worked.

Education: 1 = did not complete high school
2 = high school equivalent
3 = Some college credits, no diploma
4 = Diploma
5 = Some Bachelor's degree credits, no degree
6 = Bachelor's degree

Table 3.8: Demographics

Demographics	N	Minimum	Maximum	Mean	Std. Deviation
Trained					
Gender	25	1	2	1.16	0.374
Time worked	26	1	21	7.08	6.026
Education	24	1	4	2.33	1.007
Water board trained					
Gender	7	1	2	1.71	0.488
Time Worked	5	2	25	7.2	9.985
Education	6	1	4	2.17	1.169
Not trained					
Gender	18	1	2	1.22	0.428
Time Worked	17	1	17	5.29	4.283
Education	19	1	4	2.47	1.172

3.3.3 Aligned-commitment level

Research question 1: What is the level of aligned-commitment in the organisation (municipality water and wastewater plants) as perceived by the operators?

Results were analysed to establish the level of aligned-commitment in the municipality organisation as perceived by the operators (employees). The findings are presented below.

Figure 3.1: Percentage responses on aligned-commitment elements (frequency distribution): Greater extent level of elements' existence

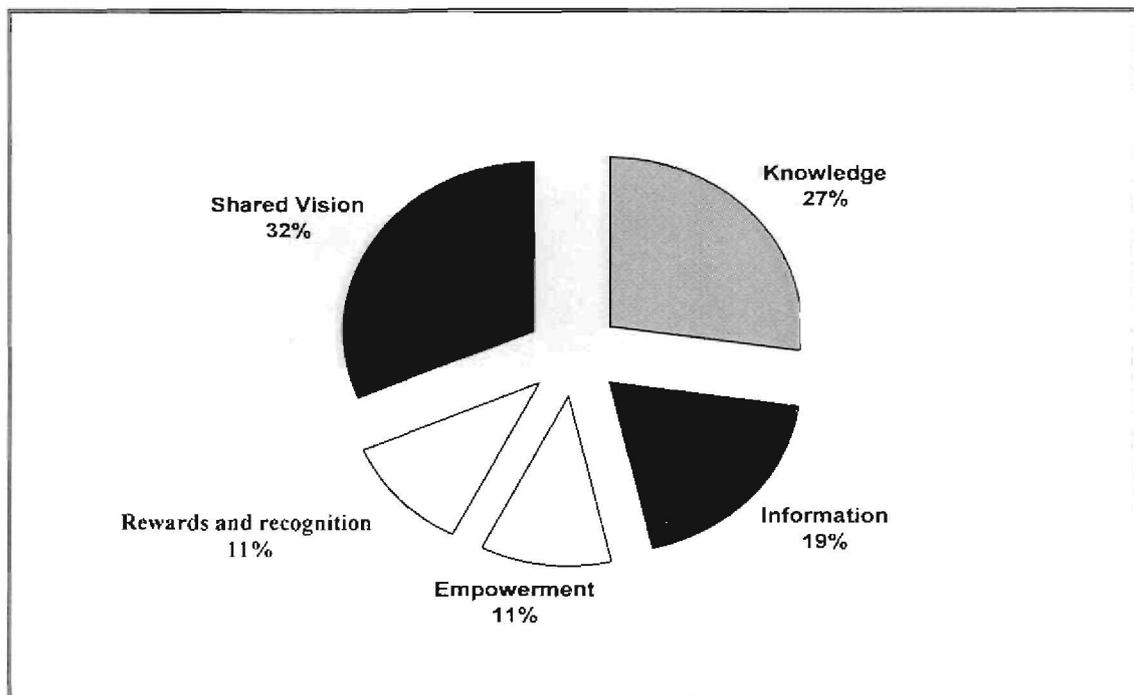


Figure 3.1 indicates that respondents indicated the greater extent existence of each of the five elements of aligned-commitment, in which shared vision constitutes 32 percent, followed by knowledge 27 percent and information 19 percent. Empowerment, and rewards and recognition both show 11 percent level of existence as perceived by participants. These results show that there is a need to improve rewards and recognition as well as empowerment within the municipality to enhance the level of employees' commitment. A high percentage of shared vision and information show that participants support the following and that they were involved, without being committed/motivated:

- The training provided them with sufficient knowledge to do their work effectively (mean of 3.69 trained, 3.57 water board, and 2.75 not trained).

- Their skill and competency to do their work are enhanced through training (mean of 3.85 trained, 4.14 water board, and 2.7 not trained).
- They had sufficient training to do their work (mean of 3.5 trained, 3.29 water board, and 1.75 not trained).
- Their municipality values water quality, and uninterrupted water supply for water service delivery (3.23 trained, 4.57 water board, and 3.29 not trained).
- They benchmark quality of water produced to SANS drinking water standards (2.77 trained, 4.14 water board, and 3.29 not trained).
- They understand how their work contribute to water service delivery (4.31 trained, 4.43 water board, and 4.33 not trained).

The reason for a lower mean score (under first and second bullet points above) for the not-trained operators is that they were not part of the training project. This contributed to lowering the overall score of knowledge.

Descriptive statistics for aligned-commitment elements as a way to examine the mean, standard deviation and other information of the data were used. Table 3.9 contains descriptive data for the five elements of the aligned-commitment model. Score distribution in the sample contained reasonable normality for use in subsequent analysis

The mean scores of each element or factor were used to calculate the overall aligned-commitment score. The scores for each group (trained, water board and not trained) as well as the overall score for the whole sample were, in all instances, less than what Coetsee (2002:40) considered weak for aligned-commitment. Coetsee (2002:40) considers the levels for aligned-commitment as follows:

2500+	very strong aligned-commitment
1864 – 2499	strong aligned-commitment
1125 – 1864	average aligned-commitment
750 – 1124	weak aligned-commitment
749 and less	very weak aligned-commitment

The mean scores that, according to Coetsee (2002), suggest scores for most effective or very strong aligned-commitment include the mean scores of only 5, for average aligned-commitment include the mean scores of at least 4.076 for each element. Mean scores for this research data ranged from 1.83 to 3.86, which are even lower than Coetsee's (2002) weak aligned-commitment scores mean of at least 3.758. The only score that was slightly higher than the ideal one for weak aligned-commitment was 3.86 for the knowledge factor as perceived by a trained water board operator. Therefore, the aligned-commitment level of 'satisfactory' at participants' workplace is not met.

Table 3.9: Descriptive statistics for aligned-commitment elements

Descriptive Statistics									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
KNOWLEDGE	Trained	26	3.4519	.79063	.15506	3.1326	3.7713	1.50	4.75
	Water Board	7	3.7500	.92421	.34932	2.8952	4.6048	2.00	4.50
	Not Trained	20	2.2125	1.00090	.22381	1.7441	2.6809	1.00	4.50
	Total	53	3.0236	1.08670	.14927	2.7241	3.3231	1.00	4.75
INFORMATION	Trained	26	2.5192	.82439	.16168	2.1863	2.8522	1.50	4.75
	Water Board	7	3.8690	1.04511	.39502	2.9025	4.8356	1.75	5.00
	Not Trained	21	3.0714	.63316	.13817	2.7832	3.3596	1.75	4.50
	Total	54	2.9090	.89567	.12188	2.6645	3.1534	1.50	5.00
EMPOWERMENT	Trained	26	2.5288	.81648	.16012	2.1991	2.8586	1.50	4.75
	Water Board	7	2.5357	1.27825	.48313	1.3535	3.7179	1.00	4.25
	Not Trained	21	2.4643	.79955	.17448	2.1003	2.8282	1.50	4.75
	Total	54	2.5046	.86123	.11720	2.2696	2.7397	1.00	4.75
REWARDS & RECOGNITION	Trained	26	1.8269	.58210	.11416	1.5918	2.0620	1.00	3.00
	Water Board	7	2.4286	.83808	.31677	1.6535	3.2037	1.50	4.00
	Not Trained	21	2.1429	.97651	.21309	1.6984	2.5874	1.00	5.00
	Total	54	2.0278	.80339	.10933	1.8085	2.2471	1.00	5.00
SHARED VISION	Trained	26	3.4231	.94543	.18541	3.0412	3.8049	2.00	5.00
	Water Board	7	2.4286	.83808	.31677	1.6535	3.2037	1.00	3.50
	Not Trained	21	3.3571	.89642	.19562	2.9491	3.7652	1.00	5.00
	Total	54	3.2685	.95519	.12998	3.0078	3.5292	1.00	5.00

Aligned-commitment = Knowledge x Information x Empowerment x Performance Strengthening (Rewards & Recognition) x Shared Vision (Shared Goals & Values)

Therefore, the aligned-commitment level, according to Coetsee (2002), is as follows:

Trained =	$3.45 \times 2.52 \times 2.53 \times 1.83 \times 3.43 = 138.10$
Water Board =	$3.75 \times 3.86 \times 2.53 \times 2.43 \times 2.43 = 216.24$
Not-trained =	$2.21 \times 3.07 \times 2.46 \times 2.12 \times 3.36 = 118.88$
Total =	$3.024 \times 2.909 \times 2.505 \times 2.028 \times 3.357 = 150.02$

This pattern of scores for the data suggests that most operators perceived a very weak existence of a motivating climate, since aligned-commitment as described by Coetsee (2002:40) may be seen as a new theory of motivation. The mean (greater or equal to ideal weak aligned-commitment mean of 3.75) for Knowledge suggests that trained and water board participants perceived that training provided to them was sufficient and enhanced their skill. Water board participants also perceived the greater existence of Information in their workplace. The mean for Shared vision suggests that the trained and not trained operators group perceived that there is more of a shared vision in their municipalities than is the case with water board operators.

Analysis of variance with each element/factor variables as independent variables, and total aligned-commitment as the dependent variable, showed knowledge, information and shared vision factor/element with the significant difference at the 5 percent level of significance, as shown in Table 3.10.

Table 3.10: Results of analysis of variance with aligned-commitment element/factor as independent variable and total aligned-commitment as dependent variable

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
KNOWLEDGE	Between Groups	21.621	2	10.811	13.586	.000
	Within Groups	39.787	50	.796		
	Total	61.408	52			
INFORMATION	Between Groups	10.956	2	5.478	8.852	.001
	Within Groups	31.562	51	.619		
	Total	42.518	53			
EMPOWERMENT	Between Groups	0.056	2	.028	.037	.964
	Within Groups	39.255	51	.770		
	Total	39.311	53			
REWARDS & RECOGNITION	Between Groups	2.451	2	1.226	1.968	.150
	Within Groups	31.757	51	.623		
	Total	34.208	53			
SHARED VISION	Between Groups	5.725	2	2.862	3.424	.040
	Within Groups	42.632	51	.836		
	Total	48.356	53			

3.3.4 Relationship between aligned-commitment and dependent variables

A regression analysis was done with subscales of aligned-commitment as independent (predictor) variables and the subscale of job satisfaction/performance as dependent variables. Regression analysis provides estimates of the average amount by which each variable changes when there is a change by one unit in the other. A mathematical equation to determine the relationship, called the regression model, was established, in which the variation in job satisfaction/performance can be explained by the variation in aligned-commitment.

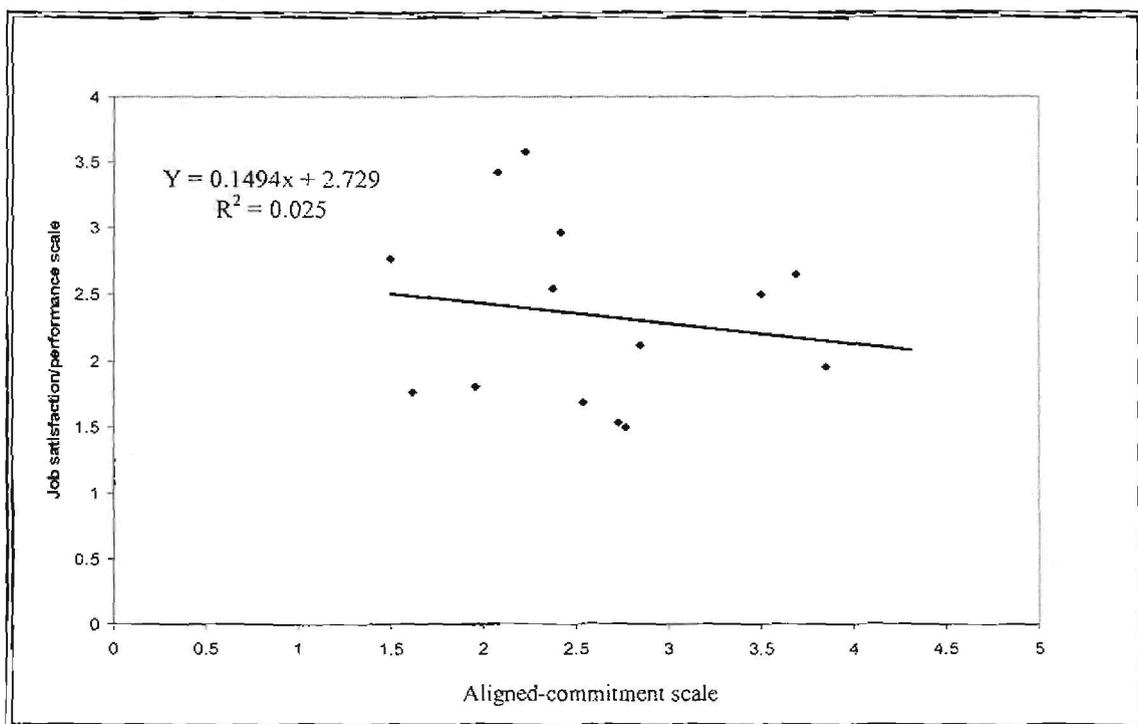
An important output of regression analysis is the multiple correlation coefficient, R^2 , which is the proportion of the variance in the dependent explained uniquely or jointly by the independent variables. The accuracy of an estimate of this nature depends on the extent to which the regression equation and its graph actually fit the data, and the

accuracy of the regression line depends on the degree of scatter in the data. The more linear the data, the more accurate the linear regression model will be.

Research question 2: What is the relationship between operators' (participants) perception of their job satisfaction and/or performance, and employee aligned-commitment?

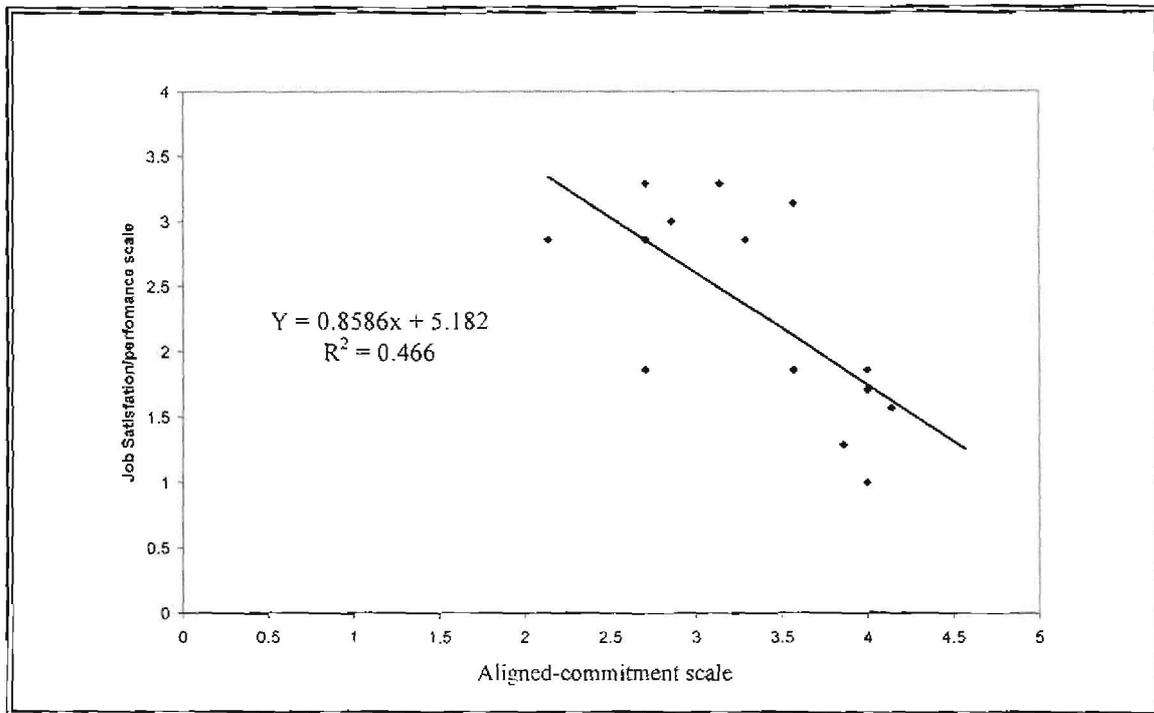
Results were analysed to establish the relationship between participants' job satisfaction/performance and employee aligned-commitment.

Figure 3.2: Correlation for trained operators with aligned-commitment subscale as independent variable and job satisfaction/performance subscales as dependent variables



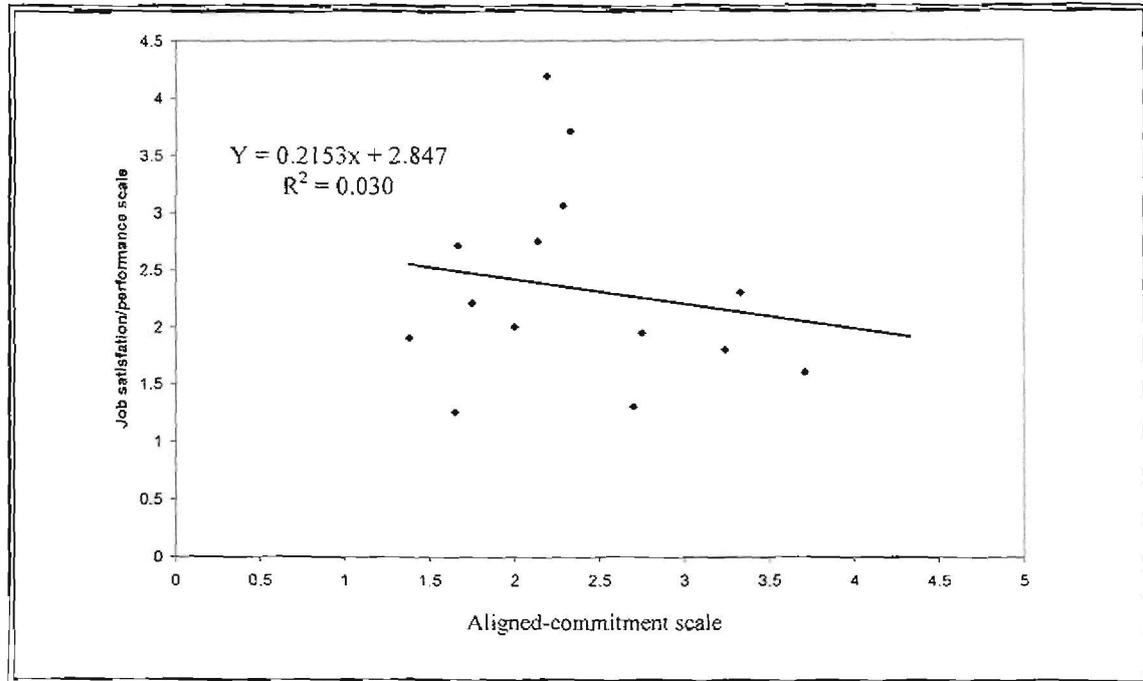
The results show a high degree of scatter in the data and a very weak positive correlation between aligned-commitment and job satisfaction, whereas only 2.5 percent variation in job satisfaction/performance can be explained by the operators' aligned-commitment.

Figure 3.3: Correlation for trained water board operators with aligned-commitment subscale as independent variable and job satisfaction/performance subscales as dependent variables



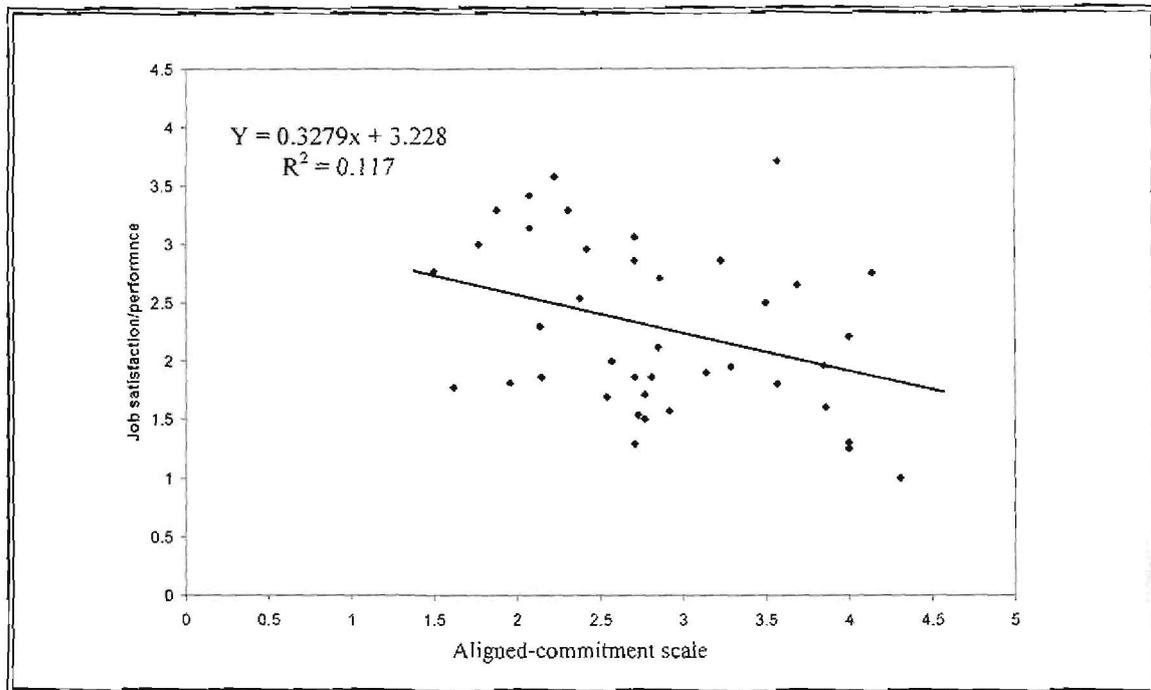
The above figure indicates the results obtained from trained water board operators, showing a lesser degree of scatter in the data as compared to municipality-trained and not-trained operators. The results also show a weak positive correlation between aligned-commitment and job satisfaction, whereas only 20 percent variation in job satisfaction/performance can be explained by the operators' aligned-commitment.

Figure 3.4: Correlation for not-trained operators with aligned-commitment subscale as independent variable and job satisfaction/performance subscales as dependent variables



The results show a high degree of scatter in the data and a very weak positive correlation between aligned-commitment and job satisfaction, whereas only 3.0 percent variation in job satisfaction/performance can be explained by the operators' aligned-commitment.

Figure 3.5: Overall correlation for all participants with aligned-commitment subscale as independent variable and job satisfaction/performance subscales as dependent variables



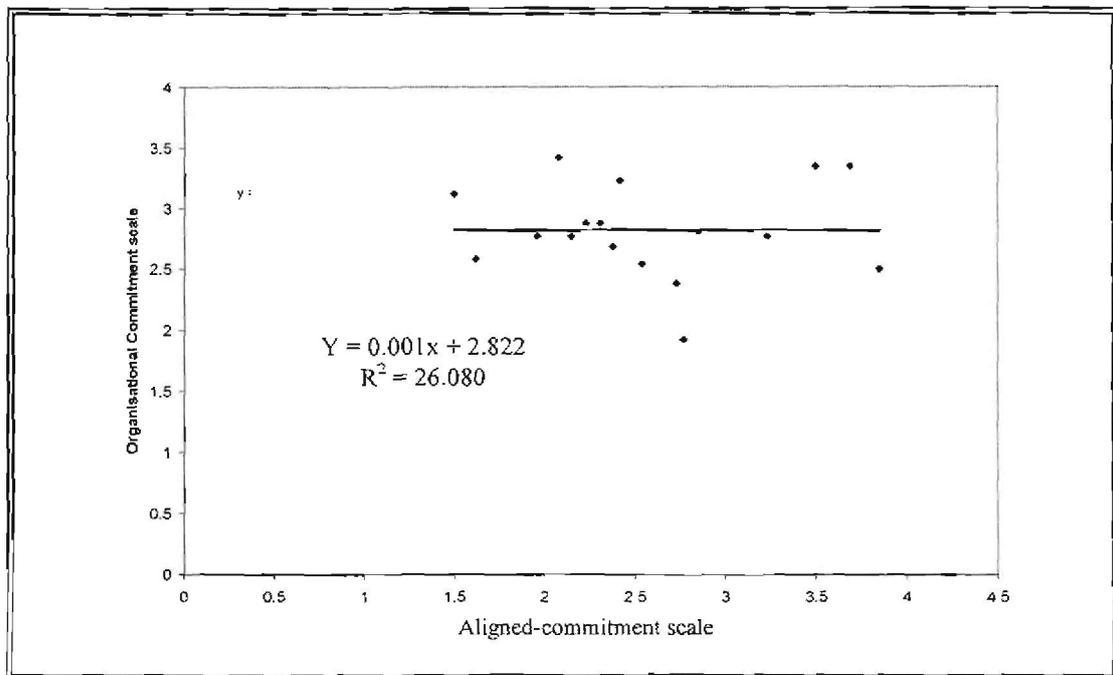
The evaluation of all groups of participants combined show the overall correlation between aligned-commitment and job satisfaction with the correlation coefficient R^2 being equal to 11.7 percent.

The correlation with aligned-commitment as the independent variable indicates that only participants (operators) from water boards show a significant contribution towards job satisfaction/performance as dependent variable with R^2 equal to 20 percent. The predictor model indicates that 20 percent common variance existed between predictors and the dependent variable. This indicates that the greater the extent aligned-commitment is high, the stronger the participants are satisfied with their jobs and the opposite being the case. Trained and not-trained groups showed a very weak correlation, whereas 2.5 percent and 3.0 percent variation in job satisfaction/performance can be explained by the operators' aligned-commitment. The overall correlation coefficient R^2 is equal to 11.7 percent.

Research question 3: What is the relationship between operators' (participants) perceptions of organisational commitment and employee aligned-commitment?

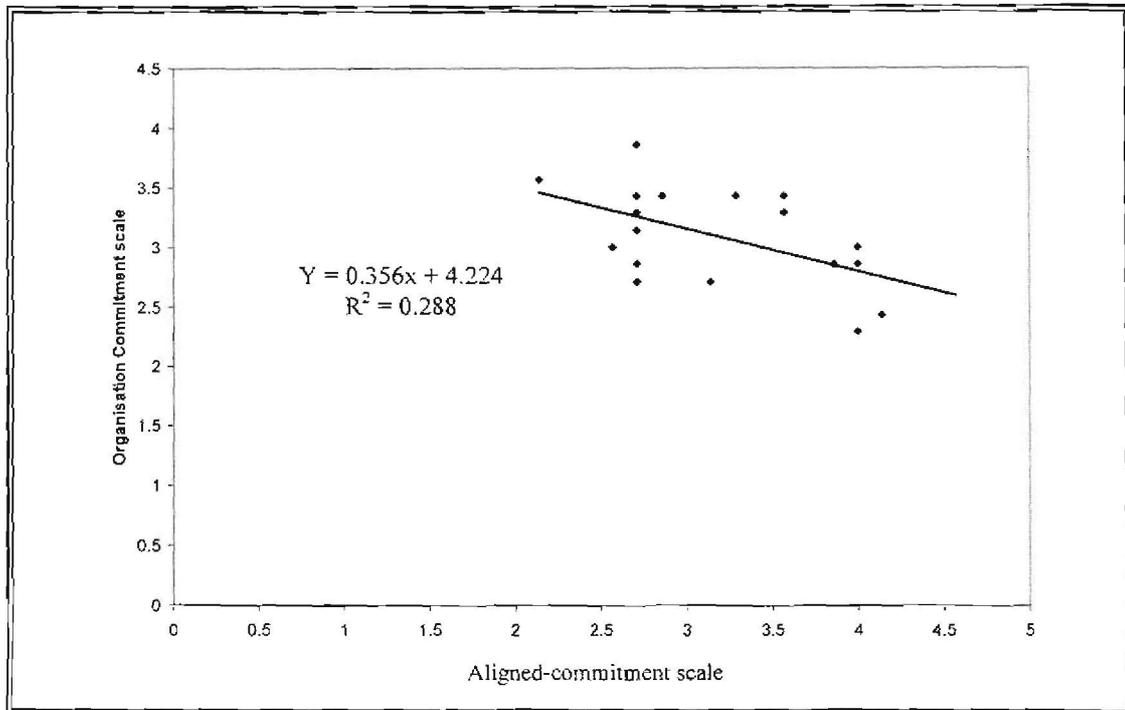
The following results were analysed to establish the relationship between organisational commitment and employee aligned-commitment as perceived by participants:

Figure 3.6: Correlation for trained operators with aligned-commitment subscale as independent variable and organisational commitment subscales as dependent variables



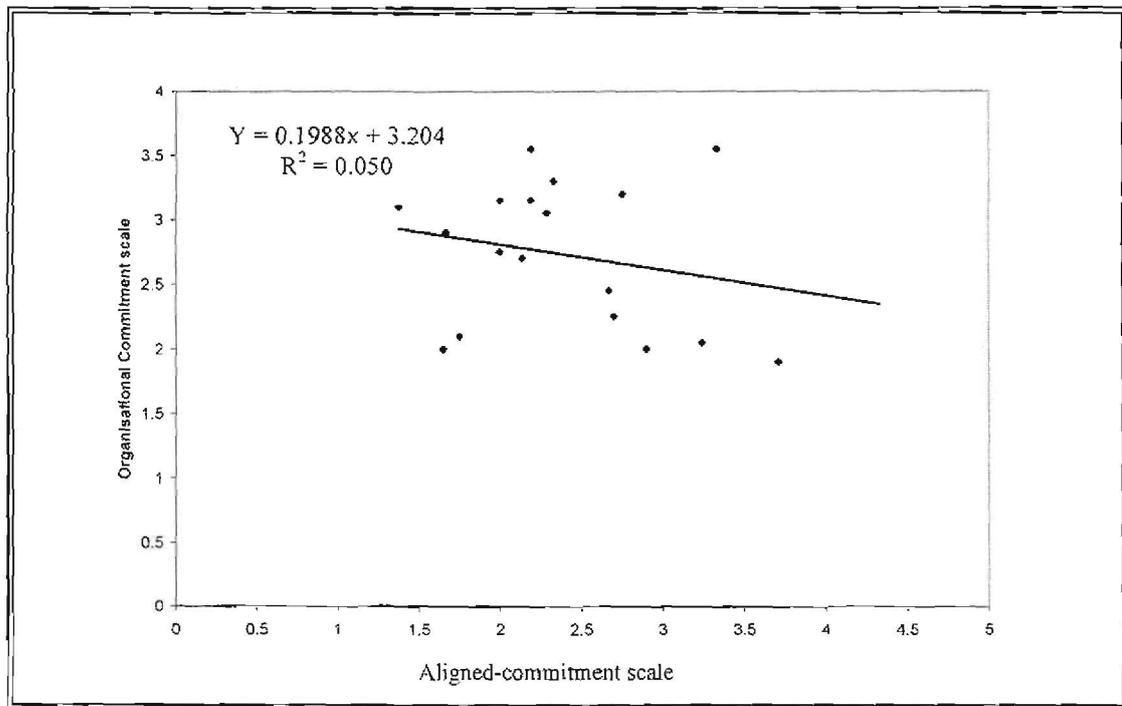
The results show no correlation between aligned-commitment and organisational commitment. The accuracy of an estimate of the nature of correlation cannot be derived from this relationship.

Figure 3.7: Correlation for water board trained operators with aligned-commitment subscale as independent variable and organisational commitment subscales as dependent variables



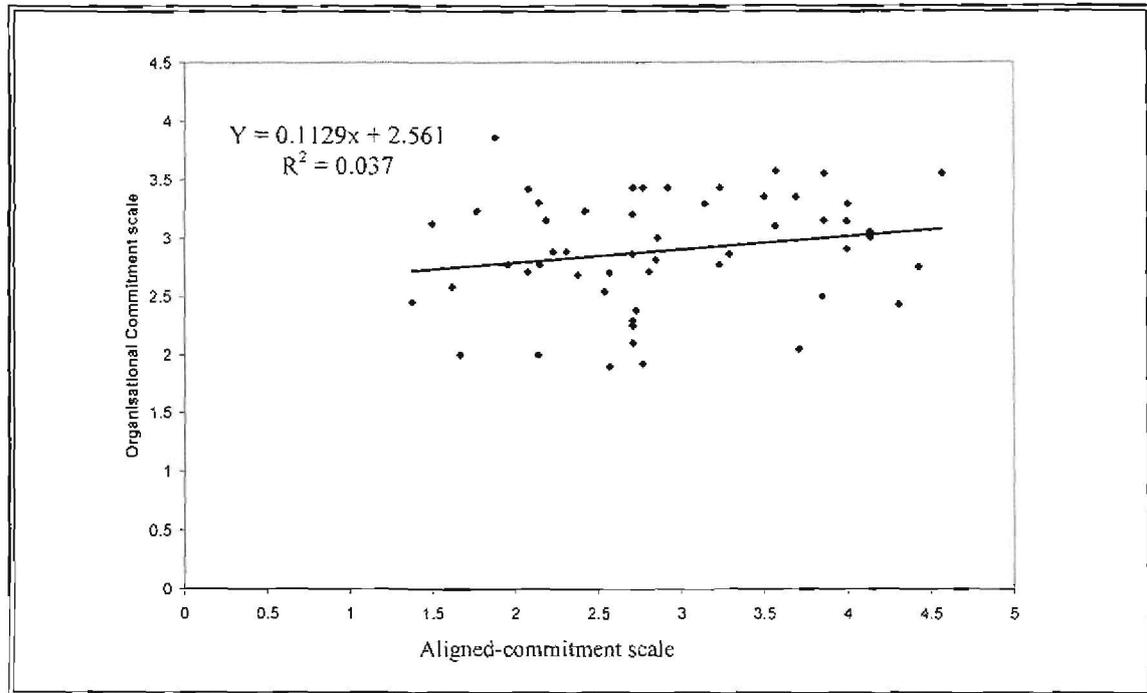
The above figure indicates the results obtained from trained water board operators, showing a lesser degree of scatter in the data. The results show a weak positive correlation between aligned-commitment and job satisfaction, whereas only 28 percent variation in job organisational commitment can be explained by the operators' aligned-commitment.

Figure 3.8: Correlation for not-trained operators with aligned-commitment subscale as independent variable and organisational commitment subscales as dependent variables



The results show a high degree of scatter in the data and a very weak positive correlation between aligned-commitment and job satisfaction, whereas only 4.28 percent variation in organisational commitment can be explained by the operators' aligned-commitment.

Figure 3.9: Overall correlation for all participants with aligned-commitment subscale as independent variable and organisational commitment as dependent variables



The results show a very weak negative correlation. The evaluation of all groups of participants combined show the overall correlation between aligned-commitment and organisational commitment with the correlation coefficient R^2 being equal to 3.74 percent.

The correlation between aligned-commitment as the independent variable and organisational commitment as dependent variable indicates that all groups of participants (operators) show very weak to no significant contribution of aligned-commitment towards organisational commitment, with R^2 equal to an average of 3.7 percent. The predictor model indicated that 3.7 percent common variance existed between predictors and the dependent variable, whereas 3.7 percent variation in organisational commitment can be explained by the operators' aligned-commitment. This indicates that the greater the extent aligned-commitment exists; it would have very small or not have an effect on participants' organisational commitment. The overall correlation coefficient R^2 is equal to 3.7 percent.

Research question 4: What are the benefits and/or effectiveness of capacity-building training as perceived by operators (participants)?

Perceptions of participants on capacity building were established and the results are as follows:

Table 3.11 shows that most of the participants for the whole sample perceived capacity-building training as referred to operators' skill development efforts directed towards helping operators to operate the treatment works/plant more effectively.

The overall perception of participants on the benefits of capacity-building training shows that the benefit ranges from 'to some extent' to a 'very greater extent' (see table 3.11). Responses from trained operators for capacity-building subscale D11 and D12 (mean = 3.65) range from showing the benefit being 'to a lesser extent' to a 'very greater extent' with the standard deviation of less than one (0.9 and 0.736 respectively). The response from water board operators (mean = 4) range from 'to some extent' to a 'very great extent' with a standard deviation of 0.756, while responses from not-trained operators showing the benefit ranging from 'not at all' to a 'very greater extent' with a standard deviation of greater than one (1.069 and 1.408). Nonetheless, in all groups of participants, the response in respect to whether the training duplicated operators' knowledge and skill (subscale D113), operators' perceptions vary highly as this depends from whether the participant had or had no knowledge and/or skill before the training, and that is difficult to measure.

Table 3.11: Descriptive statistics on capacity building as perceived by trained operators, water board trained operators, and not-trained operators

Descriptive statistics on capacity building as perceived by trained operators					
	N	Minimum	Maximum	Mean	Std. Deviation
D11	26	2	5	3.42	0.902
D12	26	2	5	3.69	0.736
D13	26	1	5	3.85	1.047
D14	2	1	3	2.00	1.414
D2	25	1	3	1.40	0.645
Descriptive statistics on capacity building as perceived by water board trained operators					
	N	Minimum	Maximum	Mean	Std. Deviation
D11	7	3	5	4.29	0.756
D12	7	3	5	4.29	0.756
D13	7	1	5	3.43	1.618
D14	2	5	5	5.00	0.000
D2	7	1	3	1.57	0.787
Descriptive statistics on capacity building as perceived by not-trained operators					
	N	Minimum	Maximum	Mean	Std. Deviation
D11	8	2	5	3.50	1.069
D12	8	1	5	3.38	1.408
D13	8	2	5	3.62	0.916
D14	2	2	2	2.00	0.000
D2	19	1	3	1.37	0.597

Research question 5: What is the relationship between operators' (participants) perception of their immediate supervisors' role of creating a motivating climate (employee aligned-commitment)?

Perceptions of participants of their supervisors' role of creating a motivating climate (aligned commitment) were analysed to establish the ability of participants' supervisors on creating a motivating climate within the organisation. The results are as follows:

Tables 3.12, 3.13, and 3.14 show the descriptive statistics on operators' immediate supervisors' role of creating a motivating climate as perceived by trained operators, water board trained, and not-trained operators.

Results in Table 3.12 show that 80, 54, and 40 percent (mean 1.2, 1.44, and 1.6 respectively) of the trained operators indicated that responsibility for encouraging employee commitment (motivating climate) in their workplace vested on operators

themselves, operators' manager, and top management respectively. However, most of the participants (mean = 2.8 and 2.68) regarded their supervisors/managers as being able to identify and address the basic needs of the operators to improve work performance, to some extent. They also described the relationship between them and their supervisors (management) as being neither good nor bad (mean = 2.76), while the relationship among themselves as being quite good (mean = 1.84).

Table 3.12: Descriptive statistics on immediate supervisors' role of creating a motivating climate as perceived by trained operators

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
E1A	25	1	2	1.20	0.408
E1B	25	1	2	1.44	0.507
E1C	25	1	2	1.60	0.500
E2	25	1	5	2.80	0.866
E3	25	1	5	2.68	0.988
E4A	25	1	3	1.28	0.678
E4B	24	1	3	1.79	0.977
E4C	23	1	3	2.13	1.014
E4D	23	1	3	1.35	0.775
E4E	23	1	3	1.13	0.458
E4F	25	1	3	1.88	0.971
E4G	23	1	3	1.61	0.891
E4H	24	1	3	1.58	0.830
E4I	24	1	3	1.87	0.947
E51	25	1	5	2.76	0.831
E52	25	1	3	1.84	0.473

Results in Table 3.13 show that 86, 100, and 71 percent (mean 1.14, 1.0, and 1.29 respectively) of the water board operators indicated that responsibility for encouraging employee commitment (motivating climate) in their workplace vested on operators themselves, the operators' managers, and top management respectively. However, most of the participants (mean = 3.17 and 3.83) regard their supervisors/managers as being able to identify and address the basic needs of the operators to improve work performance 'to some extent' and to 'a greater extent'. They also described the relationship between them and their supervisors (management) as being neither good nor

bad (mean = 2.86) while the relationship among themselves as being quite good (mean = 2.14).

Table 3.13: Descriptive statistics on immediate supervisors' role of creating a motivating climate as perceived by water board trained operators

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
E1A	7	1	2	1.14	0.378
E1B	7	1	1	1.00	0.000
E1C	7	1	2	1.29	0.488
E2	6	2	5	3.17	1.169
E3	6	3	5	3.83	0.983
E4A	6	1	3	1.33	0.816
E4B	7	1	3	1.43	0.787
E4C	7	1	2	1.14	0.378
E4D	7	1	1	1.00	0.000
E4E	7	1	1	1.00	0.000
E4F	7	1	3	1.29	0.756
E4G	7	1	1	1.00	0.000
E4H	7	1	2	1.14	0.378
E4I	7	1	3	1.29	0.756
E51	7	2	4	2.86	0.690
E52	7	1	3	2.14	0.900

Results in Table 3.14 show that 83, 74, and 46 percent (mean 1.17, 1.26, and 1.56 respectively) of the not-trained operators indicated that responsibility for encouraging employee commitment (motivating climate) in their workplace vested on operators themselves, the operators' managers, and top management respectively. However, most of the participants (mean = 3.05 and 3.32) regard their supervisors/managers as being able to identify and address the basic needs of the operators to improve work performance to some extent. They also described the relationship between them and their supervisors (management) as being quite good to neither good nor bad (mean = 2.42) while the relationship among themselves as being quite good (mean = 1.58).

Table 3.14: Descriptive statistics on immediate supervisors' role of creating a motivating climate as perceived by not-trained operators

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
E1A	18	1	2	1.17	0.383
E1B	19	1	2	1.26	0.452
E1C	18	1	2	1.56	0.511
E2	19	1	5	3.05	1.079
E3	19	1	5	3.32	1.057
E4A	19	1	3	1.16	0.501
E4B	19	1	3	1.26	0.653
E4C	18	1	3	1.44	0.784
E4D	19	1	3	1.47	0.697
E4E	19	1	3	1.26	0.562
E4F	19	1	3	1.37	0.684
E4G	19	1	3	1.58	0.902
E4H	19	1	3	1.32	0.671
E4I	19	1	3	1.74	0.872
E51	19	1	3	2.42	0.692
E52	19	1	3	1.58	0.607

3.4 CHAPTER SUMMARY

In this chapter, the empirical data gathered from the survey of municipalities' operators in the Free State were statistically analysed and interpreted. A response rate of 64 percent was achieved. The factor analysis of items that measured aligned-commitment indicated that items for each factor (knowledge, information, empowerment, rewards and recognition, and shared vision) clustered in a satisfactory manner. The Cronbach Alpha Coefficient was used to determine the reliability of the aligned-commitment measuring instrument (Section A of the questionnaire), and it was found that the instrument was reliable. From the inter-correlations between each factor of aligned-commitment showed low to moderate inter-correlations.

It became evident that the levels of employee aligned-commitment within the Free State municipalities' operators are very weak as it is benchmarked to the Coetsee model (2002:40). The response indicated the greater extent existence of each factor in which

shared vision constituted a higher percentage, while empowerment, and rewards and recognition constituted lower percentages.

While the relationship between aligned-commitment and job satisfaction/performance was distinguished to be very weak, it is obvious that it is not significant in the way that Chem et al. (2007:1129) found in their study. The correlation between participants' organisation commitment and aligned-commitment was also found to be very weak, where only 3.7 percent variance in organisational commitment could be explained by operators' aligned-commitment.

Additional findings include the overall perception of the participants on the benefit of *capacity-building training* showing it to be to 'some extent' to a 'very greater extent'. Additionally, most of the participants regarded their supervisors as being able to identify and address the basic needs of the operators to improve work performance to some extent, and also described the relationship between them and their supervisors as being neither good nor bad.

Chapter 4 follows and deals with the concluding perspectives of this study.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

It can be argued that in most of the municipalities in the Free State there are many factors that could have an influence on the effectiveness of operators' capacity to achieve the goal; for example, a lack of operational resources, poor infrastructures maintenance, aging infrastructure and more. However, the core of influence is within operators' commitment. If water treatment plant operators are committed, they will have the ability to identify problems inhibiting achieving the water service provision goal. They will develop and evaluate procedures and alternatives for dealing with these problems, and provide information required to operate and manage the municipality programme, like budgeting for resource and infrastructure maintenance requirements, since operators are the ones directly involved with day-to-day operation and maintenance of water treatment plants. Honadle (1981:580) explained that the primary goal of a capacity-building approach is to develop the capacity of the jurisdiction (municipality) to manage its own affairs, and to more effectively protect and promote their interests and decrease its vulnerability to disruptive changes coming from without. This can be achieved when there is employee aligned-commitment in the workplace.

4.2 ALIGNED-COMMITMENT MODELS APPLIED AND NOT APPLIED

Coetsee's and Kotzé's model of aligned-commitment are applied to improve aligned-commitment. Nevertheless, Kotzé's model is applied for improving aligned-commitment in an organisation (that is; improving aligned-commitment of a business unit in an organisaion), rather than improving aligned commitment of individual employees.

Since the main aim of capacity-building training is to capacitate the employees with the knowledge, this study focuses on the employees rather than the organisation aligned-commitment.

In line with answering the problem statement, wherein ineffectiveness of capacity-building training is due to a lack of employees' aligned-commitment, and that knowledge is used as one of the elements of aligned-commitment in Coetsee's model, Coetsee's model of aligned-commitment was assumed the most significant model applied to assess employees' commitment to improve organisational performance in this study.

4.3 CONCLUSIONS OF THIS STUDY

The factor analysis of the aligned-commitment elements used in this study revealed that these five factors can be used as a measure of the importance of the factors and can be relied on. The findings for the level of aligned-commitment suggest that the very weak level of aligned-commitment in the Free State municipalities explains some of the variation in employees' effectiveness in their job performance, which capacity-building training alone could not address.

When the organisation addresses the needs to improve the effectiveness of employees' job performance to adequately deliver services by means of training programmes, the question that arises is, however, whether the organisation (municipalities) succeeded in making the employees more productive in their workplace through capacity-building training.

To answer the above question, a literature study of employee aligned-commitment and organisational commitment were undertaken in Chapter 2 and empirical research was undertaken in Chapter 3 to find an understanding and clarity regarding aspects that were outlined in the literature study. In light of this study, the quality of water service delivery did not improve despite the training provided to the operators (employees). Based on the study findings, one can conclude that a lack of aligned-commitment within the Free State

municipalities is responsible for the ineffectiveness of operators' capacity-building training intervention programme aimed to improve water service delivery.

From the findings in Chapter 3, it became evident that the level of employee aligned-commitment of the Free State municipalities' operators is very weak as benchmarked to the Coetsee (2002:40) considered levels of aligned-commitment. The response indicated the greater extent existence of each factor in which shared vision constitutes a higher percentage, while empowerment, and rewards and recognition constitute lower percentages.

This study also identified that high levels of employee job satisfaction were present in employees when their level of education is low (high school equivalent). This could be because they do not have any other option to seek employment elsewhere. Their present job is a privilege to have since one with a low level of education has a very slim chance of getting another job.

As it is expected that motivated employees will be committed to an organisation and would be satisfied with their job, this study did not support these expectations. As the findings in Chapter 3 show that the relationship between aligned-commitment and job satisfaction/performance is very weak, it is obvious that it is not significant in the way that Chem et al. (2007:1129) found in their study. The correlation between participants' organisational commitment and aligned-commitment was also found to be very weak, where only 3.7 percent variance in organisational commitment could be explained by operators' aligned-commitment.

However, the presence of employees' aligned-commitment will improve their job performance as supported and confirmed by Chem et al. (2007:1129) in their study investigating "how employee-level H.R. practices affect employee commitment and eventually influence their job performance", in the situation where participants are all on the same level of education. This uncertainty could be addressed in a future study to establish the relationship between aligned-commitment and job satisfaction comparing

both findings from employees with adequate levels of education (with high chances to get other jobs) and employees with inadequate levels of education (having very low chances to get alternative/other jobs).

4.4 RECOMMENDATIONS

4.4.1 What can supervisors do?

In encouraging and maintaining the benefit and effectiveness of capacity-building training that employees (operators) have to apply in their jobs, management must understand that all five elements of aligned-commitment must be present and applied to create a motivating climate in the workplace. This will help employees to be able to apply knowledge gained from training programmes and effectively deliver adequate water services. As indicated in the literature in Chapter 2 that one element cannot be substituted for another, for example, improved knowledge (training) cannot replace information sharing or better remuneration. This will also result in satisfying all three goals that the great majority of workers seek from their work. Sirota et al. (2006:1) list these goals as follows:

- **Equity:** To be respected and to be treated fairly in areas such as pay, benefits, and job security;
- **Achievement:** To be proud of one's job, accomplishments, and employer; and
- **Camaraderie:** To have a good and productive relationship with fellow employees.

Even though individual supervisors/managers cannot control all leadership decisions, they can still have a profound influence on employee motivation and do things right the first time by planning carefully. Each of the following practices will play a key role in supporting employees' aligned-commitment to effectively operate, manage, and improve water service delivery. These practices are in line with applying Coetsee's model for improving aligned-commitment in an organisation (refer to Chapter 2) addressing all five elements of the aligned-commitment equation.

4.4.1.1 Training employees

- Train employees and help them in recognising opportunities, and making suggestions.
- Refine the criteria for approval of training classes to ensure consistency and fairness to all employees.

4.4.1.2 Communicate fully

One of the most counterproductive rules in business is to distribute information on the basis of “need to know”. It is usually a way of severely, unnecessarily and destructively restricting the flow of information in an organisation. Good communication requires managers to be attuned to what employees want and need to know; the best way to do this is to ask them! Most managers must discipline themselves to communicate regularly. Often it is not a natural instinct. Schedule regular employee meetings that have no purpose other than two-way communication. Meetings among management should conclude with a specific plan for communicating the results of the meetings to employees. And tell it like it is. Many employees are quite sceptical about management’s motives and can quickly see through “spin”. Get continuous feedback on how well you and the company are communicating. One of the biggest communication problems is the assumption that a message was understood. Follow-up often finds that messages are unclear or misunderstood.

Organisations and managers that communicate in the ways as described above reap large gains in employee morale. Full and open communication not only helps employees do their jobs but is also a powerful sign of respect (Sirota et al., 2006:3).

4.4.1.3 Provide recognition

Managers should be certain that all employee contributions, both large and small, are recognized. The motto of many managers seems to be, “Why would I need to thank someone for doing something he’s paid to do?” Workers repeatedly tell, and with great

feeling, how much they appreciate a compliment. They also report how distressed they are when managers don't take the time to thank them for a job done well yet are quick to criticise them for making mistakes (Sirota et al., 2006:2).

Receiving recognition for achievements is one of the most fundamental human needs and strengthens performance. Rather than making employees complacent, recognition reinforces their accomplishments, helping ensure there will be more of them. A pat on the back, simply saying "good going", a note about their good work to senior executives, some schedule flexibility, a paid day off, or even a flower on a desk with a thank-you note are a few of the hundreds of ways managers can show their appreciation for good work. It works wonders if this is sincere, sensitively done, and undergirded by fair and competitive pay and not considered a substitute for it.

4.4.1.4 Empower employees

Knowledge workers are believed to produce more when empowered to make the most of their deepest skills (Cloete, 2008:1). Therefore management should:

- Practice delegation through participation and involvement; and
- Be creative and innovative – provide employees with opportunities to use their skills.

4.4.1.5 Instill an inspiring purpose (vision)

A critical condition for employee enthusiasm is a clear, credible, and inspiring organisational purpose: in effect, a "reason for being" that translates for workers into a "reason for being there" that goes above and beyond money (Kimball & Nink, 2006:69). Every manager should be able to expressly state a strong purpose for his unit. Stating a mission is a powerful tool. Equally important is the manager's ability to explain and communicate to subordinates the reason behind the mission.

4.5 ACHIEVEMENT OF THE STUDY'S OBJECTIVES

This study evaluated the level of aligned-commitment of water and sanitation works operators, which displays operators' job performance effectiveness for water service delivery. The findings and information obtained show a very low presence of aligned-commitment levels in the Free State municipalities' water and wastewater works operators. The results found would help management of the municipalities to adopt the way to induce and maintain aligned-commitment (motivating climate) for their operators/employees.

In answering the research problems of this study, the following objectives were realised:

- A most significant model (aligned-commitment equation) of needs assessment was described to support employees' capacity-building programme (training and development) effectiveness that will enhance municipal water service delivery.
- Elements of aligned-commitment were described as they may apply to municipalities for effective and efficient training and development.
- The level of water and sanitation works operators' aligned-commitment was determined.

The results of this study was used to suggest recommendations for developing a comprehensive plan for the creation of effective employee (operators') aligned-commitment for capacity-building programmes to be effective.

4.6 RECOMMENDATIONS FOR FUTURE RESEARCH

Job satisfaction is positively correlated with organisational commitment, job involvement, motivation, organisational citizenship behaviour, life satisfaction, mental health, and job performance. It is correlated negatively to turnover, absenteeism, and perceived stress (Brewer & Lee, 2005:1).

Thus, as the expected positive relationship from aligned-commitment with job satisfaction and organisational commitment were not supported by the data of this study,

it could be attempted to study the relationship between aligned-commitment and the level of employees' education both as independent variables with job satisfaction and/or organisation commitment as dependent variables. Even though all elements of aligned-commitment are present and the level of aligned-commitment is high enough (motivating climate), employees with a low level of education have a very small option to get another job due to the limited available jobs for people with their education level. These employees will still show commitment to an organisation (affective, continuance, and normative commitment) irrespective of whether the level of aligned-commitment is high, low or none. Further research direction could include, among others:

- Studies to establish the relationship between aligned-commitment and job satisfaction, comparing both findings from employees with adequate levels of education (with high chances to get other jobs), and employees with inadequate levels of education (having very low chances to get alternative/other jobs).
- Future research is also needed to identify factors/elements for employees with different levels of education, which could lead to organisational commitment (affective, continuance and normative commitment).

4.7 CHAPTER SUMMARY

For this study, employees' aligned-commitment levels explained variance in employees' job performance. To address this does not only require capacity-building through training which only provides knowledge, but engagement of practices resulting in all five elements of aligned-commitment as described by Coetsee (2002:30). However, this study also suggests that high levels of employee job satisfaction will be present where employees' levels of education are low, irrespective of the level of organisation and/or employees commitment present. These suggestions offer additional opportunities for further research to establish the relationship between aligned-commitment, organisation commitment, and job satisfaction, comparing both findings from employees with adequate levels of education and employees with inadequate levels of education.

Therefore, this study contributes to growing literature on the influence of aligned-commitment and organisational commitment on job performance and job satisfaction.

“The power of knowledge is in the hands of someone using it”.

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WATER RESEARCH COMMISSION *see* SOUTH AFRICA

ANNEXURES

ANNEXURE - A

Questionnaire

Section A:

Aligned-commitment Elements Scale (Coetsee, 2002)

1. For each of the following, please tick one box to show how important you personally think it is in a job.

1. Very important 2. Important 3. Neither important nor unimportant 4. Not important 5. Not at all important

How important is....

a. Knowledge	1	2	3	4	5
b. Information	1	2	3	4	5
c. Empowerment	1	2	3	4	5
d. Rewards and recognition	1	2	3	4	5
e. Shared vision	1	2	3	4	5

2. The following statements are about your work and your organisation. Please indicate the extent to which each statement is true by ticking one box on each line.

1. Not at all 2. To a lesser extent 3. To some extent 4. To greater extent 5. To a very greater extent

2.1 Knowledge

This section explores the extent to which knowledge exists in your municipality/organisation.

1. The training provided me with sufficient knowledge to do my work well	1	2	3	4	5
2. My skill and competency to do my work is enhanced/increased through training	1	2	3	4	5
3. I had sufficient training to do my work	1	2	3	4	5
4. Operators have necessary mentorship in a workplace	1	2	3	4	5

2.2 Information

This section explores the extent to which information exists in your municipality/organisation.

1. My work objective is clearly defined most of the time	1	2	3	4	5
--	---	---	---	---	---

2. Operators are fully informed regarding municipal service delivery objectives (e.g. quality of water supplied)	1	2	3	4	5
3. My supervisor ensures that everyone knows what has to be done	1	2	3	4	5
4. We do hold workplace meetings discussing plant operation, maintenance and overall plant management	1	2	3	4	5

2.3 Empowerment

This section explores the extent to which empowerment exists in your municipality/organisation.

1. I have the freedom to decide how I wish to do my work	1	2	3	4	5
2. It is primarily my own responsibility to decide how I do my work	1	2	3	4	5
3. I am satisfied with the opportunities granted me to take part in decision-making	1	2	3	4	5
4. I find my work to be challenging	1	2	3	4	5

2.4 Rewards and Recognition

This section explores the extent to which rewards and recognition exist in your municipality/organisation.

1. My salary is fair considering what other operators/supervisors receive in other municipalities in the country.	1	2	3	4	5
2. I do earn the kind of money I should for the work I do	1	2	3	4	5
3. I do get compensated for working shifts and overtime	1	2	3	4	5
4. Operators get praised and/or rewarded for achieving targeted water quality in water produced	1	2	3	4	5

2.5 Shared Values/Goals

This section explores the extent to which shared values/goals exist in your municipality/organisation.

1. Our municipality values water quality and uninterrupted water supply systems for water service delivery	1	2	3	4	5
2. Senior people in our municipality continuously emphasise the importance of these values.	1	2	3	4	5
3. Operators compare quality of water produced to the SANS drinking water standards	1	2	3	4	5
4. I understand how my work contributes to water service delivery goals	1	2	3	4	5

Section B:
Job satisfaction/performance

1. How satisfied are you in your job?

Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	Can't choose
1	2	3	4	5	

2. For each of these statements about your job, please tick one box to show how much you agree or disagree that it applies to your job.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

	1	2	3	4	5
a. My job is secure	<input type="checkbox"/>				
b. My income is high	<input type="checkbox"/>				
c. My opportunities for advancement are high	<input type="checkbox"/>				
d. My job is interesting	<input type="checkbox"/>				
e. I can work independently	<input type="checkbox"/>				
f. My job is useful to the organisation and to society	<input type="checkbox"/>				
g. My job gives me a chance to improve my skills	<input type="checkbox"/>				

3. For each of the following factors of job satisfaction, please tick one box to show how important you personally think it is as commitment/motivating factor for incumbents by the operators' supervisor/manager.

1. Very important
2. Important
3. Neither important nor unimportant
4. Not important
5. Not at all important

How important is...

	1	2	3	4	5
a. The work itself (responsibility, interest and growth)	<input type="checkbox"/>				
b. Quality of supervisor (technical help and social support)	<input type="checkbox"/>				
c. Relationship with co- workers (social harmony and respect)	<input type="checkbox"/>				
d. Promotion opportunities (chances for further advancement)	<input type="checkbox"/>				
e. Pay (adequacy of pay)	<input type="checkbox"/>				
f. I do not feel a strong sense of belonging to my organisation	<input type="checkbox"/>				

Section C:

Affective, continuance, and normative commitment scale (Meyer & Allen, 1991)

Please use the scaling below to rate the following items.

1. Strongly agree
2. Agree
3. Neither agree or disagree
4. Disagree
5. Strongly disagree

1. Affective Commitment Scale Items

	1	2	3	4	5
a. I would be very happy to spend the rest of my career in this organisation	<input type="checkbox"/>				
b. I really feel as if this organisation's problems are my own	<input type="checkbox"/>				
c. I do not feel like part of the family at my organisation	<input type="checkbox"/>				
d. I do not feel emotionally attached to this organisation	<input type="checkbox"/>				
e. This organisation has a great deal of personal meaning for me	<input type="checkbox"/>				
f. I do not feel a strong sense of belonging to my organisation	<input type="checkbox"/>				

2. Continuance Commitment Scale Items

	1	2	3	4	5
a. It would be very hard for me to leave my organisation right now even if I wanted to.	<input type="checkbox"/>				
b. Too much of my life would be disrupted if I decided I wanted to leave my organisation right now	<input type="checkbox"/>				

c. Right now, staying with my organisation is a matter of necessity as much as a desire	<input type="checkbox"/>				
d. I believe that I have too few options to consider leaving this organisation	<input type="checkbox"/>				
e. One of the few negative consequences of leaving this organisation would be the scarcity of available alternatives.	<input type="checkbox"/>				
f. If I had not already put so much of myself into this organisation, I might consider working elsewhere	<input type="checkbox"/>				

3. Normative Commitment Scale Items

	1	2	3	4	5
a. I do not feel any obligation to remain with my current employer	<input type="checkbox"/>				
b. Even if it were to my advantage, I do not feel it would be right to leave my organisation now	<input type="checkbox"/>				
c. I would feel guilty if I left my organisation now	<input type="checkbox"/>				
d. This organisation deserves my loyalty	<input type="checkbox"/>				
e. I would not leave my organisation right now because I have a sense of obligation to the people in it	<input type="checkbox"/>				
f. I do not feel a strong sense of belonging to my organisation	<input type="checkbox"/>				

Section D:
Capacity-building scale

1. This questionnaire has been designed to gauge the benefits of capacity-building training you may have attended.

1. Not at all
2. To a lesser extent
3. To some extent
4. To greater extent
5. To a very greater extent

	Not at all	To a lesser extent	To some extent	To greater extent	To a very greater extent
1. I feel good that I could implement what I learned during the training	1	2	3	4	5
2. I feel more effective in my role as a direct result of training	1	2	3	4	5
3. The training duplicates my existing knowledge and skill	1	2	3	4	5
4. Other (please specify)	1	2	3	4	5

2. What form of capacity building as mentioned below you think explains it best?

1. Capacity building refers to operators' skill development efforts directed towards helping operators to operate the plant more effectively.	1
2. Capacity building is developing operators' capability to operate the plant	2
3. Capacity building is more likely when operators have several opportunities and challenges to a particular skill	3
4. Other (please specify)	4

Section E:
Manager/supervisor's role scale

1. Who is responsible for encouraging employee commitment/motivation in your workplace?

	Yes	No
a. The operator himself/herself	1	2
b. The operator manager/supervisor	1	2
c. The top management of the municipality	1	2

2. Would you regard operators' supervisor/managers, in the employee commitment/motivational process, as able to identify the basic needs of operators to improve work performance?

Not at all	To a lesser extent	To some extent	To greater extent	To a very greater extent
1	2	3	4	5

3. Would you regard operators' supervisor/managers, in the employee commitment/motivational process, as able to address the basic needs of operators to improve work performance?

Not at all	To a lesser extent	To some extent	To greater extent	To a very greater extent
1	2	3	4	5

4. Which one or more of the statement(s) below will portray to operators' manager/supervisors that operators are committed/motivated?

	Yes	No	Uncertain
a. Willingness to work hard	1	2	3
b. Determination of succeed	1	2	3
c. High level of achievements	1	2	3
d. Consistently good results	1	2	3
e. Willingness to go the extra mile	1	2	3
f. Full participation in the team	1	2	3
g. Enjoying work with its challenges	1	2	3
h. Loyalty towards the organisation	1	2	3
i. Attachment to organisational goals, objectives, etc.	1	2	3

5. In general, how would you describe relations at your workplace?

	Very good	Quite good	Neither good nor bad	Quite bad	Very bad
1. ...between management and employees?	1	2	3	4	5
2. ...between workmates/colleagues	1	2	3	4	5

Section F:
Demographic Questions

The following questions concern your position and other personal information. Completion of this information is voluntary and confidentiality is assured.
THANK YOU!

1. Gender

 1. Male 2. Female

2. What is your Job Title?

3. How long have you worked for your municipal authority?

_____ Years _____ Months

4. What is your highest level of education?

- 1. Did not complete High school
- 2. High school equivalent
- 3. Some college credits, no diploma
- 4. Diploma
- 5. Some Bachelor's degree credits, no degree
- 6. Bachelor's degree

5. Have you ever attended courses related to water and/or wastewater treatment operation?

 1. Yes 2. No

Thank you for your co-operation in completing this questionnaire.

ANNEXURE - B

Free State water quality monthly results for the year 2007

