

AN IMPACT EVALUATION OF A RETAIL BUSINESS SKILLS TRAINING PROGRAMME

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## EXECUTIVE SUMMARY

### Introduction

The South African retail industry is growing significantly and increasingly becoming an important contributor to the country's economic growth. The industry grew by 5.9 percent in 2011, in terms of sales, compared to 3.6 percent decline in 2009. According to figures provided by the Statistics South Africa (StatsSA), the industry contributed six percent to the entire South African economy and 23 percent towards total employment in the country. Despite the growing significance of the industry in the South African economy, the industry is still marred with chronic challenges of poor education and skills shortages. Major players in the industry indicated that these challenges are the main impediments to potential higher growth.

In the face of these challenges, one of the major retail groups in South Africa has embarked on a training programme (Survial of the Fittest Business Skills). The purpose of this programme is to equip new store managers with financial skills, with the ultimate aim of increasing profits. These new store managers are supposed to enrol into the programme within their first six months of appointment.

Although Survial of the Fittest Business Skills training programme has been operating for more than five years, no assessment was done to evaluate the impact of this programme on business outcomes. Generally, little is known about the link between skills training and organisational financial performance. The literature on the impact of training on business performance is limited, mixed and varied. This study is therefore motivated by the need to shed more light on the impact of training on business performance. Specifically, this study is a theory-driven evaluation that examines the impact of the training programme on a South African retail group's financial performance.

## **Research aims and objectives**

The main aim of this study was to examine the impact of the Survival of the Fittest Business Skills training programme on business financial outcomes of net profit, gross profit and expenses; with particular reference to a major retail group in South Africa.

## **Research methodology**

The study attempts to measure the impact of skills training programme on business financial performance outcomes. The business financial outcomes considered were net profit, gross profit and expenses. A quasi-experimental design was developed to assess the impact of the training programme. The design's internal validity and reliability assessed against the most common threats to internal validity. This exercise proved that the evaluation design was strong enough to satisfy the programme impact concerns.

## **Major findings from the study**

A major finding from this study was that training does not have a significant impact on the identified business financial indicators of net profit, gross profit and expenses. In particular, the following were the specific findings from the study.

- While controlling for store location and store brand, the study tested the relationship between the net profits and the training programme. The semi-partial correlation between net profits and training only accounted for six percent of the variance and was not statistically significant. The conclusion therefore was that the Survival of the Fittest Business Skills training programme was not effective. Thus, the impact of training on net profits was found to be statistically insignificant.
- A similar analysis investigating the relationship between training and gross profits found similar results. This analysis indicated that the training does not have an impact on gross profits and the relationship between the two was found to be statistically insignificant. With other factors (store location and store brand) held constant, training only contributes two percent to the variability in gross profit. This contribution was found to be statistically insignificant.

- The results further show that Survival of the Fittest Business Skills training does not impact store expenses and the relationship between the two was statistically insignificant. Thus, of all the factors that contribute to reduced store expenses, training only contributes two percent, which is statistically insignificant.
- Although training was found not to have an impact on business financial performance indicators, it has more influence on gross profits than expenses and net profit. Thus, training contributes four percent to gross profit variability compared to two percent and one percent for expenses and net profit, respectively.
- However, training appears to have an impact on net profits for stores located in particular regions. This was shown by a statistically significant relationship between store net profits and the interaction effect between store location and training.
- Furthermore, a statistically significant relationship between store brand and store gross profits was found to exist. Holding other factors constant, the variable, store brand, accounts for four percent of the variability in gross profits.
- Finally, training was found to have an impact on store financial performance but that depends on the store brand. Holding other things constant, store brand contributes to four percent variability in store expenses and is statistically significant.

### **Major conclusions of the study**

Based on the findings from the study, the following conclusions were derived:

- Overall, training does not consistently transfer to job performance and this could be attributed to the following factors:
  - A lack of support in the work environment that would otherwise enable the transfer of learning to the job and superior organisational outcomes.
  - The individuals that enrol for the training do not perceive it as a tool that can help them improve their store performance.
  - Participants are perhaps not engaged in decisions that pertain to the training programme.
  - The training module's objectives are perhaps not relevant to the work context.
- There are objectives of the training that are not being achieved and these are:

- Ensuring that store managers understand the effect of sales on gross profit and net profit.
- Ensuring that store managers understand the expenses that affect the Branch Operating Report (BOR).
- The programme is provided on a “one size fits all” basis. However, the results from the study indicate that in order for the training programme to be effective, it should be provided to specific regions and store brands; this further confirms that different stores have different training needs as well as regions. Tellingly, there are characteristics unique to certain regions. Finding such characteristics and modifying the programme can make the training effective. Of course, further study would be needed.

### **Limitations of the study**

The study, however, was limited in a number of aspects and these are as follows:

- Due to time and financial constraints, the study was limited to quantitative analysis. Yet, qualitative aspects were essential to get individual perceptions about the impact of the training on both individuals involved in training and the business outcomes.
- The sample size was relatively small which might result in the sample not being representative or the study lacking statistical power needed to detect weak but potentially important effects. Hence, the research finding could not be generalised to other populations i.e. other retail organisation outside the clothing and textiles industry.
- The sample data was skewed towards one region with the majority of these stores from the Gauteng region.
- The data used for the analysis was collected from archives and from participants who self-selected themselves into the training programme. This presents a possible selection bias that could be a threat to internal validity of the evaluation design.
- Some store managers benefited from the programme yet they were not the target beneficiaries. Thus, while the programme was designed for newly appointed store managers within six months of appointment, those with more than five years as store managers, for example, could also benefit from the programme.

## **Recommendations and areas for future research**

Noting the strengths and weaknesses of this study, the following key recommendations should be considered:

- Future evaluation should be formative, rather than a summative. Formative evaluation will provide insight into what business need to do in order to improve the programme, while at the same time allowing for programme modification to meet the specifics of the business and location.
- Furthermore, while the study highlighted the importance of regional and brand attributes towards improving the impact of training on store financial performance, it fell short of highlighting the specific reasons why some regions and store brands benefited the most from training. Further research therefore should focus in this area.
- While this study was purely quantitative, future studies can employ qualitative methods or both, to effectively assess individual perceptions regarding the training programme on both personal attributes and business outcomes.
- The duration and content of the study module needs to be reviewed so that it is in line with the professional level of the target population.
- Alternatively, a needs analysis should be conducted to identify if the training still meet the needs of the store managers.
- Following a needs analysis, a pilot study should be conducted for the training programme.
- The pilot study could be evaluated using a Randomized Control Trial and once again employing both quantitative and qualitative methods of evaluation to measure the actual impact of the programme.

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## CHAPTER ONE

### INTRODUCTION AND BACKGROUND

#### Introduction

The South African retail industry is growing significantly and is increasingly becoming an important contributor to the country's economy. Recent retail sales figures provided by the Statistics South Africa (Stats SA) shows that the year-on-year growth in total retail trade sales improved significantly, from a negative growth of 3.6 percent in 2009, during the economic crisis, to 5.9 percent in 2011 (Stats SA, 2012). In 2011, the retail sector contributed 6 percent to Gross Domestic Product (GDP) and 23 percent to total employment (QLFS, 2011).

In the same year (2011), retail sales increased by R30 billion, with retailers in the textiles, clothing, footwear and leather (CTFL) goods being the second largest contributors, contributing 28 percent or R8 billion; after general dealers which contributed 32 percent or R10 billion. In terms of annual growth in retail sales, retailers in the clothing, textiles, footwear and leather goods sector were ranked the third, after retailers in household furniture, appliances and equipment; and retailers in hardware, paint and glass (StatsSA, 2012).

Moreover, the CTFL retail industry generated R116 billion in sales in 2011. This increase can be attributed to major players that make up 60 percent to 70 percent of the retail sales in the CTFL industry. These are Edcon, Woolworths Holdings, Pepkor, Truworths, Foschini, Pick 'n Pay and the Mr Price Group (GEP, 2010). The observed substantial growth of these retailers is evident largely in South Africa. Annual reports by these stores shows that over the last six years, the number of stores in the CTFL industry (excluding Pepkor) grew by 26 percent from 4 700 in 2007 to 5 900 stores in 2011. This is an average growth of 300 stores per annum. The highest growth in the number of stores was recorded for Foschini, which grew at an average of 100 stores per year.

The 2010/2011 financial results for a number of these retailers were encouraging. Mr Price group posted 50 percent net profit after tax increase to R1.0 billion in 2011 from R674 million in 2010. Similarly, Woolworths Holdings posted a 29 percent increase to R1.6 billion in 2011 from R1.3 billion 2010. Moreover, Truworths posted 21 percent increase to R1.9 billion in 2011 from R1.6 billion in 2010. Foschini posted 20 percent increase in net profits to R1.3 billion from R1.1 billion in 2010. Edcon however posted a net loss of 31 percent to R610 million in 2011 from a profit of R926 million. This was probably due to its high finance costs that were incurred in that financial year.

While there has been a rapid expansion in the South African retail industry, poor education and lack of skilled workers has been a major factor holding back the industry from potentially higher growth levels. To this end, a Grant Thornton International Business Report (2013) shows that lack of skilled workers is the major growth constraint by South Africa's businesses (p.5). There is also a general acceptance amongst economists that skills shortage could pose a significant limitation to the country's growth prospects (Sharp, 2011).

Notably, the problem of skills shortage is rampant within the retail industry in South Africa and major players in the industry allude to the severity of the problem. Mr Price Group, for instance, in its 2011 annual report, emphasised that poor education levels contribute to a lack of skills and hence impedes business growth (MR Price, 2011). According to the report, these challenges strain the organisation, both operationally and from a cost perspective. South Africa's pool of skilled resources is becoming increasingly limited, according to MR Price. Similarly, the Foschini Group in its 2011 annual report, stressed that "without insightful, specialised, and talented staff at all levels, continued success and growth through innovation would be endangered" (TFG, 2011).

While Truworths attributes its success to the skills and competence of its executives (Truworths, 2011), Woolworths is increasingly finding it difficult to attract, retain, and develop talent (Woolworths, 2011). This suggests that skills training could have substantial benefits to the success of companies.

Recognition of the importance of attracting, developing, and retaining world class skilled staff and managers in all disciplines to ensure competitiveness and sustainability had sparked a new trend in education and skills development programmes in the retail industry. Woolworths, for example, spent R51.4 million and R58.2 million in 2010 and 2011, respectively (Woolworths, 2011). Edcon has made significant investments in training, with an offering of approximately 1 146 learning programmes to employees. In 2011, Edcon spent about 4.5 percent of payroll expenditure on learning so as to be able to attract and retain quality employees (Edcon, 2011).

### **Statement of the problem**

Although training programmes are widely accepted as critical to the success of any organisation, their impact on organisational performance remains unclear. Those who have attempted to provide a link between skills training and organisational performance have produced limited, mixed and varied results.

Some studies such as Bassi, Ludwig, McMurrer & Buren (2002); Drexler, Fischer & Schoar, (2011 & 2004); and Warech & Tracey (2004), have found an important and significant association to exist between training and organisational performance. However, these studies have been criticised on many fronts. For instance, critics argue that although training is expensive, it does not transfer to the job (e.g. Kraiger, McLinden & Casper, 2004; Niazi, 2011; Ngoc, Salas & Cannon-Bowers, 2000; Ngoc, Truong & Dirk, 2010).

Furthermore, previous studies have failed to specify the type of training that works between general and firm specific. Without clear knowledge about the nature of training that works, it remains difficult for organisations to make informed decisions about the nature of training programmes. In the literature, studies such as Black and Lynch (1996) argue that generic training is likely to produce greater returns than firm-specific training. On the contrary, studies by Green, Mayhew and Molloy (2003) and Reid (2000) found a strong link between specific training and organisations' specialised product or service. Despite the contrasting views regarding the type of training that necessitates the desired outcomes, the majority of the studies focus on developed countries. This suggests that little is known about this

relationship in developing countries such as South African, particularly within the retail environment.

It is widely acknowledged that training activities are critical for achievement of organisational outcomes. For instance, according to Nguveni (2009, p.99), the full impact of training can be realised if the training activities are in line with organisational goals. This assertion has been alluded to in various studies including Blundell, Dearden and Meghir (1996) and Booth (1991). These studies have analysed the link between the training activities that took place and organisational performance and found a strong relationship. However, this area has not been fully explored within the South African context.

Although extensive work has been done to explore the general impact of training on business performance, there is relatively little evidence drawn from firm-level evaluation. Within the South Africa context, the lack of monitoring or measuring the success of organisational training programmes leaves a lot to be desired in terms of their effectiveness in reducing the skills challenges in the country. Thus, since training involves huge expenditures, with associated opportunity costs, it is essential that they are evaluated to ensure the optimum allocation of resources.

In light of the above, this study aims to determine the extent to which providing training enhances the overall financial performance of an entity. This could provide some important lessons that are applicable to the South African context.

### **Aims and objectives of the study**

The main aim of this study is to examine the impact of a business skills training programme on business financial outcomes of net profit, gross profit and expenses; with particular reference to a major retail group in South Africa.

## **Rationale for the study**

The results obtained from this study will enable the organisation to ascertain more accurately whether providing training will result in improved financial performance. This knowledge will assist the company to make informed decisions regarding its funding and the nature of training programmes it provides. A lesson could be drawn not only for other retailers with similar skills development initiatives but other unrelated entities can adopt it as a basis to build a strong linkage between skills training and organisational performance.

This study is further justified by the fact that it will provide researchers, especially those in the field of evaluation and managers or training practitioners, with knowledge of the important linkages between employees' skills training and organisational performance. Firstly, the study contributes to the existing debate on the relationship between training and firm performance. The study is unique because of its focus on a specific retailer rather than using panel data from many different and sometimes unrelated organisations.

Secondly, the study's focus on the effects of training on organisational performance in a specific retail sector seeks to provide answers that are applicable to that specific sector. Consequently, the study contributes substantially to the sparse literature in training evaluation for the sector, especially within the South African context.

Thirdly, the study addresses the weaknesses in the literature that is largely developed in a nation-oriented context. This weakness is addressed by analysing the effects of training on a specific job description for an entity, in an emerging country context.

Finally, the findings from this study could be important for training practitioners and policy makers who are concerned about training and firm performance. In this regard, the study provides a basis for performance improvement by companies in the bid to address the challenge of skills shortage in South Africa. Thus, while the study contributes to more knowledge on the link between training and organisational performance, it also sheds more light on the role of organisational training in resolving the national skills shortage.

## **The description of the training programme**

*Survival of the Fittest Business Skills* is a training programme run by one of the largest retail groups in South Africa. The programme has been running for 5 years and targeting store managers drawn from 16 brands across the country. Training is conducted at different times and at different places. There are four dedicated trainers with vast experience in clothing retail, as well as a strong academic background in financial accounting. Potentially, the programme was designed to benefit approximately 4 500 store managers per annum. In terms of implementation, training workshops are provided once-off to each group comprising of between 20 and 40 store managers. Training runs for 2 days, from 08.30 am to 16.30 pm. The training programme was designed for newly appointed store managers within the first 6 months of appointment. Nevertheless, those managers who missed training have an option to enrol at any other time. The following subsection purely draws from the programme training manual, *Survival of the Fittest: A Facilitator Guide to Protecting Your Top Line*, which is the latest version updated in 2012.

Specifically, the programme's main objectives are to make sure that managers are able to:

- Explain the effect of sales on gross profit and net profit;
- Demonstrate an understanding of the expenses that impacts the Branch Operating Report (BOR) and;
- Plan to improve the operational performance of their stores by analysing actual performance against operational targets and budgets.

The training programme was designed to deal with basic finance concepts with special focus on profit measurement. These are the effect on net profit and improvement of gross profit. Another aspect of the training programme deals with increasing net income. This is based on the belief that the bottom line is drastically affected by a leader's ability to keep the team geared towards satisfying customer expectations. This involves providing the image promised by the brand and getting started on preparing for formulating an action plan. To achieve this, managers are trained to identify the target market - described by age, gender, population size, demographics and income. In South Africa, the Living Standard Measure (LSM) is the most widely used measure. The South African Audience Research Foundation

(SAARF) developed this measure. It further segments the market by level of sophistication to help marketers define their markets better. This measure therefore groups the market according to community size, such as metropolitan, cities or large town, small towns, villages and rural areas (SAARF, 2012).

Store managers are also trained on how to use the company's Branch Operating Report (BOR). A branch operating report is a management report detailing profit and loss summary for the store. In this report, one can also find measures of the monthly and cumulative performance of the store over a set period. The BOR is used so that one can see if the bottom line has improved. Bottom line can improve through increasing sales and managing expenses. The BOR can also be used as measure of the store performance against budget. Generally, information contained in this report include income (turnover), expenses (running costs of the store), gross profit (sales less cost of sales), stock loss (the cost of stock losses for the store), bad debt (money owed by customers that have been written off) and net profit (gross profit less expenses plus stock loss plus bad debts).

In addition, managers are trained on how to check BOR to establish whether the month and year to date's performance meets the company's expectations. This can be done through identifying variances (out of line), by checking if the variances are justified, developing an action plan to ensure control, communicate with staff and investigate if needed.

Another important component of the training programme is the benefits and tips to improving turnover. Store managers are trained on the benefits associated with receiving new merchandise more frequently. Moreover, store managers are trained about techniques and advantages of realising less loss from selling reduced priced and out-dated stock. Importantly, store managers are taught on the tips of keeping an eye on reducing expenses and how that translates into improved profits. Keeping staff motivated has also been identified as a key to success for any store manager.

Concerning improved sales, the training provides stores managers with tips on how to effectively run promotions or in-store events, as well as how to strategically advertise on the shopping centre billboards. Managers are also taught the importance of keeping staff up

to date with sales progress. This could be done through holding regular staff meetings update the manager on turnover rates, the performance of promotions, and individual sales achievements. The essence of training staff to be multi-skilled had greater emphasises as well as the importance to clearly state staff member's job responsibilities and what they are accountable for.

Similarly, enhancing customer care by staff is essential for customer retention and store managers as leaders are encouraged to lead by example. Store managers are also trained on the importance of creating an enabling work environment that allows transfer of learning by staff. Finally, stores managers are trained on the importance of understanding the cost of losing customers and the essence of encouraging customers to open new accounts.

Overall, all the components of the training programme boil down to improving profits for stores. In this regard, store managers are trained to manage profitability and are given tips to improve profitability. These tips include the need to drive sales, the need to maintain excellent store standards, the importance of staff development, the importance of understanding and utilising all the resources at one's disposal and commitment to customer satisfaction and excellence.

After the training programme, participants write two assignments. The first assignment is written immediately after training, that is within one month after training and the second assignment is completed within first two months after completion of the first assignment.

This section provided an in-depth description of the skills training programme, including number of participants, time frames, the nature of the training modules and assessment methods. With this understanding of the programme, the next section deals with the identification of stakeholders who might have an influence on the training programme.

### **Identified stakeholders in the evaluation**

The stakeholders involved in the training programme are the programme manager, the human resource manager, the training personnel and the store managers of the retail group. The reasons to involve these stakeholders in the evaluation are:

- They assisted in identifying programme goals, which can be transformed into clear and specific statements of objectives.
- They also helped in coming out with a workable agreement in defining criteria to be used in assessing whether the set objectives have been met.
- To determine if the evaluation questions are relevant and meaningful to the various stakeholders.
- Laying the groundwork for credible findings, including a broad range of perspectives, ideas and experiences.
- To provide stakeholders with an opportunity to raise objections or issues early in the evaluation process.
- To create relationships to gain trust and have easy access to information when it comes to data collection.

### **Evaluation questions**

To determine if the training programme results in improved financial performance the following four questions were explored:

1. To what extent does the training programme meet the objectives of improving net profit and gross profit?
2. To what extent does the training programme meet the objective of reduced store expenses?
3. Which of the business financial performance indicators was most influenced by the training programme?
4. Does the impact of training differ depending on the store brand and the location of a particular store?

### **Programme theory as formulated by programme stakeholders**

In this section, the programme theory or a conceptual model is described. This helps to elucidate how the training is expected to work and also to identify the linkages presumed between various activities and functions and the expected benefits of the programme. According to Rossi, Lipsey and Freeman (2004, p.93), this representation is important as it is

used to identify those aspects of the training programme most essential for effective performance.

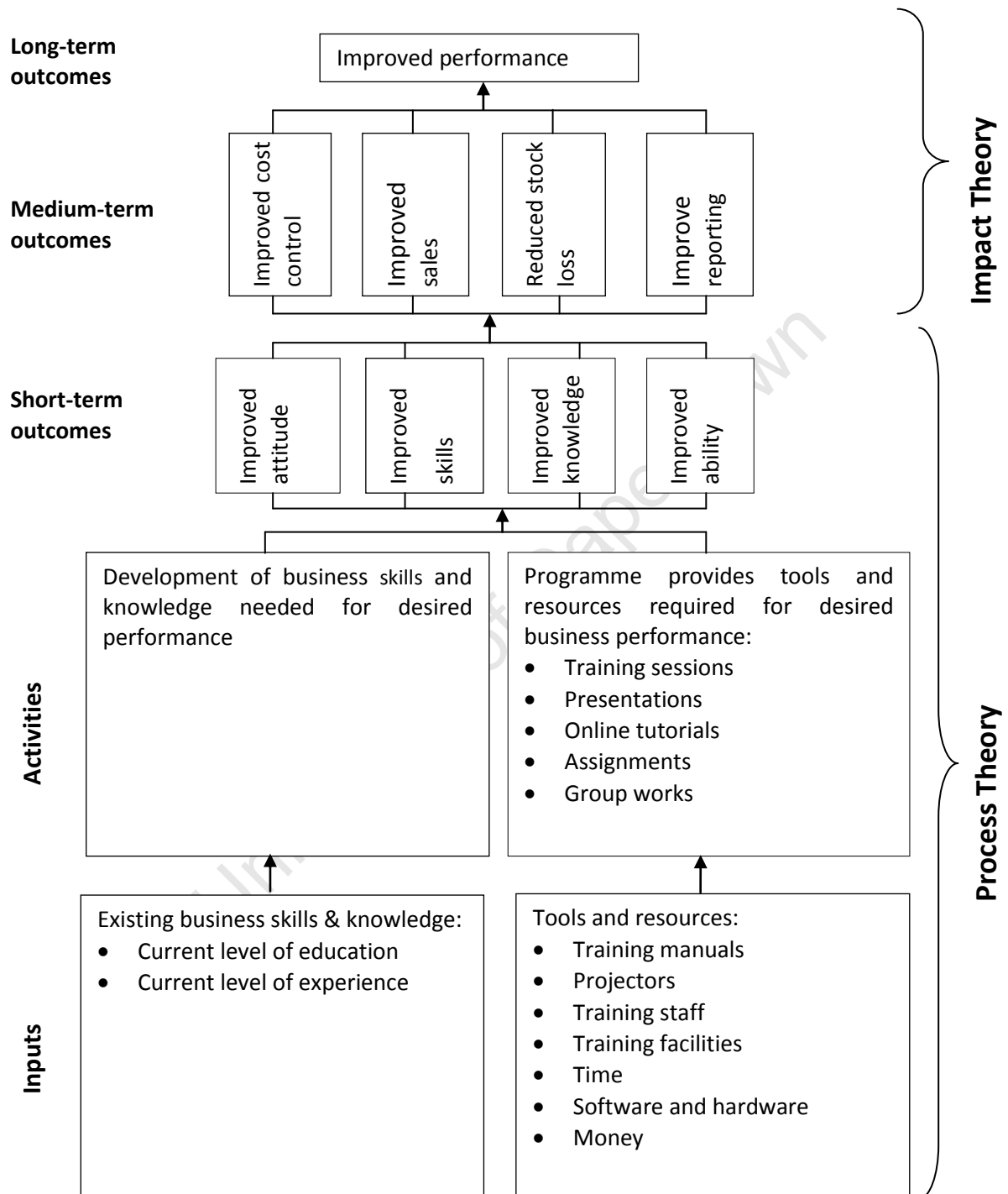


Figure 1: The programme theory for the Survival of the Fittest training programme

In this regard, a conceptual framework maps out the causal assumptions inherent in the programme. In the case of the Survival of the Fittest Business Skills, no programme records could be found that could explain the linkage from programme activities to outcomes. As a result, programme theory was formulated after discussions with the programme manager and training facilitators. The importance of articulating the program theory is to make it explicit, so that it can be examined and evaluated (Rossi et al., 2004). To fulfil this purpose, programme theory is divided into two distinct parts as suggested by Rossi, et al. (2004). These are the process theory and the impact theory as shown in Figure 1 above. The following sections discuss each of these parts in detail.

### **Process theory**

Process theory provides the linkage between programme inputs, activities and outcomes. This theory consists of two main components: the service utilization plan and the programmes' organisational plan. A programme's organisational plan encompasses both the functions and activities the programme is expected to perform and the human, business, and physical resources required for that performance (Rossi, et al. 2004, p.142). The service utilization plan simply focuses on the ways in which the targets will gain access to and interact with the training services.

#### **Programme resources**

Figure 1 above illustrates the programme theory for Survival of the Fittest business skills training programme as stipulated by the programme stakeholders. The figure shows the programme components which comprise the activities and materials used in the training sessions. The theory begins with accumulation of resources that include training staff, training manuals, projectors, training facilities, time, software and hardware, business resources for travelling, printing and publishing, and other overheads.

Thus, a considerable amount of resources is required to run a programme such as Survival of the Fittest. In the history of the programme, the retail group had consistently provisioned enough financial resources. A majority of these monies are required for travelling by the

programme participants and training facilitators. Some of the funds are used for hotel accommodation and training facilities, i.e. in those instances where outside facilities are used instead of their own.

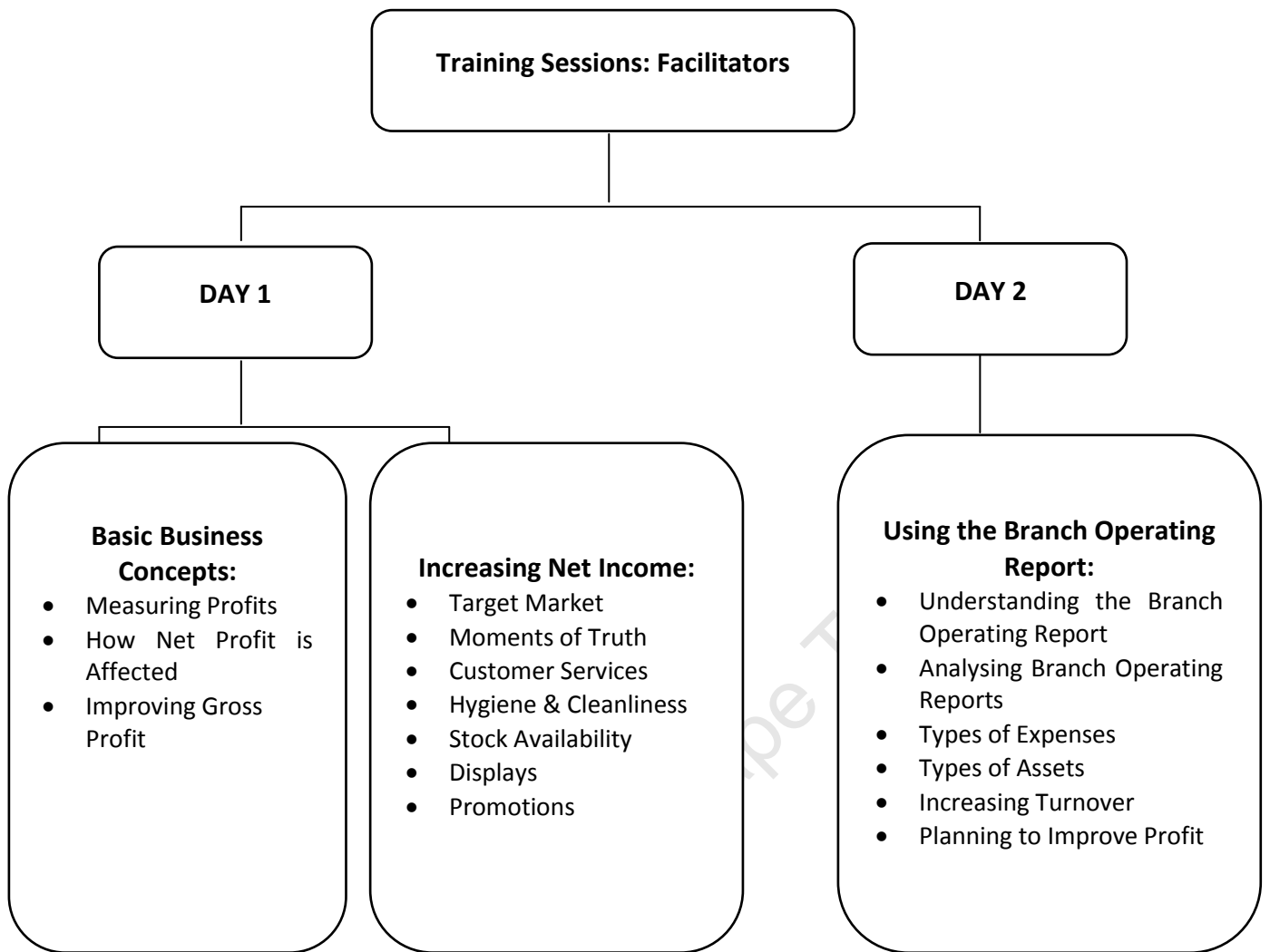
Time is another valuable resource the programme utilises. The programme runs during working days, and two days of normal work are forgone.

The training programme directly utilises the services of five staff members: one programme manager who oversees the whole programme nationally and four facilitators who are responsible for conducting training sessions. Participants bring with them existing business skills and knowledge gained from their previous education and training. These store managers are experienced in other aspects of business skills which are expected to be complemented by the training programme. A detailed discussion of these programme components is presented below.

#### **Programme activities**

During training, various activities take place that provides tools and resources required for desired financial performance. As Figure 1 shows, during training presentations are made, participants complete individual tasks, and engage in group discussions as well as written assignments. These training activities are believed to equip store managers with business knowledge and skills, and strengthen their existing skills and knowledge. Overall, this is expected to provide participants with knowledge and skills required to achieve the desired store performance.

Figure 2 below further illustrates the programme activities of the Survival of the Fittest business skills training programme, where training is conducted for two days. On day 1 of the training, two modules are covered which are the Basic Business Concepts and Increasing Net Income. The Basic Business Concepts includes topics such as measuring profits, how the net profit is affected, and improving gross profit. The increasing income module covers topics such as target market, moments of truth, customer services, hygiene and cleanliness, stock availability, displays and promotions.



Assessment

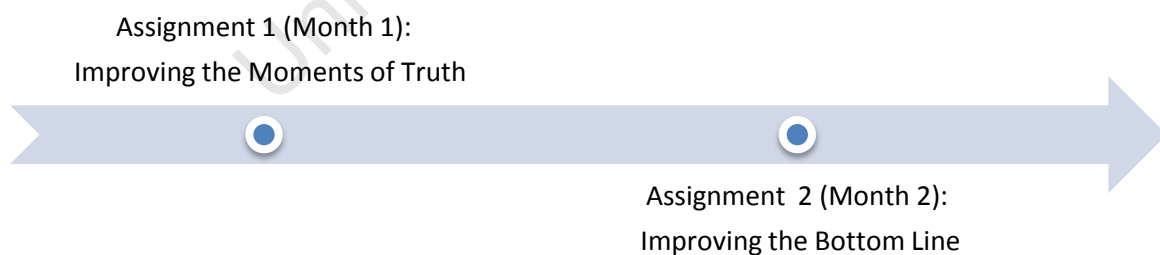


Figure 2: Programme activities of the Survival of the Fittest training programme

On day 2 of training, there is only one module “Using the Branch Operating Report”. Through this module, participants are expected to have an understanding of the BOR and be able to analyse it. Participants are also expected to identify types of expenses and assets as well as ways of increasing turnover. The training session is concluded by teaching

participants how to plan to improve profit. This module is exclusively dedicated for a full day because the facilitators believe that the module covers the most crucial part of the training. According to the facilitators and the programme manager, in day 2 of the training, participants are expected to apply most of the knowledge they gained in the first day of training.

After every module, participants are expected to complete small exercises individually and/or sometimes in groups. In these exercises, participants are instructed to construct and analyse a BOR. Training facilitators believe that this enhances participants' understanding and analytical skills.

After the programme, two assignments are given to form part of assessment. The first assignment deals with improving the moments of truth as indicated in Figure 2. This is where participants are expected to identify strategies they can implement at their stores to enhance a positive shopping experience for customers. Thus, satisfying customer expectations encourages customer retention and hence positive outcomes on store profits. The assignment is completed in the first month of completing training. The second assignment is completed in the second month after training. This assignment focuses on ways to improve the bottom line or sales. Essentially, the expectation around this assignment is that if participants are able to identify ways of improving the bottom line, then they are able to identify components of the BOR that have an implication on the profitability of their respective stores.

The assignments are internally assessed, by the facilitators and no accreditation or certification is awarded. Overall, after completing the training programme participants are expected to have knowledge about business concepts, enhanced marketing skills and business reporting skills. Table 1 above provided a further breakdown of the training activities in an attempt to show how the activities associated with each module are expected to achieve each of the expected outcomes.

Table 1

*Activities of the Survival of the Fittest programme and intended outcomes*

<b>Learning Module</b>	<b>Programme activities</b>	<b>Intended Outcomes</b>
Basic Finance concepts	<ul style="list-style-type: none"> <li>• Measuring Profits</li> <li>• How Net Profit is Affected</li> <li>• Improving Gross Profit</li> </ul>	<ul style="list-style-type: none"> <li>• Improved financial knowledge</li> </ul>
Increasing Net Income	<ul style="list-style-type: none"> <li>• Target Market</li> <li>• Moments of Truth</li> <li>• Customer Services</li> <li>• Hygiene &amp; Cleanliness</li> <li>• Stock Availability</li> <li>• Displays</li> <li>• Promotions</li> </ul>	<ul style="list-style-type: none"> <li>• Improved business insight</li> <li>• Understanding a broader purpose of the business</li> </ul>
Using the Branch Operating Report	<ul style="list-style-type: none"> <li>• Understanding the Branch Operating Report</li> <li>• Analysing Branch Operating Reports</li> <li>• Types of Expenses</li> <li>• Types of Assets</li> <li>• Increasing Turnover</li> <li>• Planning to Improve Profit</li> </ul>	<ul style="list-style-type: none"> <li>• Improved financial analysis skills</li> <li>• Improved financial reporting skills</li> </ul>
Assessment and Feedback	<ul style="list-style-type: none"> <li>• Assignment of improving Moments of Truth</li> <li>• Assignment of Improving the Bottom Line</li> </ul>	<ul style="list-style-type: none"> <li>• Insight into business problems</li> <li>• Improved problem solving</li> </ul>

The categorisation in Table 1 above is adapted from the programme manual and the programme design as outlined by the programme manager and training facilitators. The table represents the training modules and the associated programme activities that are designed to enhance learning transfer by participants to achieve the intended outcomes. As indicated in the Table, the intended outcomes expected to be effected by the programme activities are improved financial knowledge, improved business insight, understanding a broader purpose of the business, improved financial analysis skills, improved financial reporting skills, insight into business problems and improved problem solving.

### **Programme target participants**

The training programme targets newly appointed store managers within the first six months of appointment. However, those managers who missed training have an option to enrol at any other time. To encourage participation, the participants are charged R150 for not attending. This amount is three times more than the normal attendance fee of R50 paid by those who attend.

### **The service utilization plan**

The second component of process theory is the organisation's service utilisation plan, depicted in Figure 1. The service utilization plan shown in Figure 3 builds on Rossi et al. (2004, p.144). It shows the path in which the programme participants can follow from the point of first interaction with the programme to the point where they are no longer in any contact.

The service utilization focuses on ways in which targets gain or not gain access to the programme. It also shows how the participants interact with the programme. Figure 3 depicts the services utilization flow chart of the Survival of the Fittest business skills training programme, characterising the situation in which the newly appointed store managers are not engaged with programme as intended. Some newly appointed store managers miss invitations to attend the training programme and some of those who get invited may not attend. The end result is that these newly appointed store managers do not get training at all and remain financially incompetent. On the other hand, those store managers who have been approached and decide to enrol in the programme receives the programme and acquires the necessary skills and knowledge. There are however two possible outcomes for those who got training, either they end up financially knowledgeable or some will come out without the expected gain in financial knowledge.

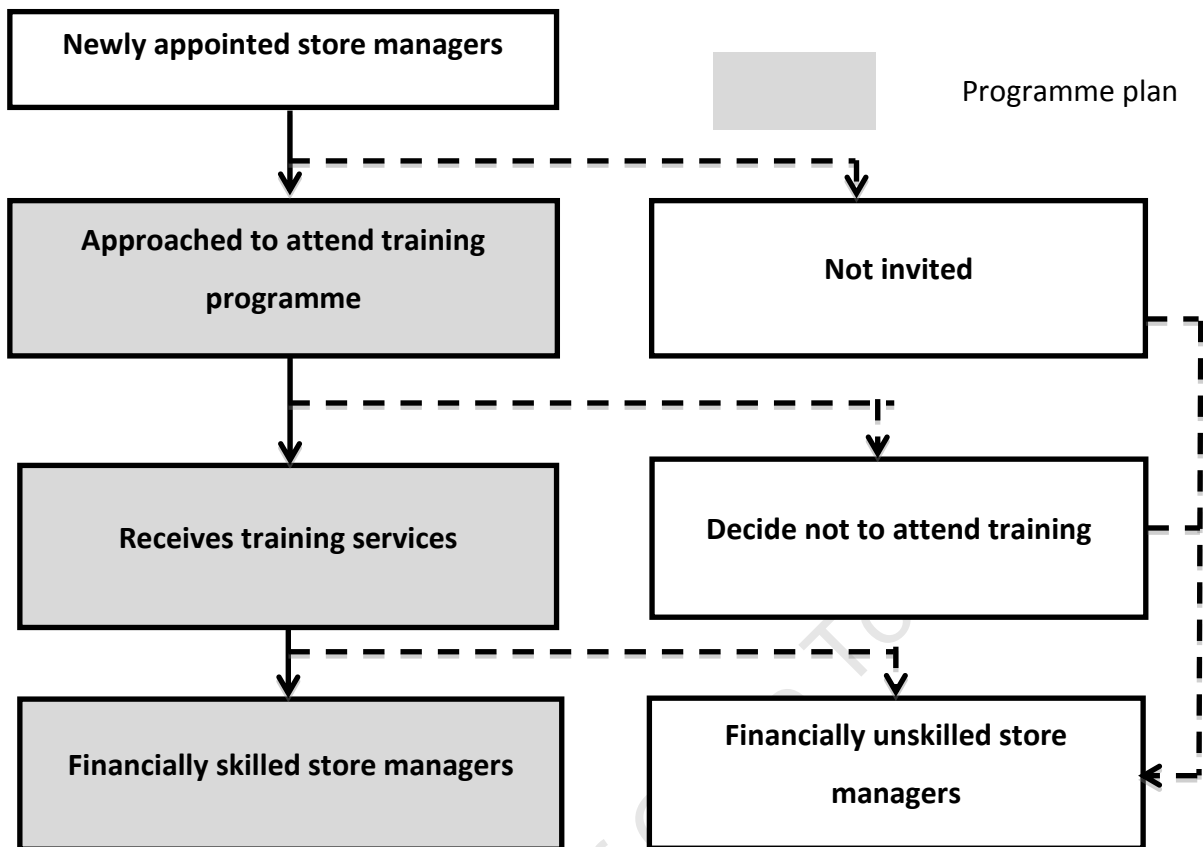


Figure 3: The service utilization flow chart for the Survival of the Fittest

#### The organizational plan

The second component of the process theory comprises the organisational plan. Figure 4 shows the programme's organisational plan that involves assessment of store managers' needs, the recruitment and the training of training facilitators as identified in the previous section.

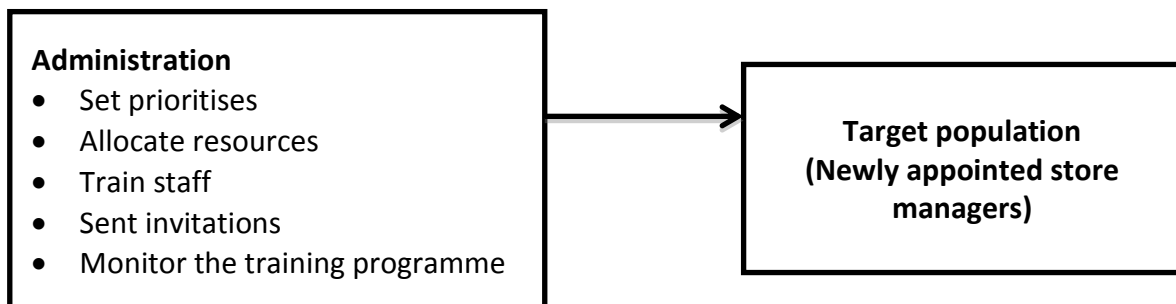


Figure 4: The organisational plan for the Survival of the Fittest

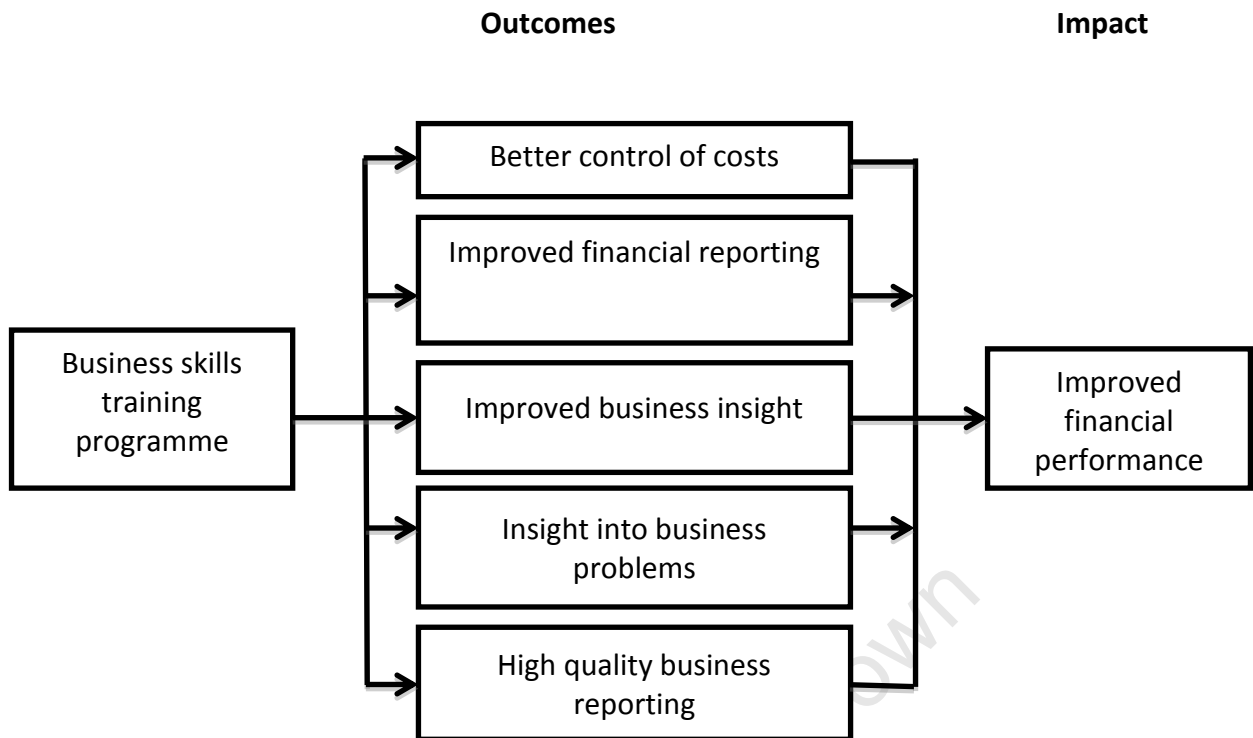
Thus, Figure 4 shows ways in which the resources or inputs are combined with programme functions, components and to provide training that will translate in the intended business skills and knowledge which ultimately turn into organisational profitability.

### **The programme impact theory**

Ultimately, the programme inputs and activities described in process theory are expected to have an impact on the intended targets. The causal effect is explained by the programme impact theory. The theory focuses on the changes expected in the target population as a result of programme activities. It is also known as the causal theory. The impact theory explicates the programme's logic by describing a cause-and-effect linkage in which certain programme activities are the instigating causes and certain benefits they produce (Rossi et al. 2004: 141).

Figure 5 shows the impact theory for the Survival of the Fittest training programme. The theory was made explicit by asking the following question to programme stakeholders: How do the business skills training influence the profitability of the organisation? Figure 5 shows that the programme causal theory starts with outcomes expected after completion of the training programme. Thus, after completing the training course, store managers are expected to have a better control of costs, improved financial reporting skills, improved business insight and insight into business problems. It is then expected that the successful attainment of these outcomes will impact the profitability of the organisation.

The conceptual framework for Survival of the Fittest business skills training programme was described by explicating the programme theory as intended by the programme stakeholders. In practice, the programme may be very difficult to implement. There are possible impediments that may hinder the programme from achieving the intended outcomes.



**Figure 5: The impact theory for the Survival of the Fittest**

Thus, when these hindrances take toll, the ultimate results are huge discrepancies between the programme as intended and the programme as actually implemented (Rossi et al., 2004, p.170). According to Rossi et al. (2004), an important evaluation function is “to assess the adequacy of the programme process”. Hence, the following section deals with an assessment of the logic and plausibility of the theory behind Survival of the Fittest training programme.

### **Plausibility of programme theory**

The importance of articulating a program theory or conceptualizing the programme is to have an understanding of how the programme was intended to operate so as to produce the desired outcomes. This follows that two activities are essential. These are a description of the programme model and assessment of how well defined and evaluable the model is.

This section compares the assumptions made by the programme stakeholders against social science and training programme evaluation literature to assess whether the programme is

logical and plausible. The review attempts to find out if business skills' training over a period of two days is substantial enough to meet the goal of ensuring that store managers are able to control operational costs, improve their business reporting, improve their business insight, improve understanding of the business problems, and improve their problem solving skills. Also, of interest is to determine how attaining some of these qualities will translate to organisational profitability. This section reviews the existing research and theoretical literature in an effort to establish plausible links between the training efforts and the observed changes.

### **Literature review**

The first part of the literature review assesses the theoretical underpinnings that links training to organisational performance. Second part analyses the empirical evidence about the link between skills training and organisational performance. The expected outcomes from this literature review are twofold. Firstly, this is in order to gain a deeper understanding about what is known about the relationship between skills training and business performance and the gaps that exist thereof. Secondly, is to assess the plausibility of the theory behind the training programme so as to propose a robust and sound framework for evaluating training programmes.

#### **Theoretical models linking training to organisational performance**

There is a repertoire of training evaluation models that have developed in an attempt to provide a link between training and organisational performance. Theoretical models are essential because they provide useful ways to understand the linkage between a training programme and the expected business outcomes (Kin and Mathuvay, 2011). The reviewed theoretical models for this study include Kirkpatrick (1994)'s Four-Level Evaluation Model, Brinkerhoff (1989)'s Six-Level Evaluation Model, Phillips (1996)'s Return on Investment (ROI) Model, and recently a model by Alvarez, Salas and Garofano (2004) and Success Case Method by Brinkerhoff (2005). Amongst these theoretical models, Kirkpatrick's evaluation model is the one most popular and the most used (Altarawneh, 2009 and Gharechedaghi,

Fartash & Ghotbi, 2012). For these reasons, this study follows closely the theoretical underpinnings of the Kirkpatrick evaluation model.

The Kirkpatrick's evaluation model has four levels of outcomes that should result from an effective training program and these are reaction, learning, behaviour, and results level. According to Kirkpatrick, each level is important and has implications on the success of the next level (Mohamed & Alias, 2012, p.3). At the reaction level, participants' reactions to a training programme are usually gauged in terms of satisfaction or enjoyment (Warr, Allan & Birdi, 1999, p.352). In order to determine these reactions, Altarawneh (2009, p.4) suggested that stakeholder perceptions could be a good criteria. Consequently, enjoyment of the training, perceptions of its usefulness, and its perceived difficulty are the outcome indicators to be examined (Warr, Allan & Birdi, 1999, p.352).

The learning level determines what participants have learnt during the training programme. The learning outcomes can include changes in knowledge, change in skills and attitudes. Measures such as pre and post-training tests, workshops and simulation can be employed at this stage (Altarawneh, 2009, p.4). The behaviour level focuses on performance at work after training and again, pre and post-performance tests can be used as an assessment tool. Specifically this stage measures the transfer of knowledge, skills, and attitudes acquired from the training to the workplace environment.

The final level of the model is the results from training that contributes to the overall performance of the organisation. These results are reflected by indicators such as sales, productivity, cost, quality, and staff turnover. As Warr, Allan and Birdi (1999, p.355) highlighted, the challenge at this stage is not only about finding appropriate indicators but also to identify single training activities that can be attributed to the observed change.

A fifth level of evaluation was developed by Phillips (1996), which he termed "Return on Investment (ROI)". Recently, the ROI had been used to assess if the monetary benefits of training exceed the cost associated with training. Although ROI could be employed, Altarawneh (2009, p.4) argues that it remains difficult to correlate the impact of training to organisation performance, especially if it is measured in financial terms.

Despite the wide usage of the Kirkpatrick model, it has received extensive criticism (ASTD, 2009 and Bates, 2004). Bates, for example, argues that the Kirkpatrick model does not consider the contextual environment (e.g characteristics of the organization, work environment and the participant) that influences the effectiveness of training (p. 342). Furthermore, the model has been criticised on its causal linkages assumption that a good reaction to a training programme leads to positive learning outcomes, which leads to improved behaviour at the workplace and eventually to better organisational results (Bates, 2004, p.342). Another weakness identified by Topno (2012, p.22) is that the model is not clear as to what main indicators could be used at each evaluation level.

Although the Kirkpatrick model could have some weaknesses, which have been the subject to its criticism, it still provides important theoretical foundations for training evaluation. Thus, having knowledge about the Kirkpatrick model and its criticisms, this study extends the model by borrowing some aspects of the evaluation hierarchy developed by Rosi *et al.* (2004) and Mavin & Lee (2010). Mavin and Lee (2010, p.9) are of the contention that because not all interventions aim to meet all four levels, organisations need to consider the form of evaluation that is needed for one to provide sufficient information, a modified model is illustrated in Figure 6 below.

Figure 6 shows two distinct levels of interest to training evaluation. At organisational level, management is more concerned about the results and the return on investment from the training. At implementation level, programmes managers would be interest in evaluation outcomes on performance, learning, and motivation. To fulfil the objective of the study, main focus will be on the results level or the impact of training on the organisation.

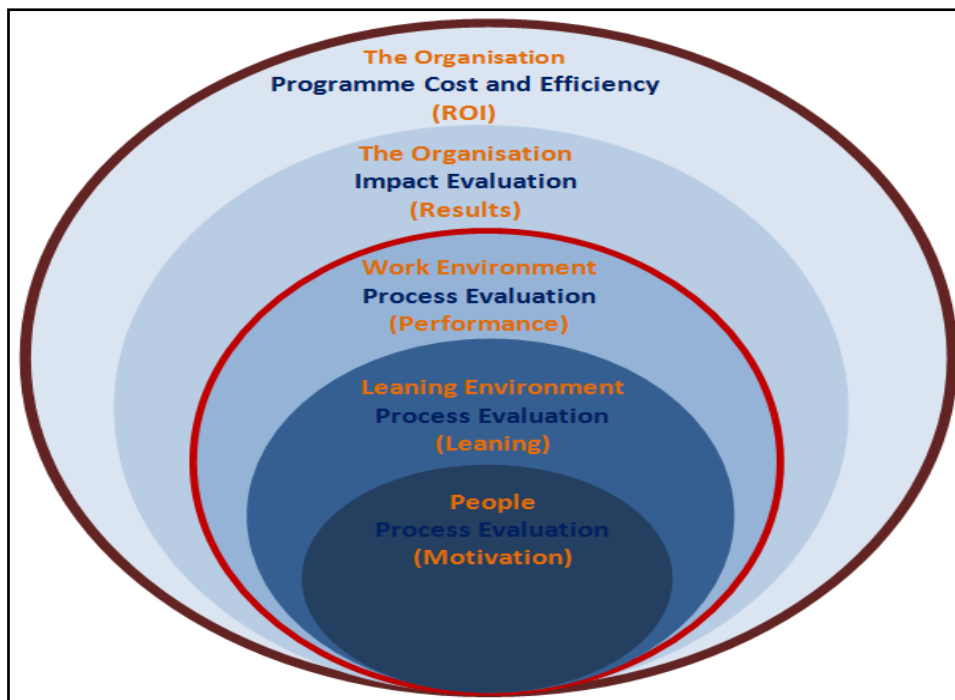


Figure 6: The model for evaluation training outcomes [Sources: Rosi et al. (2004) and Mavin & Lee (2010)]

The assessed evaluation models thus far simply explained the level of evaluation and the possible outcome indicators to focus on at each level. They were not, however, clear on how training can be linked to the business outcomes. Specifically, they fail to explain what aspects of training leads to what business outcomes. To this end, the next section assesses the theoretical models that links training to business performance.

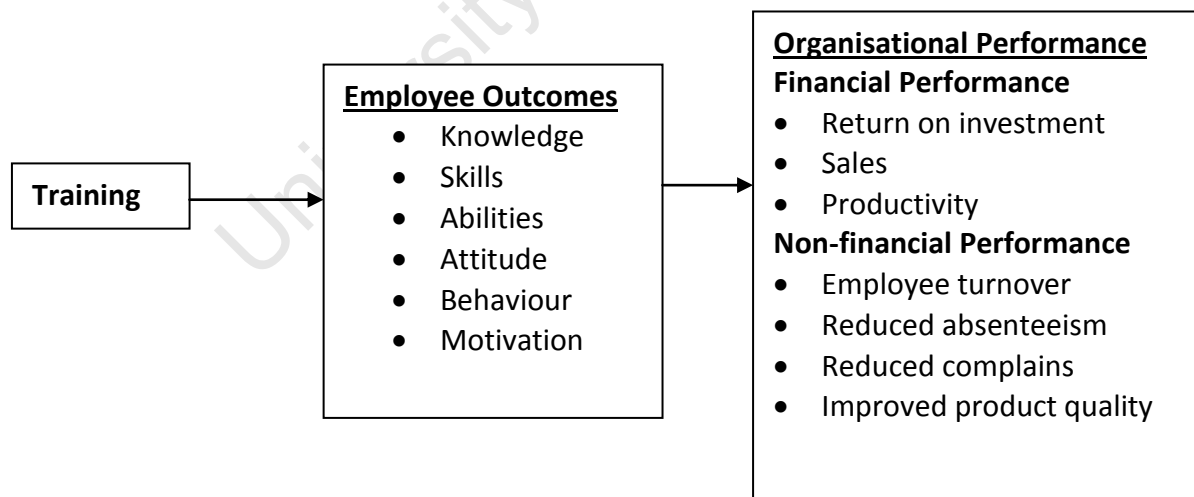
Looking beyond the Kirkpatrick and the ROI models, the study also considers some early analytical models explaining the relationship between training and organisational performance. Guest (1987) developed a theoretical framework that expresses a pathway that is clear and easy to apply in practice. Thus, training contribute to employee commitment, flexibility and quality and these outcomes lead to high job performance, cost effectiveness, low employee turnover, low absenteeism and fewer complains. The ultimate result is improved organisational performance, through product quality and improved customer services.

Furthermore, Schular & Jackson (1987) developed a behavioural model that focused only of employee behaviours as being instrumental to the achievement of a business's competitive

edge. Nevertheless, Gilbert (1998) argued that performance as reflected by organisational results could be a better objective compared to behaviour. Thus, performance has two aspects: “behaviour being the means and its consequence being the end... and it is the end we are mostly concerned with.”

Regarding performance outcomes and measures, Dyer and Reeves (1995), categorised them into four groups. The first category concerns the employee outcomes emanating from training and these include attitude and behaviour. The second category comprises of organisational outcomes such as productivity, quality and service. The third group are financial outcomes including return on investment, return on assets, expenses, revenues and profitability. The fourth category mainly applies to public entities in which the focus is on stock prices or shareholder return.

Theoretical models are developed so that they help understanding the link between training and organisational performance. However, existing theories do not adequately address this important link. Consequently, Thang, Quang and Buyens (2010) developed and proposed a new model shown in Figure 7 below.



**Figure 7: A framework for analysing and firm performance** [Source: Thang et al, 2010]

Thus, Figure 7 shows that the critical variables of training intervention are employee outcomes such as knowledge, skills, abilities, attitude, behaviour and motivation. Achievement of these employee outcomes will then lead to organisational performance,

which can be categories into two groups: Financial performance (return on investment, sales and productivity), and Non-financial performance (employee turnover, reduced absenteeism, reduced complains and improved product quality).

Having analysed the theoretical underpinnings of training programme, the next section assesses how some of these theories and have been applied in practice.

#### **Empirical evidence linking training to organisational performance**

Having reviewed the theoretical propositions linking training programmes to organisational performance, this section reviews the application of these theories practice. While the existing literature on training evaluation provide insight into the link between training and organisational performance, evaluation research in the South African retail setting remains sparse.

According to Chang (2010), many studies have utilised the first two levels of the Kirkpatrick's model. Fartash and Ghotbi (2012) agree and attribute the wide usage of the model to it being comprehensive, simple, and practical. To this end, Iqbal, et al (2011) employed the Kirkpatrick model to empirically test the predicted relationship between training characteristics and formative training evaluation using the reaction and learning levels. They found that all the seven training characteristics (training objectives, training contents, training material, trainer, training methods, training environment, and training management) have positive impact on reaction and learning except training contents.

However, the use of the Kirkpatrick evaluation at the first and second level is not convincing, according to the ASTD (2009).<sup>1</sup> The ASTD (2009, p.11) argues that evaluation of training programmes at these levels has become unpopular simply because measuring reaction is very complex and behaviour changes are unpredictable. Wick, et al. (2006) further argues that measuring performance at the first level has been dismissed and labelled as a misleading measure of success.

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<sup>1</sup> The American Society for Training and Deveelopment (ASTD) is a United States based association dedicated on the training and development profession, with members in more than 100 countris across the world.

Recently, Mohamed and Alias (2012) employed the four levels of the Kirkpatrick model to evaluate the effectiveness of employee training programs in the banking sector in Malaysia. The authors utilised various techniques (training feedback questionnaires, pre and post tests, face-to-face interviews, learner development plan reports and behavioural surveys). These were drawn from a sample of 36 employees who attended the Intermediate Central Banking Course. The results from the study indicated that the training outcomes provide evidence to three of the four levels of Kirkpatrick's model. Key variables used to assess level one of the model were course structure, learning initiatives, general administration, and an overall assessment.

Some studies made a distinction between manufacturing and non-manufacturing to analyse the link between training and organisational performance (e.g., Katou, 2009; Sun & Jin Nam, 2011; and Thang & Quang, 2010). These studies found training to have a significant positive effect within manufacturing industries compared to non-manufacturing industries.

Thang and Quang (2010) employed a Cobb-Douglas model to analyse 196 major companies across industries in Vietnam. Training was found to have a significant positive effect on manufacturing companies but non-significant effect for non-manufacturing companies in the period between 2005 and 2006. Similarly, Katou (2009) used structural equation modelling to investigate the pathways leading from training to organisational performance using data from 600 organisations operating in the Greek manufacturing sector. The results indicated that the impact of training on organisational performance was positive. Further, Sun and Jin Nam (2011) used data collected from 207 manufacturing companies at three points over a five-year period to investigate the effect of training on the operational and business performance of manufacturing organizations in Korea. Sun and Jin Nam (2011) found a positive indirect relationship between training and organisational financial performance.

Jones, Kalmi and Kauhanen (2008) utilised panel data from 223 Finnish banks to study the impact of training on wages and performance over the period between 2000 and 2004. These data was drawn from income statements and balance sheets, and from training. They found stronger evidence that suggest that training have an impact on worker outcomes

rather than organizational performance. Another interesting finding from this study is that training intensity has a bearing of performance. Also important from this study is that general training has substantial effects compared to firm-specific. The key variables of interest in this study were training expenditures, duration of training, level of education and age, and the control variables were gender, unemployment rate and year dummies. Moreover, profitability and cost efficiency were used as measured for organisational performance.

Other studies took a different approach to training and attempted to examine the linkages between training and business performance. They did this by utilising data drawn from different samples and settings. For instance, Niazi (2011) studied employee perceptions on the link between training and organisational performance in the Fast Moving Consumer Goods (FMCG) industry in Pakistan. In another study, Prieto and Revilla (2006) used data from 111 companies from different Spanish industries to explore the link between learning capability, financial performance and non-financial performance. Similarly, Molina and Ortega (2003) analysed the impact of employee training on the performance of 405 North-American firms.

Interestingly, these studies produced contrasting results. While Molina and Ortega (2003) and Prieto and Revilla (2006) concluded that training have significant positive effects on non-financial performance such as customer's satisfaction, customer's growth, employee satisfaction, quality of products and services, and the organizational reputation which in turn influence financial performance measures such as return on assets, sales growth, profitability, average productivity and cost reduction. Niazi (2011) found a gap to exist between skills, knowledge and abilities acquired through training and organisational performance. Niazi's findings contrast the chain linkage found by Molina and Ortega (2003), and Prieto and Revilla (2006).

Schonewille (2001), for example, presents a sector model that measures the effect of training on productivity. The sector model developed has important advantages as it shows that training generally works, but it is not clear whether this is mainly due to on-the-job or off-the-job training. However, the author acknowledges that research performed by other

authors, most of them using micro-data, suggests that off-the-job training is more productive than on-the-job training.

Other than training itself, there is a general acceptance in the literature that an enabling environment is essential for training to have a positive effect on organisational performance. Both factors inside and outside the training process can serve to enhance or inhibit the transfer of knowledge and skills to the workplace (Wehrmann, Shin & Poertner, 2003). According to Grossman and Salas (2011) and Wehrmann, Shin and Poertner (2003), trainee and trainer attributes, instructional design, the training environment, trainee expectancy and post-training factors play an important role in the transfer of learning to work situations.

Furthermore, Patton, Marlow and Hannon (2000) employed the Industrial Marketing Model to assess the impact of training on performance outcomes in small organisations. The model identifies four areas of analysis: the general business environment, the atmosphere that surrounds the association between the trainer and trainee, the interaction process that takes place and the make-up of the individual parties. The standard criteria by which performance is often judged by factors such as employment; sales growth and profitability are significantly affected by a firm's operating environment. The author identified critical aspects in training interventions that have a bearing on the knowledge or skills imparted. These important aspects were the duration of training, and type of employees involved and the mode of delivery. Thus, differences in these factors are likely to impact variability upon performance of individuals and the organisation. Finally, the quality of the training provider is an important consideration. It has been indicated the trainers may lack essential skills and knowledge to deal with specific requirements of an organisation.

As far as the linkages between training and business performance is concerned, it has become clear that most of the reviewed studies followed the pathways, outcomes and measures suggested by Dyer and Reeves (1995) and echoed in Thang, Quang and Buyens (2010). The core objective of this study is to provide a link between a business skills training programme to the financial performance of a retail business within the South Africa context. Thus, based on the theoretical propositions on the relationship between training and

organisation performance, the following hypothetical framework was developed and proposed.

To summarise, the reviewed literature serves to provide an insight to the logic and plausibility of the theory behind the Survival of the Fittest business skills training programme. Although the training programmes in the reviewed studies were not closely related to business skills and also from different organisational settings, it was possible to identify some important aspects of training excluded in the programme theory for the Survival of the Fittest business training. These were the training environment, duration of the training, the type of targets, the trainer skills and capabilities, incentives, place of training, and after training support. Outcomes indicator, however, varies from organisation to organisation but the most common indicators were identified by the programme stakeholders.

University of Cape Town

## CHAPTER TWO

### RESEARCH DESIGN AND METHODOLOGY

#### Introduction

This chapter presents the research design and methodology employed to assess the impact of the Survival of the Fittest Business skills training programme on the financial business outcomes of net profit, gross and expenses.

#### Research design

The most valid way to establish the effects of an intervention is a randomized field experiment (Rossi, Lipsey, & Freeman, 2004, p.237). However, it was not feasible to assign subjects randomly to training, as it utilises archival data on store performance. Instead the developed a non-experimental evaluation design that groups participants according to their training status. This design is presented in Table 2 below.

In Table 2, NR stands for Non-Random assignment and X stands for intervention period. Pre-test measurements were taken in the period before training, that is between June 2010 and December 2010 and post-test measurements were for the period between July and December 2011. While this study design was not as initially planned, it remains strong in that it: (1) takes several measurements of outcome indicators for the programme both before and after the intervention, and (2) it uses the indicators prior to implementation of the programme that would have happened in the absence of a programme. This assumes that this trend would have continued if a program had not been implemented, and (3) compare the trend in outcome indicators prior to the intervention to the post-intervention trends.

Table 2  
Evaluation design for Survival of the Fittest programme

		Pre-intervention Measures	Intervention	Post-intervention Measures
		Gross Profit Net Profit Expenses	Training	Gross Profit Net Profit Expenses
Year		2010	2011	2011
Quarters(3 months to)		June-December	Jan-June	July-December
Intervention	NR	O <sub>1</sub>	X	O <sub>2</sub>
Control	NR	O <sub>1</sub>		O <sub>2</sub>

This pre-test and post-test two-group design was chosen because it is immune to many of the internal threats to validity. The introduction of a control group to the pre-post design makes the design stronger as that automatically derails many of the internal threat to validity. While the pre-test and post-test two-group design is more effective in assessing the immediate outcome of programme, over an extended period of time, more circumstances (threats to internal validity) can arise that may obscure the effects of the training programme. The following section identifies each of these threats and assesses the degree of the threat they pose to this design. The lesser the degree of threat, the more confident in the results derived from this evaluation design.

### History

History is the major threat in this design but it is relatively less likely that short-term historical events will both co-occur during the six months of training and have a lasting effect over time. Furthermore, the assessment of store performance for the group of managers who did not attend training (control group) controls for the problem of history. To this end, if there were any events that co-occur with the training period, it should also reflect in the control group.

### **Maturation**

The introduction of the control group together with a short time frame allotted for the analysis controls for psychological changes that might occur. For example, job experience by store managers can improve during the experimental period. Thus, if both groups' improvement in experience can influence store performance, the store performance for the intervention group should improve more than the control for one to conclude that business skills training had an impact.

### **Testing**

Testing effect is not a threat, as the analysis in this study is based on historical store performance.

### **Instrumentation**

Since there has been no change in accounting standards over the period under study, there are likely no detectable measurement inconsistencies both in the pre-test and post-test, suggesting that a gain or decline in performance is real.

### **Selection**

Selection bias is unlikely as there are no identifiable systematic differences between the treatment group and the control group.

### **Attrition**

The study controls for attrition by including in the sample of those stores managers who were been appointed from the beginning until the end of the period under consideration.

### **Diffusion of Treatments**

There is a higher probability that those who attend the training sessions may have an influence over those managers in the control group. This possibility is high as the store managers have occasional meetings with the Area Managers (AMs) in which they discuss more or less the same concepts covered by the programme. A covariance analysis will be carried out to determine the extent of this problem.

## **Measurement of reliability and validity of the research instrument**

Reliability is defined as the lack of random error in the measurement instrument. This study relies on data generated from Branch Operating Reports/Income Statements as store performance measurements. The BOR template used to collect data conforms to profit and loss account format according to the current Generally Accepted Accounting Principles (GAAP) framework guidelines. Because the retail group is listed on the Johannesburg Stock Exchange these, income statements are subjected to auditing: internally and externally by independent auditors. As a result, strong validity is achieved in measurement items, measurement process, and the results of the measurement process

## **Research methods**

This section presents the research methods employed by the study to analyse the impact of the training programme of business outcomes.

### **Outcomes for participants**

The programme offers training modules and activities that are designed to enhance learning transfer of participants to achieve desired outcomes. These outcomes are improved knowledge (i.e. financial knowledge); improved skills (i.e. improved business insight, improved financial analysis skills, improved financial reporting skills) and improved behaviour (i.e. insight into business problems and improved problem solving).

### **Data sources and variables of interest**

The evaluation study is designed to achieve systematic and reliable observations and ratings of store performance. The training programme provided is the predictor variable and the outcome judged by observing criterion variables. These criterion variables are derived from the BOR, which gives details of profit or loss summary for a store. Thus, the information contained in this report includes income, expenses, gross profit, stock loss, bad debt and net profit. These are the criterion variables of interest of the study.

## **Population and Sampling**

The training programme is meant for newly appointed store managers, within their first six months of appointment, drawn from sixteen store brands across the country. However, not all of the newly appointees enrol for training within the prescribed first six month period of appointment. Yet, those store managers who missed training within the prescribed period have an option to enrol at any other time. This then permit a two group design for the evaluation: an intervention groups and a control group.

The intervention group comprises those store managers who were appointed between June and December in 2010 and attended training between January 2010 and June 2011. On the other hand, the control group consists of those store managers who were appointed in the same period but never enrolled for training. A major drawback for the study is that the data provided by the programme personnel was not sufficient to test for the third hypothesis, resulting in it not being tested. To answer the first and second hypothesis, the intervention group is compared to the control group before and after the intervention.

## **Sample size determination**

The required sample size was calculated using G\*Power 3 (Faul, Erdfelder, Lang & Buchner, 2007). The power sought given the effect size of 0.15,  $\alpha=0.01$ ,  $1-\beta=0.95$  and 5 predictor variables is 0.80. According to the software, to achieve this required power of 0.80, the target sample size should be 120. This sample comprises of 40 store managers for each group. The control group will be matched to the treatment groups in terms region and store brand. Consequently, the initial plan was to have a target sample size of 120 store managers in total, with 40 store managers in each group. The control group was matched to the experimental group in terms region and store brand.

However, the data was supplied for 69 stores and out of this; data from 21 stores was missing or incomplete. For example, data supplied from 15 stores contained turnover with the data for gross profit, expenses and net profit missing. Data from five stores were missing for some quarters and one store did not have the data for the year 2011. To this end, a

Complete-Case analysis (CC), as suggested by Little (1992, p. 1229), was employed. When using the CC analysis, cases with any missing values are simply deleted. The advantages of this method are that it is simple to use and it allows comparability across the analysis (Little and Rubin, 2002). Furthermore, the use of the CC analysis is justified because the missing meet the minimum assumption that the data is missing completely at random (MCAR) and does not result in bias as the missing sample is not different from the original target sample (Allison, 2001).

The eventual sample thus consisted of 48 stores, with 30 store managers undergoing training classified into the experimental group and 18 store managers who did not get training classified into the control group. Based on the sample size of 48 participants, the medium effect size of 0.3,  $\alpha=0.01$ ,  $1-\beta=0.95$  and 5 predictor variables, the power was reduced to 0.71.

### **Statistical analytic methods**

Region and store brand are control variables that were added to the analysis. Because there was more than one factor in this study, a General Linear Model (GLM) was used to statistically analyse the data. This design was considered appropriate as it allows an analysis between groups and within subjects' designs, with repeated measures over time. The GLM that was tested is expressed in Equation 1:

Equation 1.

Multiple Regression Model

$$\text{Store performance} = \beta_0 + \beta_1\text{Training} + \beta_2\text{Region} + \beta_3\text{StoreBrand} + \varepsilon$$

Where:

$\beta_0$  = Intercept, which gives the average effect on store performance when all the factors (training, region and store brand are excluded from the model).

$\beta_1, \beta_2$  and  $\beta_3$  = Partial regression coefficients, which measures the separate influence of each variable on store performance.

$\varepsilon$  = Error term, which represent all other factors that affect store performance but are not taken into account explicitly in the model.

Two central tasks in this section were to create a high-quality but necessarily imperfect source of counterfactual inference and understanding how this source differs from the treatment condition (Shadish, Cook & Campbell, 2002). Furthermore, the design's internal validity and reliability are strong enough to satisfy the programme impact concerns.

University of Cape Town

## CHAPTER THREE

### RESULTS

#### Introduction

The training programme was developed for newly appointed stores managers drawn from sixteen brands across the country. The newly appointed store managers are expected to enrol into the programme within the first six months of appointment. It was made clear earlier that in some instances, people who have been in appointment for some time can also enrol into the programme. This section employs statistical methods to test the impact of training on store financial performance.

#### Participants

Table 3 below shows the data for analysis was collected from only 48 stores. Out of these stores, managers from 30 stores received training and managers from 18 stores did not receive training. The majority (42 stores or 88%) of these stores were from the Gauteng region. There were two from North West, two from Northern Cape, one from Cape Town and one from Free State. In terms of store brands, these data was collected from four brands. Data was collected from 15 stores for brand number 1, seven stores for brand number 2, 18 stores for brand number 3 and eight stores for brand number 4.

Table 3  
*Composition of programme participants*

<b>Between-Subjects Factors</b>			
		Value Label	N
Status	0	No Training	18
	1	Training	30

The implication of the above situation is that the number of groups to be compared in this study has to be reduced to two from three as originally planned. Consequently, the strength of the design has been compromised to a certain extent.

The main hypothesis this analysis seeks to address is that training has an impact on store performance and the following subsections address this hypothesis in detail.

### The impact of training on net profits

One measure of the success of a training programme that could be directly related to store performance is the profitability of the stores. Table 4 below shows that before training was received the mean for the experimental group was 0.34 and compared to a mean of 0.29 for the control group. Although the mean net profits after training were lower, the mean net profit for the experimental group remains higher compared to the control group. Thus, the mean profits after training dropped by 17.6 percent to 0.28 percent and from 17.2 percent to 0.24 percent, for the experimental group and the control group, respectively.

By looking beyond, the mean differences between groups, Table 4 below shows that variability, as reflected by the standard deviation, increased for the control group compared to the experimental group, which experienced a decrease.

Table 4  
Results for participants' pre and post training net profit means

Descriptive Statistics									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Net Profit Before Training	No Training	18	.29	.12	.029	.23	.35	.05	.45
	Training	30	.34	.13	.023	.30	.38	-.05	.55
	Total	48	.32	.13	.018	.28	.36	-.05	.55
Net Profit After Training	No Training	18	.24	.20	.046	.14	.34	-.24	.69
	Training	30	.28	.09	.017	.25	.32	.02	.41
	Total	48	.27	.14	.0201	.23	.31	-.24	.69

The graphical illustration of the above Table is depicted in Figure 6 below.

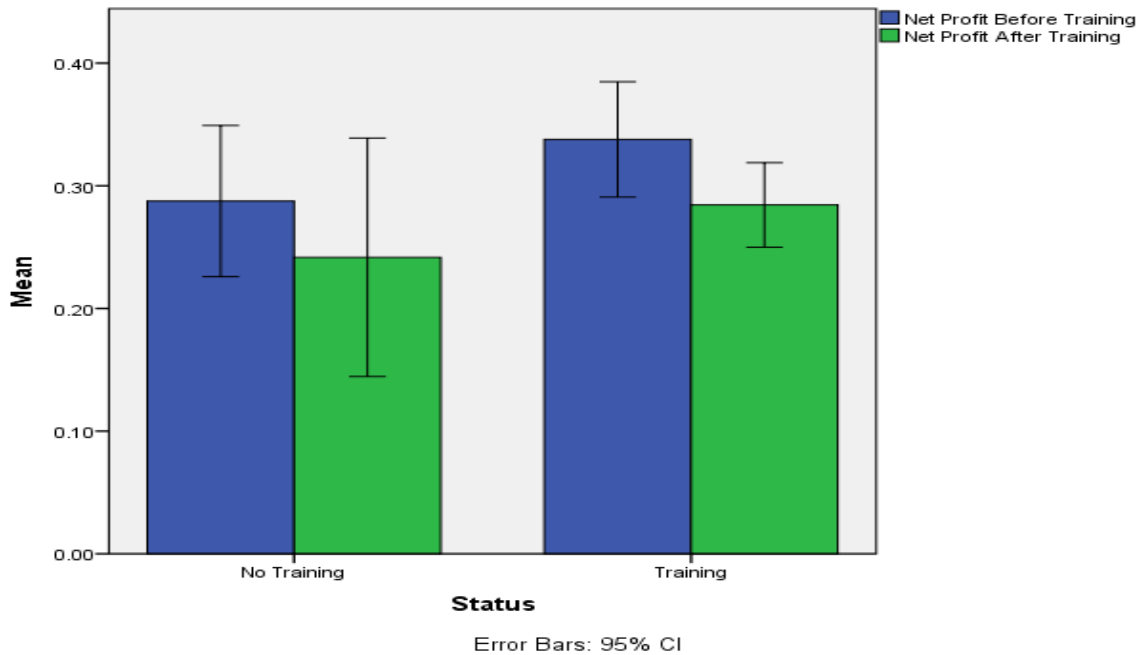


Figure 8: Comparing net profit means for participants' pre and post training

Figure 8 shows that after training, the mean profits fell for the control group but variability between stores also increased. This variability is reflected by a higher standard deviation. Similarly, the mean profits for the intervention group fell but variability between stores was reduced as reflected by a small standard deviation. Thus, after training, those who got training have a slightly lower mean compared to those who did not (i.e. the control group).

The observed small difference in means could be evidence that the groups in fact are not different and perhaps training causes no difference. However, there is need for more evidence to confirm that there is actually no real training effect on the store net profits. An analysis of variance is employed to analyse variability between the two groups and the variability between the stores in each of these two groups. If there is variability between the two groups, then it means that the experimental group performed differently from the control group. Furthermore, if there is variability between stores in each group, it means that each store did not have the same profit.

Since the ANOVA analysis is used under the assumptions of normality, independence of observations, and homogeneity of variances. Of major concern is the assumption of homogeneity of variances. To this end, the Levene's test is employed to assess the

assumption that the variances of the populations from which the two groups are drawn are equal.

Table 5  
*Results for variability and equality of net profit means*

Independent Samples Test: Net Profit										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
After Training	Equal variances assumed	7.24	.01	-1.03	46	.31	-.043	.0416	-.13	.041

The Levene's test assesses the null hypothesis that the population variances are equal i.e. the difference between the variance is zero. Consequently, Table 5 above illustrates that  $p=.01$  and is less than  $.05$ , suggesting that the variance are significantly different from each other. This suggests that the assumption of homogeneity has been violated and hence the use of the Welch's F-ratio for ANOVA analysis.

Table 6 below shows the variance within each group and compares that to the variance found between the groups. The within-group effect measures variation due to natural individual differences regarding responsiveness to training. The between-group effect measures the overall effect due to training. Thus, the F-ratio tests the combined effect against the hypothesis that the entire group means are the same, i.e. any difference between them is due to random chance. To this end, the value of the F-ratio in the table is 1.053 and the associated probability of  $.31$  is greater than  $p=.05$ . This suggest that net profits generated by store managers in the intervention group are not significantly different from the profit generated by those in the control group and therefore training has no effect on net profits.

Table 6  
ANOVA Summary: Net Profit

		Sum of Squares	df	Mean Square	F	Sig.
After Training	Between Groups	.021	1	.021	1.053	.310
	Within Groups	.897	46	.020		
	Total	.918	47			

The above analysis however only show the impact of training on profits without controlling for other factors such as region and the type of brands for the participating store managers. It is therefore important to do an analysis that control for these important factors that might have a bearing on the impact the training programme has on store profitability. In this regard, General Linear Model (GLM) is employed.

Table 7 below shows the effect of profit after controlling for the geographical location (region) for respective stores and the brands at which they are categorised. The corresponding table, Table 7 shows the magnitude of the impact these factors contribute to the profitability of stores. Overall, these factors (training, region, brand and the interaction effect of training and region) account for 38 percent variability in net profits. The remaining 62 percent variability is explained by other factors not captured by this model.

With regards to the training's contribution to profits, Table 7 shows that since the training status variable has a probability of 0.61 which is above  $p=.05$ , it is insignificant (the test statistic for a variable should be less than .05 for it to be statistically significant). What this shows is that providing training does not result in significant profits for the organisation. Thus, the extent of the training's contribution to net profits is minimal, as shown in the corresponding Table 7. In the table, the parameter estimate for training is 0.06 which means that training contribute only 6 percent of variability in net profit, with the remainder being explained by other factors.

Table 7  
Results for the programme impact on net profit

Tests of Between-Subjects Effects					
Dependent Variable: Net Profit After Training					
Source	Type II Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.350 <sup>a</sup>	5	.07	5.18	.001
Intercept	.416	1	.416	30.74	.000
Status	.004	1	.004	.26	.613
Region	.015	1	.015	1.09	.302
Brand	.030	1	.030	2.20	.146
Status * Region	.153	1	.153	11.31	.002
Status * Brand	.054	1	.054	4.00	.052
Error	.568	42	.014		
Total	4.376	48			
Corrected Total	.918	47			

a. R Squared = .381 (Adjusted R Squared = .308)

Store geographical location is insignificant in terms of contribution to store profitability. This variable has a probability of .30 and above the  $p=.05$  and contributes only 1 percent to profit variability. Likewise, store brand is statistically insignificant as its probability of .15 is higher than the probability of .05, contributing only 1 percent to store profitability.

Table 8  
Results on the contribution of training on net profits

Parameter Estimates						
Dependent Variable: Net Profit After Training						
Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	.287	.066	4.375	.000	.154	.419
[Status=0]	.061	.120	.510	.613	-.182	.305
[Status=1]	0 <sup>a</sup>	.	.	.	.	.
Region	.001	.020	.055	.956	-.040	.042
Brand	-.001	.020	-.073	.942	-.042	.039
[Status=0] * Region	-.218	.065	-3.363	.002	-.349	-.087
[Status=1] * Region	0 <sup>a</sup>	.	.	.	.	.
[Status=0] * Brand	.065	.033	2.001	.052	-.001	.131
[Status=1] * Brand	0 <sup>a</sup>	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

The results also show two interactions to have an effect on net profits. These are the interaction between training and location, and training and the store brand. The interaction between training and location is statistically significant, since .002 is less than the p-value of .05. The probability for the interaction between training and the store brand is .052 which is greater than .05. Although it is approaching significance, it is not significant. Each of these interaction variables contributes 22 percent and 7 percent to net profit variability. Thus, if someone is trained and their store is located in a particular region the impact of store profits is significantly large.

Statistical results obtained in this subsection failed to support the hypothesis that training has an impact on store performance. However, an interaction effect between training and location was found to have an impact on store profitability. This means that training can have an impact on store performance depending on the region the store is located.

### **The impact of training on gross profit**

This subsection seeks to test the hypothesis that training has an impact on gross profit for stores. To measure the impact of training, gross profit ratio means before and after training are compared for both groups. Just like net profit measure, gross profit is calculated as a proportion of store turnover. Table 9 and the corresponding Figure 9 show that before training, the mean for both groups was fairly equal at .50. This means that on average, all participating stores generated 50 percent gross profit for every rand unit sale. After training, gross profit for the experimental group remain unchanged at .50 but fell to .48 for those the control group. The question that arose from this observation is whether the difference in means after training is due to the training programme or was just by chance.

Table 9

Results for participants' pre and post training gross profit means

Descriptive Statistics									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Gross Profit Before Training	No Training	18	.50	.091	.021	.45	.55	.40	.60
	Training	30	.50	.076	.014	.47	.53	.40	.60
	Total	48	.50	.081	.012	.47	.52	.40	.60
Gross Profit After Training	No Training	18	.48	.088	.021	.43	.52	.30	.60
	Training	30	.50	.093	.017	.47	.54	.40	.80
	Total	48	.50	.091	.013	.47	.52	.30	.80

A graphical illustration of the above Table is depicted in Figure 7 below. The figure shows that after training, while the mean gross profits fell for control group, their variability remain fairly unchanged with a standard deviation of 0.09. However, for the experimental group, the mean gross profits slightly rose with a fairly high variability of 0.09 between stores, compared to variability of 0.08 before training.

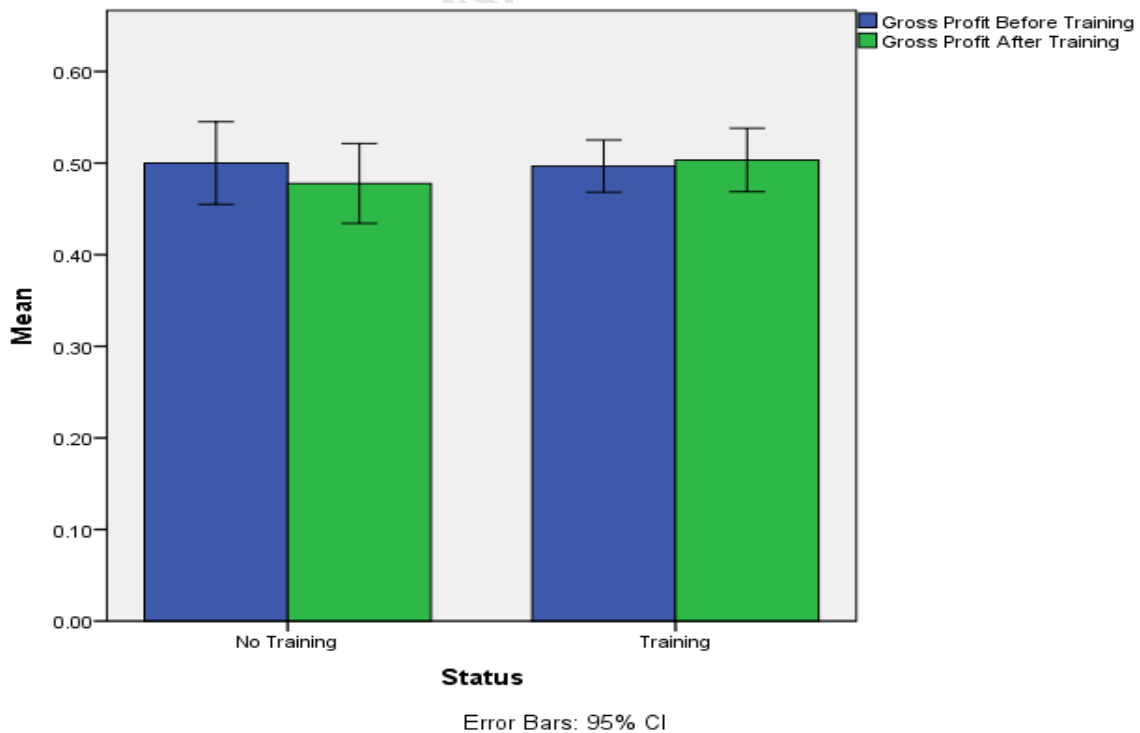


Figure 9: Comparing gross profit means for participants' pre and post training

In order to test the homogeneity of variances assumption for AVOVA, Levene's test was employed. If Levine's test is significant at  $p \leq .05$ , we can conclude that variances of the populations from which the two groups are not equal. According to Table 10, the probability that the variance is equal is  $p=.71$  and greater than  $.05$ . This means that the assumption of homogeneity has been met and that we can rely on the F-ratio produced by an ANOVA.

Table 10  
Results for variability and equality of gross profits means

Independent Samples Test: Gross Profit										
		Levene's Statistic		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
After Training	Equal variances assumed	.14	.71	-.94	46	.351	-.026	.027	-.080	.029

Thus, the F-ratio tests they hypothesis that all the group means are the same, i.e. any difference between them is due to random chance. To this end, the value of the F-ratio shown in Table 11 is  $.89$  and the associated probability of  $.35$  is greater than  $p=.05$ . This suggests that gross profits generated by store managers in the experimental group are not significantly different from those in the control group. The pattern in these data allows one to conclude that the Survival of the Fittest Business Skills programme had no effect on net profits.

Table 11  
ANOVA Summary: Gross profit

		Sum of Squares	df	Mean Square	F	Sig.
After Training	Between Groups	.007	1	.007	.89	.35
	Within Groups	.381	46	.008		
	Total	.388	47			

Just as was the case with the impact of training on net profits, the above analysis only tests the impact of training on profits without controlling for other factors such as region and the type of brands for the participating stores. It is therefore important to do an analysis that control for these important factors which might have a bearing on the potential impact the training programme have on store profitability.

Consequently, a GLM was employed to evaluate the impact of training while controlling other factors such as geographical location of stores and the store brands. In Table 12 below, the value of  $R^2$  of 0.31 tell us that all the factors (training, geographical location and store brand) account for 31 percent variability in gross profits. The remaining 69 percent is accounted for by other factors with are not captured by the model. The corresponding Table 13 shows the magnitude of the impact these factors' contribution to store gross profits.

The first hypothesis being tested is that there is a statistical relationship between training and store gross profits. The training status variable has a probability of .48, which is greater than the  $p$ -value of .05 and the conclusion is that there is no any statistically significant relationship between training and store gross profits. The parameter estimates shows that, holding other factors constant, training accounts for only 2 percent variability in store gross profits.

The second hypothesis being tested is that there is a statistical relationship between a location and store gross profits. Since the region variable has a probability of .04, which is less than  $p$ -value of .05, the conclusion is that there is a statistically significant relationship between store location and store gross profits. The parameter estimates shows that, holding other factors constant, geographical location accounts for only 3 percent variability in gross profits.

The third hypothesis is that there is a statistical relationship between store brand and store gross profits. Since the brand variable is associated with a probability of .01, which is less than the  $p$ -value of .05, the conclusion is that there is a statistically significant relationship between store brand and store gross profits. Parameter estimates shows that, holding other factors constant, store brand accounts for only 4 percent in gross profit variability.

Table 12

*Results for the programme impact on gross profit*

Tests of Between-Subjects Effects					
Dependent Variable: Gross Profit After Training					
Source	Type II Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.120 <sup>a</sup>	3	.040	6.584	.001
Intercept	1.058	1	1.058	173.700	.000
Status	.003	1	.003	.512	.478
Region	.026	1	.026	4.288	.044
Brand	.074	1	.074	12.189	.001
Error	.268	44	.006		
Total	12.090	48			
Corrected Total	.388	47			

a. R Squared = .310 (Adjusted R Squared = .263)

Table 13

*Results on the contribution of training to gross profits*

Parameter Estimates						
Dependent Variable: Gross Profit After Training						
Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	.45	.038	11.91	.000	.371	.522
[Status=0]	-.02	.024	-.72	.478	-.066	.031
[Status=1]	0 <sup>a</sup>	.	.	.	.	.
Region	-.03	.013	-2.07	.044	-.053	-.001
Brand	.04	.011	3.49	.001	.016	.058

a. This parameter is set to zero because it is redundant.

### The impact of training on store expenses

Another way to evaluate the impact of the training programme on store is to analyse the store expenses. To measure the impact of training store expenses, the means for expenses before and after training for each group are compared. Thus, the comparison of group means is done for post training. Just like the profit measures analysed above, expenses are calculated as a proportion of store turnover.

Table 14 below shows these mean differences. Before training, the mean for both groups was fairly equal at 0.18. This means that on average, all participating stores incurred 18% expense for every rand unit sold. After training, the expenditure level for the control group rose to 0.23 and 0.22 for the experimental group. Thus, while expenditure levels for both groups rose in the post training period, expenditure levels were higher for the control group compared to the experimental group. Again, the question that arose from this observation is whether this difference in means after training is due to the training programme or it is just by chance.

Table 14  
*Results for participants' pre and post training expenses means*

Descriptive Statistics									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Expenses Before Training	No Training	18	.18	.073	.017	.14	.21	.00	.30
	Training	30	.18	.085	.015	.15	.21	.00	.40
	Total	48	.18	.080	.012	.16	.20	.00	.40
Expenses After Training	No Training	18	.23	.083	.019	.19	.27	.10	.40
	Training	30	.22	.128	.023	.18	.27	.10	.80
	Total	48	.23	.112	.016	.19	.26	.10	.80

A graphical illustration of Table 14 is depicted in Figure 8 below. The figure shows that after training, while the mean for expenses rose for those who did not get training; their variability marginally rose as shown by the standard deviation increasing to 0.08 after training, from 0.07 before training. However, for those who got training, while their mean expense rose less compared to the control group, variability between stores rose to 0.13 compared to variability of 0.08 before training.

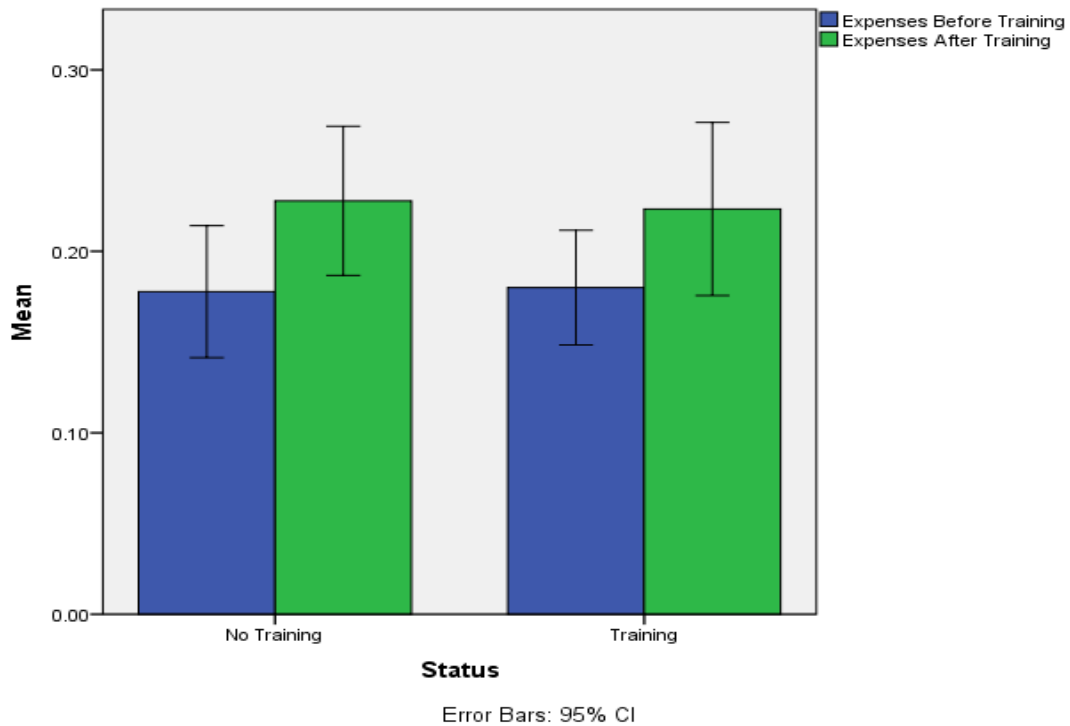


Figure 10: Comparing net profit means for participants' pre and post training

The conclusion that can be derived for post training is that while there was a marginal decrease in store expenses for both groups, the experimental group shows a reduction in the expenditure levels relative to sales. However, there was a large increase in store variability for those who got training compared to the control group. Further statistical test are however needed. If the observed difference is statistically significant, then one would conclude that training programme had an impact on reducing store expenses. Otherwise there will be no effect, as this difference would have been there just by chance.

The assumption of homogeneity is tested using Levene's test against the hypothesis that there is equal variance between groups i.e. the difference between the variance is zero (Andy, 2009: 340). If Levine's test is significant at  $p \leq .05$ , we can conclude that the variances are significantly different. In Table 15, since  $p = .65$ , which is greater than  $.05$ , the conclusion is that the variance is not statistically significantly different. This suggests that it is safe to proceed with the ANOVA analysis.

Table 15

*Results for variability and equality of expense means*

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Expenses After Training	Equal variances assumed	.206	.65	.132	46	.896	.00444	.03376	-.06351	.07240

Since the Levene's test has confirmed non-violation of the assumption of homogeneity, this section proceeds with an ANOVA test to analyse the combined effect of training between groups. Thus, the F-ratio test this combined effect against the hypothesis that all the group means are the same, i.e. any difference between them is due to random chance. To this end, the value of the F-ratio shown in Table 16 is .017 and the associated probability of .90 is greater than  $p=.05$ . The conclusion therefore is that expenses incurred by those who got training are not significantly different from those who did not get training.

Table 16

*ANOVA Summary: Expenses*

		Sum of Squares	df	Mean Square	F	Sig.
After Training	Between Groups	.000	1	.000	.017	.90
	Within Groups	.590	46	.013		
	Total	.590	47			

Just as was the case with the impact of training on net profits and gross profits, the above analysis only show the impact of training on expense without controlling for other factors such as region and the type of brands for the participating store managers. It therefore

important to do an analysis that control for these important factors which might have a bearing on the impact the training programme might have store expenditures.

A GLM is therefore employed to evaluate the impact of training while controlling of other factors such as geographical location of stores and store brands. In Table 17 below, the value of R-Squared of 0.11 tell us that overall, the factors (training, geographical location and store brand) account for 11 percent variability in store expenses. The remaining 89 percent is accounted for by other factors with are not captured by the model. The corresponding Table 18 shows the magnitude of the impact these factors contribute to store expenses.

The first hypothesis being tested is that there is a statistical relationship between training and store expenses. The training status variable has a probability of .54 which is greater that the  $p$ -value of .05. The conclusion is that there is no statistically significant relationship between training and store expenses. The parameter estimates shows that, holding other factors constant, training accounts for only 2 percent variability in store expenses.

The second hypothesis being tested is that there is a statistical relationship between store location and store expenses. Since the region variable has a probability of .85, which is greater than  $p$ -value of .05, the conclusion is that there is no statistically significant relationship between store location and store expenses. The parameter estimates shows that, holding other factors constant, geographical location accounts for only 0.4 percent variability in expenses.

The third hypothesis is that there is a statistical relationship between a store brand and store expenses. Since the brand variable is associated with a probability of .03, which is less than the  $p$ -value of .05, the conclusion is that there is a statistically significant relationship between store brand and store expenses. Parameter estimates shows that, holding other factors constant, store brand accounts for only 3 percent variability in store expenses.

Table 17  
*Results for the programme impact on expenses*

Tests of Between-Subjects Effects					
Dependent Variable: Expenses After Training					
Source	Type II Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.063 <sup>a</sup>	3	.021	1.740	.173
Intercept	.121	1	.121	10.126	.003
Status	.005	1	.005	.382	.540
Region	.000	1	.000	.038	.847
Brand	.062	1	.062	5.195	.028
Error	.527	44	.012		
Total	3.020	48			
Corrected Total	.590	47			

a. R Squared = .106 (Adjusted R Squared = .045)

Table 18  
*Results on the contribution of training on expenses*

Parameter Estimates						
Dependent Variable: Expenses After Training						
Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	.131	.053	2.496	.016	.025	.237
[Status=0]	.021	.034	.618	.540	-.047	.089
[Status=1]	0 <sup>a</sup>	.	.	.	.	.
Region	.004	.018	.194	.847	-.033	.040
Brand	.034	.015	2.279	.028	.004	.064

a. This parameter is set to zero because it is redundant.

The purpose of this section was to examine the impact of training on store performance using statistical methods. The statistical results show that training had no impact on store financial performance, after controlling for store location and brand. Thus, there was not statistical relationship found to exist between training and the three business financial

outcomes of net profits, gross profits and expenses. However, training was found to be effective depending on the region and the store brand for stores.

## CHAPTER FOUR

### DISCUSSION

#### Introduction

The purpose of this study was to empirically assess the impact of the Survival of the Fittest Business Skills training programme on business financial performance, with particular reference to one of the retail groups, within a South Africa context. The study utilised a GLM to statistically analyse whether skills training within a South African Retail Group results in improved store financial performance. Unlike many previous studies that have relied on cross sectional data to assess the impact of training on organisational performance, this study is unique in that it utilised data collected specifically from a firm to analyse the impact on store financial performance. Net profits, gross profit and expenses measured the business financial performance.

The key finding from this study is that the training programme did not significantly affect any of the identified store financial measures. Control variables were introduced in order to gain a better insight of other important factors that might have a bearing on business performance. These include store location and store brand. By including these variables, a statistically significant relationship was found to exist between store location and store gross profits. Furthermore, an interaction effect between training and store location was found to exist and statistically significant. The following sections discuss these findings in relation to the evaluation questions and their implications in detail.

#### **Question 1: To what extent does the training programme meet the objectives of improving net profit and gross profit?**

The results from this study indicated that the impact of training on net profits and gross profits are statistically insignificant. This was reflected by  $p$ -values of .3 and .48, respectively, which were both greater than  $p=.05$ . Consequently, it is clear that the training objective of ensuring that store managers understand the effect of sales on gross profit and net profit is not being met by the training programme. Furthermore, by holding other factors constant, the results shows that the training programme only contributes one

percent towards the variability in store profits and four percent towards variability in store gross profits. Both contributions were however found to be statistically insignificant.

**Question 2: To what extent does the training programme meet the objective of reduced store expenses?**

The training programme also aims to ensure that store managers have an understanding of the expenses that affects the Branch Operating Report (BOR). However, the findings suggest that the training programme is lacking as far as meeting this objective is concerned. To this end, the results shows that the impact of training on store expenses was statistically insignificant, with a probability of .44 which is greater than  $p=.05$ . Thus, of all the factors that contribute to reduced store expenses, training only contributes two percent, which is statistically insignificant.

**Question 3: Which of the business financial performance indicators most influenced by the training programme?**

Although training was found not have an impact on all the business financial measures used in the study, the results shows that training have more impact on gross profits as shown by a four percent contribution towards store gross profits. The second most impacted is expenses with training contributing two percent, followed by net profits with training contributing one percent.

**Question 4: Does the impact of training differ depending on the store brand and the location of a particular store?**

The study also produced some interesting findings. A statistically significant relationship was found to exist between training and the interaction effect between store location and store net profits, as well as between store locations. Each of these interaction effects contributes 22 percent to net profit variability. What this suggests is that the impact of training on store net profits could be substantial depending on region the store is located.

Furthermore, a statistically significant relationship was found between store brand and store gross profits; and between store brand and store expenses. Holding other things constant, the interaction effect between store brand and store expenses contributes four

percent to store variability. The conclusion therefore is that training may have an impact on store financial performance depending on the store band. In others words train has proven to have an on certain store brands but not others.

### **The implication of the findings**

These findings however support many of the studies that looked into the relationship between training and organisational performance. For instance, Thang and Quang (2010) found that training had no significant effect for non-manufacturing companies. This makes sense since the organisation that is offering training is also a non-manufacturing entity. Findings by Jones, Kalmi and Kauhanen (2008) are consistent with this study's results as they found strong evidence that suggests that training has an impact on worker outcomes rather than organizational performance. What this suggests is that the training might have a direct impact on the individuals that received in terms of improved knowledge and skills but the results from this study indicate that this is not transferred to the Job.

Consequently, several factors might have a bearing on the observed non-significant impact of training on store financial performance. These include individual attributes, instructional design, and the organisational environment (Wehrmann, Shin & Poertner, 2003). Thus, according to Wehrmann, Shin and Poertner (2003), individual attributes that influence the transfer of training include the trainee's expectations of training, involvement in decisions to participate in training, feelings of self-efficacy and locus of control. Moreover, for training to be effective the instructional design should have clear objectives; it should be relevant to the work context, and present the content in a variety of ways.

Furthermore, organisational environment should be supportive to enhance transfer of learning (Wehrmann, Shin & Poertner, 2003). In other words, for training to effectively transferred to the job: (i) there should be support from peers and supervisors, (ii) the opportunity to use the acquired skills should be provided, and (iii) the time to use the skills in a work context should be accorded. Regarding the former, Hua, Ahmad & Ismail (2011), reiterated that supervisor communication significantly contributes to the transfer of

training. Future research should measure these things in order to test whether the organisational environment was supportive.

These results however are in contrast with the findings from Katou (2009), Sun and Jin Nam (2011) and Prieto and Revilla (2006), among others who found a positive impact of training on organisational performance. These studies can be criticised based on the data they used to arrive at these conclusions. Many of the studies that found a positive relationship to exist between training and firm performance have been done using cross sectional data. To this effect, Thang, Quang, and Buyens (2010) alluded to the fact that although these studies found training to have positive and significant effects on firm performance in certain sectors, different conclusions can be drawn in other sectors. Thang, Quang, and Buyens (2010) added that most of these findings cannot be generalised to the developing country context since most of these studies have been conducted in developed countries.

### **Limitations and Recommendations**

This study was limited in a number of aspects. First, due to the limitation of the time, the study could not be made in more detail.

Second, due to time and financial constraints, the study was limited to a quantitative analysis. More insight could have been gained by supplementing the data with a qualitative questionnaire and/or stakeholder interviews. These supplemental methods would have been ideal in assessing participants' perceptions regarding the training itself and the transfer of the training to the job.

Third, the sample size was relatively small making it unlikely that it was representative. Hence, the research findings cannot be extrapolated to other populations i.e. other retail organisation outside the CTFL industry. Furthermore the data provided by the programme personnel was limited in that it was not possible to answer some of the questions the study was originally supposed to address. For instance, there were not enough participants to be included in the second control group. This made it impossible to answer the question of

what could be the appropriate time to introduce training to newly appointed store managers.

Fourth, the sample data was skewed towards one region, with the majority of these stores drawn from the Gauteng region. Thus, 88 percent or 42 stores were from Gauteng compared to only 2 from North West, 2 from Northern Cape, 1 from Cape Town and also 1 from Free State. In terms of store brands, these data were collected from four brands. While the analysis found an interaction effect between training and store location to have an impact on store net profits to be statistically significant, after holding other factors constant, it is difficult to generalise this outcome. Basically, the store location effect could have been the influence of stores in the Gauteng region since there were a considerable number of stores from the region. However, in as much as this is a weakness in this study, it was also strength because it shows that training can be effective if it is focused to particular region.

Fifth, the data used for the analysis was collected from archives and for participants who self-selected into the training programme. This presents with the selection bias and pose as a weakness to the design. A Randomized Control Trial (RCT) could have been idea for this study. Using the RCT design could have produced credible and generalizable results about the impact of training on store financial performance. Nevertheless, the RCT was not feasible because of time limitations.

Sixth, discussions with the programme personnel revealed that the programme was specifically meant for newly appointed store managers. However, the bulk of the data supplied for the study was from people who have been in the organisation for more than 5 years. This could be a theory failure, as the programmes do not actually prioritise the people it is supposed to be targeting. The consequence of this could be that providing training to these vastly experienced staff could not be of any significant value to them as they have been employed long enough to master the important aspects of running business profitably.

Seven, apart from the fact that training was provided to experienced store managers instead of newly appointed stores managers; the study had a weakness that could derive from the structure and content of the training module. While this might not be an important

limitation for the study, the module is designed in a manner that does not suit the professional level of the targeted staff.

Finally, discussions with the programme personnel revealed that there was no baseline study undertaken to identify the training needs of targeted store managers. This presents a major weakness to the study. There is therefore a higher possibility that the training in question is not what needs to be given to these store managers to enhance their store profitability. It could be also be that some sections of the training module are important to certain managers than others. Given the fact that no baseline study was done to identify training needs, it could also mean that the training programme was introduced for other organisation's purpose without a profit element in it, which could also explain the absence of its effect on store profits.

In the light of the above weaknesses, it is recommended that a needs analysis be done to identify if the training still meet the needs of the store managers. Once this is done a Randomized Control Trial study could be initiated as pilot to measure the actual impact of the programme. This study should be as inclusive as possible, that is, having an equal representative of stores from different regions and brands. The success of the programme will be then evaluated both quantitatively and qualitatively. Then make adjustments to the program based on this feedback to improve it. Moreover, the duration and content of the study module need to be reviewed so that it is in line with the professional level of the target population.

In addition, this program was probably designed in-house and the people who designed it were not necessarily experts. They may have designed a less than adequate training program, ran it for a number of years without evaluating it and only now have findings suggesting that it is not effective. Future evaluation should be formative, rather than summative. Formative evaluation will provide insight into what the business need to improve the financial outcomes. This will include assessing the design of the training programme to identify what works and what does not work, and in what contexts. Dased on this knowledge the programme will be modified to meet the specifics of the business and location.

One future direction, based on the results from this study, is to investigate the interactions further and further explore the following questions: (i) Why did training work in some places and stores but not others? (ii) What characteristics do those stores have that the other ones do not? A qualitative study followed by a quantitative study that uses the information from the qualitative study may be the way to go.

## **Conclusion**

This study was the first to evaluate the impact of training financial performance for a retail group within the South African context. The result shows that training does not have an impact of store profits. These findings, though in contrary to the host of studies in the literature (e.g., Katou, 2009; Sun & Jin Nam, 2011; and Thang & Quang, 2010), were supported by some in the literature, for example Niazi (2011). The results further suggest training may have impact on store net profit depending on the region a store is located. Regional location for stores was found to have a bearing on gross profit and store expenses but not training. The results from this study could not be generalised as it suffers a number of weaknesses.

Those organisations that wish to implement similar training programmes for the purpose of improving organisation's profits should do so by focusing on particular needs of their staff, other than providing a general training "one size fit all". Once the needs of the target population are identified, training should be focused on those who benefit the most. In this way, the organisation's resources could be fully optimised. Future studies in this particular area should employ a stronger design that produces incontestable and credible inferences. This regard, if time and resources permit, the RCT is recommended as priority design. The quality of outcomes from this design could far outweigh the costs incurred.

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University of Cape Town

## APPENDIX A: BRANCH OPERATING REPORT

Report: Branch Operating Report 12 Month Actuals ZB01-001														
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total	
Clothing Inc														
CellPhones Inc														
Total Inclusive T/O														
<b>Gross Profit</b>														
48100 Basic Salaries														
48110 Overtime														
48120 Termination Costs														
48130 Ave Earnings Benef														
48150 Flexi Salaries														
48800 Company Contributi														
48840 Skills Development														
Salaries														
22100 Ordinary Discount														
22200 Staff Discount														
22350 GC & eVoucha Disc														
22500 Promo Discount														
22550 Voucher Discount														
Discount Allowed														
31200 Electricity														
31210 Water														
31250 Sewerage/refuse/mu														
Electricity & Water														
21800 Postage														
21900 Telephone														
Telephone														
Utilities														
36410 Interbranch Transf														
Interbranch Transport														
35150 Maintenance Store														
Maintenance														
37200 Stationery														
37230 Branch Wrappings														
50200 Losses - Branch														
Branch Losses														
37000 Rent														
37020 Rates / Levies														
Rent - Stores														
38630 Alarm Maint/Monito														
Security Costs														
20400 Dep Furn & Fitt														
Depr & Rent Equip														
21020 TV Licenses & Audi														
Licences														
31040 Head Office Suppli														
31050 Branch Supplies														
Office Suplies														
28120 Over & Short Banki														
28121 Manual Overs & Sho														
Other Expenses														
Total Branch Expense														
15460 IBT Customer Incom														
Other Income														
E20 Total Income														
<b>Branch Profit</b>														