

Human Capital Return on Investment (ROI) in Training: The Case of Department of Trade and Industry (DTI)

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ABSTRACT This paper is concerned with evaluating the need to measure human capital return on investment in training at the Department of Trade and Industry (DTI). The study's population, consisting of The Department of Trade and Industry (DTI) employees, comprised of 17 respondents. To achieve the paper's objective the researcher used questionnaires and the data collected was managed and analysed using the Statistical Package for the Social Sciences (SPSS). The paper provides a theoretical background to understand and conceptualize the return on investment in training and measurement, the value of human capital in organisations, its benefits and its return on investment. An evaluation and assessment of current training programmes in the Department of Trade Industry Training Centre was carried out and compared to international best practices, in the field of training evaluation and measurement.

INTRODUCTION

Over the last ten years it has been continuously said that Human Resources (HR) should and must add more value to the business, and it is important to measure the impact of HR and training. Furthermore, South African companies spend millions of rands on training staff and paying training levies, but how much value does this training add to the organisation? Does it affect the bottom-line of the business? Does training really make a difference? Most HR and training managers will not be able to answer these questions affirmatively due to the fact that very few of them are measuring the impact of training. A recent American Society for Training and Development (ASTD) survey revealed that less than 8 percent of South African companies are measuring ROI in training. The important question here is whether training managers will survive in an era in which they are required to show the value they add to the organisation. If a lack of measurement is the problem, what is the solution?

The great ROI guru Jack Phillips (1997) defines return on investment (ROI) as a measure of the financial benefits obtained by an organisation over a specified period in return for a given investment in a training programme. In other words, it is the extent to which the benefits (outputs) of training exceed the costs (inputs). If you spend (invested) R100 000 in train-

ing, what does the organisation get back for that investment?

ROI is a very popular metric because of its versatility and simplicity. Essentially, return on investment can be used as a basic measurement of an investment's profitability. ROI can be very easy to calculate and to interpret and can apply to a wide variety of kinds of investments (Investopedia 2015). That is, if an investment does not have a positive ROI, or if an investor has other opportunities available with a higher ROI, then these ROI values can instruct him or her as to which investments are preferable to others.

ROI is not only an American imperative. Its popularity is beginning to grow in the UK and Netherlands where companies are taking ROI measurement seriously. And here in South Africa, because skills development legislation requires employers to invest in staff training, managers are increasingly demanding not only accountability for skills development but also greater articulation of how training interventions benefit their companies, in terms of financial impact. The focus to measure ROI is therefore increasing in South African organisations.

Measuring the return on investment in training programmes therefore becomes a powerful and effective way to show top management the value of training investments in financial terms. A simple question that will always be raised with ROI is, "For every rand invested in training, how many rands does the employer get back?"

Objectives

- To evaluate the value of human capital in organisations and its benefits
- To measure the return on investment on training staff from the Department of Trade and Industry.

Literature Review

Return on Investment (ROI) in Training

ROI in training involves comparing the training's monetary benefits with the cost of training. Training costs can be direct and indirect. Direct costs include salaries and benefits for all employees involved in training, including trainees, instructors, consultants, and employees who design the program material and supplies; or classroom rentals or purchases; and travel costs. Indirect costs are not related directly to the design, development, or delivery of the training program (Kumpikaitė 2015). They include general office supplies, facilities, equipment, and related expenses; travel and expenses not directly billed to one program; training department management and staff salaries not related to any one program; and administrative and staff support salaries. Benefits are the value that the company gains from the training program. Therefore, the general strategy for evaluating training costs is to measure cost and benefit indicators in monetary terms and then compare them (Kumpikaitė 2015).

For years, companies have been operating under the assumption that they are reaping positive benefits from their training efforts. They train workers because they believe it strengthens the organisation and serves as a retention tool (Lachnit 2001). Training is therefore accepted as an expense, showing human capital investments as expenditures on their balance sheets, not as assets that are expected to generate income. However, because intuition and casual estimates have formed the basis of many training investment decisions, many companies have little evidence to verify that they are realizing positive returns on their investments. Therefore, a question that repeatedly comes up is, "For every rand invested in training, how many Rands the investor gets back?"

There is much more to the concept of ROI depending on the nature and context of the training, the benefits or returns, the investments or costs, and the beneficiaries and stakeholders.

There is no "one way" to conduct or demonstrate ROI in training measurement. This literature review attempts to cover the various aspects of ROI in training and human capital from the most recent information sources.

The concept of ROI in training, or ROI, is gaining importance, utilization, and complexity. Return on Investment in training should concern whomever or whatever makes the investment that is the employer/business, the employee/trainee, perhaps the agency or government that funds the training, or the training provider. Employers and businesses use the term ROI most commonly, and there is a limited amount of literature on the concept of ROI from the point of view of individuals, the trainers, or society. Therefore, much of what follows is clearly from the employer's perspective.

Defining ROI in Training

Return on Investment (ROI) in training, strictly speaking, is an accounting-based method of comparing the costs and benefits of training, by converting all costs and benefits to financial measures. It can be used, however, in a less stringent manner to include intangible costs and benefits, but this is a less common usage of the term. The most common form of ROI in training is accounting-based cost/benefit analysis.

A brief synopsis of ROI would start with typical training costs which may fall into the following general categories:—course development or purchase, instructional materials, equipment and hardware, facilities; travel, accommodation, meals, salary (instructor and support staff); and, lost productivity or temporary replacement costs.

Training Benefits

Typical training benefits may include the following:—

- Time savings (less time needed to reach proficiency, less supervision needed, etc.);
- better quantity (faster work rate, less down time, not having to wait for help);
- better quality (fewer rejects, lost sales, reduced accidents, lower legal costs);
- personnel data (less absenteeism, fewer medical claims, reduced grievances);

The Importance of Training

The focus of this study is "training" and it is important to acknowledge the following complexities surrounding training.

- Training delivery takes many forms: Self-study or instructor-led, on-the-job or in a classroom/training site, traditional on-site or distance delivered, computer assisted and/or computer managed, individualized or group instruction; or actual, hands-on or using virtual reality.
- Training attendance / participation may be voluntary or mandatory.
- Training duration may be short-term or long-term, once-off or continuous.
- Training focus may be hard or soft skills.
- Training impetus may be in response to training needs assessment at organizational, occupational and/or individual level.
- The business context for training can be negative (for example, high turnover or poor performance, absenteeism or conflict, compliance issues like sexual harassment) or positive (for example, rapid growth, merger/acquisitions, new product development and new business opportunities).

Reasons for the Growing Interest in ROI

Interest in or reasons for ROI varies according to the needs of the stakeholder group, that is employers, trainers and HR personnel, employees, non-employer funders such as government, that is, society at large.

From the Employer / Business Perspective

From the literature reviewed, some of the reasons why employers and businesses are increasingly concerned with demonstrating ROI are the following:

- Economic pressures to increase effectiveness of training programs.
- Increasing the financial worth of employees to result in improvements in job or organizational performance.
- Linking to competitive business strategies, for example, as a critical part of total quality management (TQM).
- Simultaneously demonstrating that training has a positive impact on the company and that training is a good investment compared to other investment alternatives available to the organization.
- Demonstrating the costs of mismanagement of human resources and of types of employee behaviour.

- Attracting attention to a particular problem, for example with productivity.

Work done by Statistics Canada has linked training to innovation in business. The study used a measure of firm performance defined as an average of the growth in market share, productivity and profitability of a firm relative to other firms in an industry.

Barriers to ROI

From the perspectives of both providers and users of training services, there are a number of reasons, why ROI is not routinely studied or demonstrated. The following reasons are often cited for not doing ROI.

1. The costs of training are known and expressed in rands, but the benefits may be soft, subjective and difficult to quantify for conversion to rands.
2. It is difficult enough to get managers to send people for training without imposing additional requirements to collect data to document impact.
3. Costs are known up front, before training, but benefits may accrue over time; and it's difficult to determine when to assess the impacts or benefits.
4. Most trainers lack the time and accounting skills to do cost/benefit analysis.
5. Requests for impact data may disrupt productivity.

According to the ASTD, the following barriers, some of which are realistic, inhibit implementation of ROI and others are based on false perceptions.

1. Costs and time - course evaluations are viewed as inconsequential by some and assessment of impact as too time-consuming and costly.
2. Lack of skills and orientation for staff - ROI requires a change in overall orientation, attitude, and skills of the staff.
3. Faulty needs assessment - some training programs have been implemented for the wrong reasons (such as an effort to chase a popular fad or trend in the industry). Thus, an ROI calculation for an unnecessary program will likely yield a negative value. Training won't help if the problem isn't lack of worker knowledge and skills. Sometimes training can even hurt the organization by giving trainees expectations

about the ways things are supposed to work, when the organization has no intention of working that way. According to a training specialist, from 75 percent to 85 percent of problems identified as training problems for a certain group are not correctly diagnosed. This is a natural consequence of the fact that the skills and knowledge of the worker are only about 20 percent of the system that is involved in the problem.

4. Fear - a concern may exist about the consequences of negative ROI. The ROI process also stirs up traditional fear of change.
5. Discipline and planning - a successful ROI implementation requires much planning and a disciplined approach to keep the process on track.
6. False assumptions, such as: Managers do not want to see the results of training and development expressed in monetary values.

Basic Cost / Benefit Analysis

Cost/benefit analysis measures the impact of training on the organization in terms of rands saved or earned. The manager must make decisions on how often a particular cost category occurs, (for example, fixed costs vs. variable costs). Some costs should be determined on an organizational basis, while others should be determined on an individual basis. Another issue is to determine the period of time over which the organization benefits from the training (for example, during the training, a year after, three years). This can only be determined the managers involved. Some organizations may want to count the salary paid to their employee while they are on training. Depending upon the nature of the organization, cost and benefit categories may be modified to meet a particular need.

Cost / benefit analysis is expressed as a ratio. To determine Benefit Cost Ratio (BCR), the total benefits are divided by the total cost. ROI in training or ROI is typically expressed as a percentage: the percentage of return or benefit for each rand spent or invested. In this way it differs from straight cost-benefit analysis. To determine ROI, the costs are subtracted from the total benefits to produce net benefits, which are then divided by the costs.

Training Utility Formula

This formula still depends on estimates for several variables. The most obscure is the concept of "value," a statistic that is not readily available for most jobs. Training Utility is estimated on the basis of years of duration of effect on performance; number of employees trained; performance difference between trained and untrained employees; "Value"-the standard deviation of job performance in Rands; and cost per trainee.

Kirkpatrick Evaluation Model

By far the most well-known method of training evaluation is, Kirkpatrick's four levels, was developed by Donald Kirkpatrick in the 1959 and still used today. The four levels of evaluation are:

1. **Reactions:** Did the participants like the program? Did they feel it was valuable? Did it meet their expectations? This is measured by having participants fill out evaluation sheets at the end of course.
2. **Learning:** Did the participants learn what they were supposed to learn? This is measured by comparing participants' scores on pre and post-tests.
3. **Behaviour:** Did the participants apply their new learning back on the job? This is judged by managers' observations and follow-ups to employees' action plans.
4. **Results:** Did the training have any measurable business impact? Did it produce any ROI? This is measured by doing a financial comparison of costs vs. benefits. Some trainers only evaluate business impact at level four, and add a fifth level for financial results. To the Kirkpatrick Model, in his Handbook of Training valuation and Measurement Methods, Phillips calls level four "business results" and adds a fifth level: Return on Investment.

Because the Kirkpatrick model is a cumulative model, each step of the model builds on the prior step. According to a training specialist, the knowledge required to improve training lies in the formative program evaluation data obtained from measuring at the first 3 levels: Behaviour, Learning and Reaction; however, only through a complete evaluation using all 4 levels can a manager fully understand the value of training

investments. Evaluations do take planning, time, and money, and it's not necessary to evaluate every training program through all four (or five) levels. A good general rule of thumb would be to evaluate all training for reactions, but only 50 percent to 70 percent for learning, 30 percent for behaviour, 10 percent to 15 percent for results, and 5 percent for ROI.

The Bell System Approach

This model was developed by AT&T and the Bell Systems units. It is based on the four level approach developed by Kirkpatrick:

Reaction Outcomes: What are participants' opinions of the entire training program or specific parts of the program such as content, documentation, methods, or other general training activities?

Capability Outcomes: What are participants supposed to know, think, accomplish, or produce at the conclusion of the training program (evaluated through classroom tests or exams)?

Application Outcomes: What do participants know, think, accomplish, or produce in a workplace setting for which a training program has prepared them?

Worth Outcomes: What is the value of training in relation to its cost? This represents the degree to which an organization benefits from training in terms of the dollars, time, effort, and/or resources invested.

The reaction and capability outcomes levels represent the short-term objectives of a training program. The application and worth outcomes levels represent the organization's long-term goals.

Impact Comparison of Alternative Investments

This model is undertaken in two phases: a behavioural audit, and calculations of ROI. The results of the behavioural audit demonstrate the extent to which the trainee is using the skills presented in the training program. If trainee is not using the skills, it would be difficult to demonstrate a return on investment from the training program. The concluding question asks: Is this a good return on training investment? To determine whether it is a good investment alternative, compare the returns generated with corporate return on assets. If the return is greater than the corporate return on assets, it can be

concluded that training has been a good investment. If the return is equal to or less than corporate return on assets, there are likely better investment alternatives.

This section of the literature review provides an understanding to the concept of human capital, its variables and the benefits of human capital investment. In order for the measurement of ROI in training to be successful, it becomes important to show the conceptual relation between human capital and ROI.

Defining Human Capital

In order to determine and unfold the meaning of "Human Capital", clarity needs to be given with regards to *resource*. The term *resource* (from the Latin *resurgere*, to rise again) implies an available supply that can be drawn upon when needed. In the corporate context, people seem like water in a well that will never run dry. Fire today, hire tomorrow; easy come easy go. But are people really a "resource" in this sense? Or are they more like a form of capital – something that gains or loses value depending on how much and how we invest in it? This brings us to the question, what is "Human Capital?" Parsing the phrase can provide some answers.

The term *human* (from the Latin *hominem*, for man) means of or relating to people. It signals our biological species: To be human is to be a person – not an animal, a god or machine. On the other hand the term *capital* (from the Latin *caput*, for head). In its simplest usage, it means the first, biggest, or best. In accounting it means net worth – the remaining assets of a business after all liabilities have been deducted. Kaplan and Norton (2004) define "human capital" as the skills, values and knowledge that a company's employees possess.

Human Capital Investment

The skills and knowledge embodied in an individual can be defined as human capital. All individuals attain a certain stock of human capital and this level is primarily influenced by education and training. Investment in human capital increases productivity. According to Sullivan (1998), Adam Smith was the first to suggest that an educated worker could be related to an expensive machine. The skills embodied in a person can be 'rented out' to employers. The

higher the level of skills a person has the higher this 'rent' is likely to be. Thus, the expected returns on investment in human capital are a higher level of earnings by stating that "the simplest explanation of the universal association between education and earnings across sectors, industries and occupational categories around the world is that the better educated are generally more flexible and more motivated, adapt themselves more easily to changing circumstances, benefit more from work experience and training, act with greater initiative in problem solving situations, assume supervisory responsibility more quickly. In short, they are more productive than the less educated, even when their education has taught them no specific skills".

The Benefits of Human Capital investment

Studies in the US and throughout the world make it evident that human capital- the skill of the population, plays a major role in the productivity of nations.

The human capital concept recognizes that human beings are important, if not more important than physical capital in creating wealth and generating a successful economy. To understand how human capital investment affects the economy and why the DTI should promote human capital investment should be considered. This should be based on how human capital improves productivity. First, all human capital is productive because of its immediate effect on raising the skills levels of workers. Human capital also improves the adaptability and efficiency of resources in society. It will allow for the allocation of resources to be more effective across tasks. It will enhance the ability to adapt and to change and respond to new opportunities. South Africa is changing. Its labour and capital markets are changing, the world economy is changing. Greater skills also facilitate worker mobility across occupations, industries and regions in response to new opportunities and it helps people reallocate resources, both human and physical, toward more productive opportunities, it also helps realize that opportunities exist. An educated workforce is a more flexible workforce. People with higher levels of education are better able to absorb new ideas, adapt to foreign technologies, improve local technologies and understand and apply knowledge from outside South Africa and to local situations. There are so many stud-

ies from around that demonstrate that education and skills are important determinants of economic growth.

Human Capital Return on Investment (ROI)

With economic, social and technological change all calling for constant flexibility and adaptation, governments, organisations, enterprises and individuals are increasingly aware of the importance of skills training and competency development, similarly they share a common interest in renewing and increasing the skills base of the population. This investment encompasses not only the skills and knowledge acquired of formal education, it also includes what is learnt at work as well as informally in the family. Any assessment of the efficiency of investment in education requires measurement of the returns that it yields.

In trying to discover the types of investment in human capital that give the biggest returns is a not an easy task to establish. It is important to situate investment in human capital in a broad business and social context. Quantifying information about human capital investment is not easy because many benefits go beyond additional employment or earnings for individuals and bring immeasurable returns in the form of social cohesion. Currently human capital has been strongly conditioned by what is technically possible, focusing on the benefits of initial education to individuals rather than between lifetime development of skills. Therefore, focus should be given to more direct measures of different types of skills and the role of learning in the workplace, as well as the measurement of the social and economic impact of human capital investment in training to sustain development and reduce inequality. Individuals cannot identify all the benefits in human capital as additional earnings.

METHODOLOGY

This study makes use of the descriptive survey research design. This design has been chosen, as it will identify the phenomena whose variance we wish to describe. According to Robson (2002), the objective of descriptive research is "to portray an accurate profile of persons, events or situations". Ghauri and Gronhaug (2002:95) states that "this type of survey

is concerned with particular characteristics of a specific population of subjects either at a fixed point in time or at varying times for comparative purposes”.

In light of the above, this study will present a balanced view of the current quality of training, evaluation and measurement practices in DTI.

Sampling and Sampling Technique

The study will carry out primary research in a formal government setting. The sample frame is the current population of The Department of Trade and Industry (DTI) employees. A non-probability sampling procedure is followed in which judgment is used, to get a sample, which is representative of the population. This aids in selection of units thought to be representative of the population. Ghauri and Gronhaug (2002: 114) state “non-probability samples may, however, be useful to gain insights into a phenomenon, predominantly in qualitative research.”

The sampling frame is a representative sample of line managers, middle managers and senior managers from the following divisions: - TISA, ITED and TEO. The sample size of the population was approximately 17 managers across DTI.

Design and Analytic Technique

A qualitative method of data analysis was used taking a deductive approach. The collection of data was through the use of a structured interview questionnaire. In descriptive studies, structured interviews are used as a means to identify general patterns (Saunders et al. 2003). The questionnaire consisted of 23 standardised questions which were sent by email to all participants prior to the interview to allow sufficient time to adequately prepare themselves for the interview sessions. Due to the descriptive nature of the study, an open-ended questionnaire was thus far, the most appropriate choice to collect data. Open-ended questions allowed participants to define and describe a situation or event (Saunders et al. 2003). An open-ended questionnaire was designed to encourage the interviewee to provide an extensive and developmental answers, and maybe used to reveal attitudes or obtain facts (Grummitt 1980). Therefore the use of an open-ended questionnaire in this study

assisted in recording the opinions and attitudes of organizational practices, as well as identifying and describing the variability in different phenomena in the organisation.

The rationale behind the use of a qualitative data analysis as opposed to quantitative data analysis for this study, was that qualitative research is an unstructured, exploratory research method based on small samples intended to provide insight and understanding of the problem setting (Saunders et al. 2003). This study was well suited to a qualitative research method since collected results were in non-standardised data requiring classification into categories. This involved data being classified into meaningful categories which was derived from the data and fitted with what had been revealed. The categories were in effect labels that were used to rearrange the data and provide an emergent structure relevant to the study to organise and analyse data further.

The categories that were devised in this study formed part of a coherent set that provided a well-structured, analytical framework for further analysis. If a quantitative data analysis approach was adopted, then the collected results could have been in numerical and standardized data.

Method of Data Collection

Data was collected from DTI training records and the interviews conducted. Secondary data were obtained from training records which includes DTI training course evaluation form, sample training guides, as well as training course evaluation reports. Primary data were collected from interviews conducted through the structured questionnaire. The questionnaire was sent by email to the identified respondents. Each interview was scheduled for a duration of 25-30 minutes per respondent. The secondary data sources were selected with the aim of identifying strengths and potential areas for improvement of evaluation practices from a ROI perspective. Primary data collected enabled the researcher to make measured evaluation of the current training programmes offered at DTI and to determine the need for a measured human capital ROI in training.

Data Analysis Technique

Data was analysed by combining the inputs of all respondents. The analysis of inputs was

classified into meaningful categories, which were derived from the data to fit with what had been revealed. Categorisation was chosen as it provided an emergent structure relevant to the study that enabled data to be organised and analysed further. The categories effected labels that were used in existing theory and literature. Strauss and Corbin (1998) suggest that there are three main sources to derive names for categories:-

- a) you utilize terms that emerge from your data;
- b) they are based on the actual terms used by your participants;
- c) Or they come from terms used in existing theory and the literature.

In addition to the above a comparison of the current training practices at DTI with that of international best practices in the field of training evaluation and measurement was also presented as part of the data analysis.

RESULTS AND DISCUSSION

Assigning of Data and Development of Categories

The assigning of data to and developing categories were done after each interview. The interview verbatim was transcribed and its material was filed according to categorization loosely identified. The material was typically in the form of paragraphs that were cross-classified to several categories. As each statement was filed, it was compared with previous statements in that category and running notes were kept on the content of the category. The categories changed over time; some disappeared and were emerged under more general titles. Some emerged out of previous categories that became too heterogeneous. Some categories became parts of matched pairs or triads in which any given comment would typically be filed in each constituent category. For example comments that described instances of inappropriate training courses or bad training schedules also typically mentioned lack of management support. Similarly, statements that described DTI's training programmes and schedules also typically included statements of satisfaction with the training provided. This helped to reveal connections between categories.

Category Analysis of Data

During the analysis, the data had been finally categorized under the following labels, in or-

der to provide a framework in areas to focus for improvement and international comparisons:

- Customisation and needs analysis
- Learning guide design and development
- Learning programme planning and scheduling
- Assessment and evaluation levels
- Workplace transfer and management support

Customization and Needs Analysis

The study found that a proper training needs analysis is absent at DTI. Training is seen to be too generic, incorporating too much general theory at the expense of skills training addressing particular workplace needs. The over-emphasis on theory means that the practical side of learning programmes is neglected. The training centre does not consider the strategic needs of the different sections in DTI. The study also found that employees are sometimes sent on training courses where they do not benefit from the programme as the learning is not always aligned to work outputs. The result of this phenomenon is that staff members who are at vastly different levels in the organisation attend training together, making it difficult for all members to relate the content to the application environment. An example of this problem is that a learning programme is sourced on National Qualifications Framework (NQF) level 5 and 6 (managerial equivalent of a degree course) and attended by employees who operate at NQF level 4. In addition, training is presented for the "average" learner and not tailored for learners at different levels according to their respective learning styles and needs. A one-size fits all approach hinders the achievement of the desired objectives of DTI.

Learning Guide Design and Development

The study found that although an attempt has been made to design learning guides in outcomes-based format, the sample learning guide reviewed does not directly address the competencies to be acquired. For instance, little evidence could be found of the integration of the NQF critical outcomes in the learning material. Professional inputs are indeed obtained from subject matter experts when modules are designed, but insufficient customisation to DTI environment is done. Furthermore, the study

found that the guides are too theoretical and therefore lack a practical workplace focus. The large amount of information being shared with learners not only leads to information overload, but also contributes to rather lengthy learning programmes. There also appears to be problems with instructional design principles that are compromised, for example the assessment activities are not linked to the learning outcomes, and proper introductions have been omitted that provide sufficient background and context for the learner. In addition, a vast amount of technical jargon is used without a proper explanation thereof.

Learning Programme Planning and Scheduling

The study found that the scheduling and registration of learners for learning programmes pose particular problems for line management as well as the communication thereof to the organisation. They claim that they don't always obtain confirmation of nominations, because learners can nominate themselves for a learning programme. Notice periods for learning programmes are inadequate and that learners are too long away from work. On the other hand, staff affiliated to the training centre reported that after learners have been registered for a particular learning programme that too many cancellations occur at short notice. They also experienced problems and delays caused by the cost of identifying the right learning programme with a credible service provider. However, some of the managers felt that service providers are occasionally selected that do not meet the needs of DTI or achieve the desired expectations. This problem leads to quality management issues that could adversely affect the ROI of these programmes.

Evaluation and Assessment Levels

The findings of the survey relating to evaluation and assessment are based on the evaluation frameworks of Dr Donald Kirkpatrick and Dr Jack Phillips, as endorsed by the American Society for Training and Development, the leading professional training association in the world. However, to ensure a relevant approach within the context of the NQF assessment system, the South African Qualifications Authority (SAQA) approach to assessment has been integrated in this report.

Reaction Evaluation (Level 1)

The study found that informal discussions with line managers are used to solicit learner feedback on training programmes. In addition, learners are required to complete a reaction evaluation questionnaire at the end of a learning programme. Learners usually complete these forms right at the end of the programme and are therefore too rushed to provide meaningful feedback. Furthermore, this questionnaire is so lengthy that it takes about 15 minutes to complete. Although this information is considered by the Training centre for planning and evaluation purposes, it is not properly analysed or consolidated into training reports for comparative analysis or for further action to be taken. For instance, the study revealed that in most cases the external provider does the analysis him/herself. This does not ensure sufficient consistency and quality control from an internal responsibility aspect and quality management perspective. There is a perception among staff that training attendance records are sufficient for record-keeping purposes.

Learning Assessment (Level 2)

The study found that assignments appear to be the main form of learning assessment at DTI, although it is not used for all learning programmes. However, due to the manner in which assignments are administered as an assessment instrument, it is not clear whether the current assignments are effective assessment tools for the purpose of assessing the extent of learning and therefore the competence levels of learners. Participants reported several problems. For instance, several participants mentioned that the assignments do not directly assess the outcomes of learning programmes. Moreover, assignments are seen to be too theoretical and therefore do not directly address learning in DTI context. The time allocation for assignments also appears to be a problem. A view is expressed that the deadlines for assignments are unrealistic and that the assignments interfere with the work commitments of learners. Many learners don't complete the assignments.

Application Assessment (Level 3)

Little evidence relating to the active application of knowledge in the workplace could be found. One exception is the presentation skills

course in which managers clearly observed a change in behaviour and improvement in performance. One manager reported that learners do not have to attend training, but can simply read a manual to achieve competence. Although a better standard of work is sometimes observed as a result of training, the only formal way of assessing workplace application is the current performance management system that is not necessarily directly linked to specific learning programmes.

Training Impact Evaluation (Level 4)

It was clear from all the participants that no effort is currently made to measure the impact of training in terms of its tangible results, or the financial return on the training investment (ROI). This translates to no report back to management about the financial value of training. However, it was pointed out that it would not be possible to determine the ROI of all learning programmes at DTI due to the broad strategic nature of some learning programmes such as strategy and policy formulation. There are also many additional variables in DTI environment that would make it difficult to determine an accurate ROI such as organisation culture, politics and broader economic factors. However, the majority of participants did indicate that it is indeed possible to determine the rand value costs and impact relating to errors in the department.

Workplace Transfer and Management Support

Several authors (such as, Kontoghiorghes 1998; Gumuseli and Ergin 2002) have discovered a strong positive relationship between supervisor support and training transfer. Burke and Hutchins (2007) observe that there are studies arguing about strong or moderate relationship between the variables and have also found studies showing mixed results; the authors suggest further research to clarify or to build on the correlation between training transfer and supervisor support (Ghosh et al. 2015). Findings of the study by Facticeau et al. (1995) depict a mixed relationship: supervisor support has been found to directly influence perceived transfer of training, but with negative correlation, and to indirectly impact perceived transfer through pre-training motivation, with positive correlation (Ghosh et al. 2015).

However, in the Department of Trade and Industry, serious problems have been reported regarding the transfer of learning to the workplace. Managers feel that most of the employees do not apply what they have learned in training programmes.

Only a small number of participants expressed the view that their managers support them when they return to the workplace to apply the skills they have learned. Management provides little or no support to create an environment for skills transfer and application in the workplace. One participant stated that “management is not taking training seriously.”

Managers regarded training as a waste of time due to the fact that employees are taken away from their offices for too long periods. Several incidents were reported in which learners were called back to the office while on training. According to the managers interviewed, training should be less theory-based, and more practical in nature.

In terms of compliance to the notion of the learning organisation, it appears as if all the characteristics of the learning organisation are not actively applied in DTI. The organisation culture is seen as an obstacle to effective learning, growth and empowerment. While some managers are open to new ideas and employee input, others are not supportive of new ways of doing things. Part of the problem is that senior management is not involved in training and the question needs to be asked whether training meets their needs. Some participants are of the opinion that senior management should also attend training, not only to improve their own skills levels, but also to show an example to the rest of the organisation and to be familiar with the content of the training programme. In addition, the performance management system is only used because it has to be done, and not as an active tool to promote targeted skills development. It is seen as the responsibility of management to ensure that skills acquired during training are applied back in the workplace, but the reality is that this does not happen.

CONCLUSION

Staff members who are at vastly different levels in the organisation attend training together, making it difficult for all members to relate the content to the application environment. It could

be concluded that the more successful firms tended to place a greater emphasis on research and development R&D capability and R&D spending; developing new technology; and using new materials and implementing aggressive new strategies like process control and just-in-time inventory control. In short, while human resources were important, other factors were more important to innovation and business success. However, in some sectors – retailing, wholesaling, accommodation and food services – the more successful firms gave greater emphasis to skill labour, continuous staff training, and/or innovative compensation packages.

RECOMMENDATIONS

Workplace Transfer and Management Support

The training centre should be more involved with line management by moving closer to the core of the business. More follow-up work could be done to determine and enhance the transfer of training. The development of a generic skills transfer strategy could be useful for this purpose. The skills transfer strategy should be developed to outline clear skills transfer actions before, during and after training. Furthermore, using the current performance management system to identify performance improvement opportunities could also provide a useful foundation for ROI measurement.

Although there are many approaches available to support the transfer of training to the workplace, the two best approaches to promote workplace transfer, is performance improvement and the learning organisation. It is suggested that training staff should be orientated towards performance improvement methodology and the learning organisation to support the development of a true learning culture at DTI. This will assist the training centre to achieve their goal of being a real strategic partner in the organization

REFERENCES

- Baldwin J 1999. Innovation, Training and Success. Ottawa: Statistics Canada. *Paper Prepared for the Expert Panel on Skills*. Canada, October 1999.
- Burke LA, Hutchins HM 2007. Training transfer: An integrative literature review. *Human Resource Development Review*, 6(3): 263-296.
- Fauteau JD, Dobbins GH, Russell JEA, Ladd RT, Kudisch JD 1995. The influence of general perceptions of the training environment on pre-training motivation and perceived transfer of training. *Journal of Management*, 21(1): 1-25.
- Ghauri P, Gronhaug K 2002. *Research Methods in Business Studies: A Practical Guide*. 2nd Edition. England, Essex: Prentice Hall.
- Ghosh P, Chauhan R, Rai A 2015. Supervisor support in transfer of training: Looking back at past research. *Industrial and Commercial Training*, 47(4): 201-207.
- Goldner 1997. How to Measure Sales Training Return on Investment. From <<http://salesdoctor.com/long-term/6train5.htm>> (Retrieved on 8 March 2016).
- Grummitt J 1980. Interviewing skills. London Industrial Society. In: J Heckman (Ed.) 2003: Human Capital and the Skill of the Population. *Management Today Yearbook*, 20(10): 40-45.
- Gumuseli AI, Ergin B 2002. The manager's role in enhancing the transfer of training: A Turkish case study. *International Journal of Training and Development*, 6(2): 80-97.
- Kaplan R, Norton D 2004. *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*. USA, Boston: Harvard Business School Press.
- Kirkpatrick D L 1979. Techniques for Evaluating Training Programs. From <http://www.astd.org/CMS/templates/template_1.html?articleid=20840> (Retrieved on 28 February 2016).
- Kirkpatrick DL 1979. Techniques for evaluating training programs. *Training and Development Journal*, 33(6): 78-92.
- Kontoghiorghes C 1998. Training transfer as it relates to the instructional system and the broader work environment. In: RJ Torraco (Ed.): *Proceedings of the Academy of Human Resource Development 1998 Conference*, Academy of Human Resource Development, Baton Rouge, LA, pp. 466-473.
- Kumpikaitė 2015. *Human Resource Training Evaluation*. Kaunas: ISSN.
- Lachnit C 2001. Training proves its worth. *Workforce*, 80: 52-56.
- Long LN 1999. *ROI: Capturing the Big Picture in Technical Training*. Wisconsin: Technical Training, pp. 31-33.
- Meyer M, Opperman R 2003. *Measuring Return on Investment in Training*. 1st Edition. Randburg, South Africa: Knowres Publishing.
- Official Home Page of Investopedia 2015. From <<http://www.investopedia.com/terms/r/returnoninvestment.asp>> (Retrieved on 29 February 2016)
- Parry SB 1996. *Measuring Training's ROI in Training and Development*. Houston, Gulf, pp. 72-77.
- Phillips JJ 1991. *Handbook of Training Evaluation and Measurement Methods*. Phillips Relies on the Kirkpatrick Model, But Also Describes The Bell System Approach, the Result-Oriented HRD Model, the Parker Model and the CIRO Models. Houston, TX: Gulf.
- Phillips JJ 1996. *ROI: The Search for Best Practices in Training and Development*. New York, McGraw Hill pp. 42-47.
- Saunders M, Lewis P, Thornhill A 2003. *Research Methods for Business Students*. 3rd Edition. England: Pearson Education Limited.
- Shepeck MA and Cohen SL 1985. Put A Dollar Value On Your Training Programs. From <http://hale.pepperdine.edu/~cscunha/Pages/KIRK>. HTM (Retrieved on 1 March 2016).
- Stewart AT 1997. *Intellectual Capital: The New Wealth of Organisations*. London: Nicholas Brealey Publishing.

- Sullivan P 1998. *Profiting from Intellectual Capital: Extracting Value from Innovation*. USA: John Wiley & Sons Inc.
- Strauss A, Corbin J 1998. *Basics of Qualitative Research*. Newbury Park, CA: Sage.
- Tapscott D 1996. *The Digital Economy: Promise and Peril in the Age of Networked Intelligence*. New York: McGraw Hill.
- Woodruffe C 1991. Competent by any other name. *Personnel Management*, 23: 30-33.
- Yin RK 1994. *Case Study Research: Design and Methods*. 2nd Edition. Thousand Oaks, CA: Sage

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