

# **EFFECT OF MICRO-ENVIRONMENTAL VARIABLES ON IMPLEMENTATION OF INDUSTRIAL TRAINING PROJECTS AMONG YOUTH IN KENYA: A CASE OF NATIONAL INDUSTRIAL TRAINING AUTHORITY**

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## **ABSTRACT**

Modern technical training in industry is an integral part of development. It aims at providing the technical knowledge and/or skills required for industrial operations. It is through technical training and technological research that industrial organizations are able to develop skilled manpower that will assist them in achieving economic prosperity. In the face of unprecedented changes in technology and global competition in industrial businesses, which characterize the new global economy, both the modes and roles of technical training in industry are evolving. The trend is towards Competency development. This involves analysis of an Occupation. Any occupation can be described in terms of tasks. All tasks imply knowledge, skills and attitude. In developed countries, technological training has created a human resources base that satisfies the continually changing demands of society. This achievement has partly been driven by the Information Technology revolution, which has made conducting technical training and business operations easier. In developing countries, Industrial training is just beginning to take root. This research presents the main aspects of modern industrial technical training and the important role it plays in further developing technical skills and the economic development of a nation. The study sought to find out the micro environmental variables of project management strategies that affect effective delivery of industrial training in Kenya and come up with possible recommendations to improve its delivery. The specific objectives of the study were the influence of project planning, top

management support, communication modes and information technology on implementation of NITA projects. This study adopted a descriptive survey design. The study targeted the various firms who benefited from industrial training as administered via National Industrial Training Authority's industrial training Centers and any other NITA accredited industrial training institutions. Therefore, the accessible population was 250 firms. The sample size was 70 firms whose respondents were the training managers in these firms, and in their absence then the Human resource managers were the respondents. In this study, questionnaires and interview schedules were used. The instruments were used to supplement each other and to give a deeper and wider exploration into research perspective which would give the research more quality. Study data was organized, presented, analyzed and interpreted using descriptive statistical techniques. The descriptive statistics that were used to summarize data included percentages and frequencies. The effects of micro environmental variables in project management strategies on implementation of effective industrial training was measured through measures on a Likert Scale whose weights were analyzed and weighted averages enumerated which were used to show the influence levels of Project management practices. The data was analyzed using the Statistical Package for Social Sciences (SPSS version 22.0). It was concluded that National Industrial Training Authority must embrace Project management micro environmental variables in industrial training to advance the country

economically and develop the required skills to enable Kenyan firms to compete globally.

**Key Words:** *resource scheduling, project performance, international not-for-profit organizations, Nairobi City County, Kenya*

## **INTRODUCTION**

Effectiveness of Industrial training and development of skills depends on various factors in any industry. It is so specific in some industries like the hotel industry where specific specialized training has to be done because of its nature. Training has long been a fundamental concern in organizational contexts. Organizations rely on learning strategies, training technology and development efforts to prepare their workforce (Salas, Wilson, Priest and Guthrie, 2006). In today's global economy, the knowledge, skills and abilities necessary to maintain a competitive advantage are growing and changing (Arguinis & Kraiger, 2009). As the nature of work changes, employees are increasingly required to develop a wide set of skills that are essential to the success of their organizations when used interchangeably. Yet few workers possess the cultural competence, interpersonal skills and technological proficiency required for these changing work demands (Salas & Stagl, 2009).

It is clear that the project model is increasingly becoming the vehicle for instituting changes in private as well as public sector to attain the organizations goals. Various researchers have studied the concept of Critical Success factors (CSFs) within the projects framework. According to Mobey and Parker (2002), the chances of a project succeeding can be increased if firms have an understanding of what the critical success factors are to systematically and quantitatively assess these critical variables, anticipating possible effects, and then choose appropriate methods of dealing with them. Rad and Raghavan (2000), for example, suggest that project failure or near-failures can be caused by poor communication and unanticipated shortage of resources. Executivemanagers often complain that their middle or operating managers lack the ability to implement strategies successfully (Floyd & Wooldridge 1992).

Poor understanding and commitment to the strategy on the part of managers also impede strategy implementation (Floyd & Wooldridge 1992). The present study investigates a model to improve industrial training project implementation in organizations by investigating, among others, the above-mentioned variables that influence project implementation in firms. In the Kenyan context, the researcher could not find sufficient literature on the effect of micro environment variables influencing industrial training projects implementation. It is for this reason, that, this research adopts an exploratory approach in order to investigate the influence of micro environment variables on successful implementation of industrial training projects in Kenya. This shows that a big knowledge gap exists with regard to factors influencing industrial project being implemented by National Industrial Training Authority. This study will form a basis for further in-depth studies in this area, thereby increasing the knowledge data base.

Training can be defined as the systematic acquisition of knowledge; skills and attitudes that together lead to improved performance in a specific environment (Salas et al., 2006). This encompasses what employees need to know, what they need to do and what they need to feel in order to successfully perform their jobs. Industrial training is focused on producing permanent cognitive and behavioral changes, and on developing critical competencies for job performance. Organizations make increasingly large investments in industrial training because it serves as a powerful tool for producing the targeted cognitive, behavioral and affective learning outcomes essential for their survival (Salas &Stagl, 2009). Effective Industrial training can yield higher productivity, improved work quality, increased motivation and commitment, higher morale and teamwork, and fewer errors, culminating in a strong competitive advantage (Salas et al., 2006). On the other hand, a poorly trained work-force can lead to errors, injuries and even legal issues, all of which can be extremely costly. As a grave example, recent reports estimate \$183.0 billion were spent on employee injuries and deaths linked to deficient training practices every year (National Safety Council, 2010). Errors of all kinds were so prominent that entire training programs had to be developed specifically to remedy them. Error management training, for instance, encourages trainees to make errors and learn from them throughout the training process (Keith &Frese, 2005). Furthermore, a poorly trained workforce can cost organizations billions of dollars in legal fees (Goldman, 2000). Not surprisingly, Industrial training has become a paramount concern of organizations and researchers alike.

In line with the government efforts to position Kenya as a developed country, under vision 2030, the construction of a scientific and progressive society is needed. It is designed to produce an advanced society, having a high capacity for change and able to contribute to the country growth. This Industrial training is intended to provide Kenya as a center for Industrial training excellence and providing world-class technical education (Yusooff, Md Ali, Madon & Mohamad, 1999). Thus the education system in Kenya is now seen as more skills oriented to meet employment needs (Auyob, 2008).The revised Industrial Training Act (2011) mandates National Industrial Training Authority to ensure continued supply of trained manpower at all levels in the industry.

Changes in industrial technology and the rapid increase in the complexity of work processes in industries in Kenya has created a new demand of skilled manpower, the knowledge or "K-workers" (Shayamal, 2008). Therefore, in this decade, Industrial training seems to become a basic necessity and the most important tool in enhancing the effectiveness of industrial production processes.

The Industrial training programs were seen as being more and more important for industries to prosper. This resulted in the development of industrial training programs, carefully structured to enable trainees receive industrial training and be able to apply what they have learned. An industrial training program is said to be effective when the program is able to change the behavior of the trainees after the trainees have completed attending any training or courses (Yusof, 2002).

According to Wan Ahmad, Mohamad, Hashimdan Esa, (2010) transfer of learning is in a form of generalization and application to situations outside of the training. Thus, the transfer of learning is regarded as a generalization to the acquired skills during the training phase and applied to the work environment. Learning transfer or often referred to as training transfer is not a new step in the program planning process, but it is in line to receive more attention (Lisa & Holly, 2008). Transfer is a key to adult learning theory for education and training mainly aims to transfer knowledge. Therefore, the ultimate goal of learning and training is not achieved unless transfer occurs (Wan Ahmad, Mohamad, Hashim & Esa, 2010). Effective project implementation especially in the public sector among developing countries is still a challenge due to poor project planning. Onyango(2010) indicated that public sector projects face hurdles like bureaucracy, poor integration of ICT, low top management support and goodwill. This study sought to establish the influence of micro-environment variables on the implementation of industrial training projects among the youth in Kenya with a special reference to National Industrial Training Authority.

### **Micro-Environment**

According to Goldman (2000), an organization's micro environment is composed of the elements within the organization, including current employees, management, and especially corporate culture, which defines employee behavior. An organization's mission statement describes what the organization stands for and why it exists. It explains the overall purpose of the organization and includes the attributes that distinguish it from other organizations of its type. A mission statement should be more than just words on a piece of paper; it should reveal a company's philosophy, as well as its purpose. This declaration should be a living, breathing document that provides information and inspiration for the members of the organization.

An organization's micro environment also consists of the trading status of the business, its finances, physical resources, staff and management skills, operational and control systems, stakeholders' interests, policies and procedures. Duncan (1972a) and Williams (2009) assert that the micro environment of any organization comprises firm-related factors that influence its capacity to achieve set objectives, develop and implement a viable plan, which consequently contributes to its performance (Amoako-Gyampah, 2003; Ghani, Nayan, Ghazali & Shafie, 2010).

Waterman, Peters and Julien (1980) describe micro environment as key internal aspects that need to be aligned within an organization for improved performance or effective change implementation. Micro environment can also be described as those internal controllable forces operating within the organization itself that have a direct impact on an organization's performance. These include financial resources, information and knowledge, firm's capabilities, incentives, organizational demographics such as size, inter-institutional linkages, company's objectives, goals and employees' skills (Freeman & Reid, 2006).

Whereas the operationalization of an organization's micro environment remains varied, there is consensus among scholars that micro environment is a key determinant of an organization's performance. Micro environmental forces provide strengths and weaknesses to the business (Tolbert & Hall, 2009). The aspects forming the micro environment of an organization provide an enabling environment for an organization to achieve its objectives. McKinsey's conceptualization of organizational internal micro-environment highlights strategy, structure, skills, staff, systems, shared values and style as the key micro environmental factors that affect the implementation of an organization's strategies (Waterman et al., 1980). Consequently, firms are said to operate within a social framework of norms, values and assumptions, which eventually influences their performance and competitive advantage (Oliver, 1997). The human capital of the firm refers to the knowledge, skills and abilities that employees possess and use in their work. Studies of employee human capital have found that it directly effects the firm's performance (McKelvie & Davidson, 2009). Performance of an organization is dependent on the degree to which the values of the culture are comprehensively shared (Denison, 1990).

### **Project Performance**

Measuring performance is a critical factor in optimizing performance. Optimal performance is sustainably achieving multiple, often conflicting, objectives under changing conditions. Project performance, on the surface, seems easy to measure; just track time, cost and scope and it's done. But when we look more deeply we find that it is not that simple. Once we determine what we really want to evaluate we can identify the key performance indicators (KPIs) that will tell us whether we have been or are being successful or not and to what degree. Key Performance Indicators give managers the most important performance information to enable them to assess the performance of a project or process. Generally, we look for two to five or so indicators. One is not enough for any complex process and project performance is a complex process. Too many Key Performance Indicators make it difficult to see the big picture clearly. Too few make it difficult to diagnose and correct any issues that get in the way of optimal performance.

Project objectives are to deliver goods and services, within time, cost, quality and other constraints, while satisfying stakeholder expectations. Project deliverables are used as benefits that satisfy the needs of sponsors and clients and other stakeholders. Projects deliver goods and services that are generally used after the project has ended to achieve business objectives such as reducing costs and risks, increasing revenues, etc. Projects are initiated to achieve business objectives. Project objectives are a means to that end (Saks, 2006). When measuring project success, particularly when the project is on-going, it is necessary to focus on the project objectives and performance against schedule and budget estimates. In most cases, we cannot measure a project's success in achieving overall business objectives until well after the project has ended. Further, there are factors that are outside of the control of the project that influence benefits realization. For example, in product development the performance of sales and

marketing, market conditions, impact the degree to which expected benefits are achieved. Likewise, in Industrial Training, getting competent instructors is key to delivering the required skill sets.

Performance measurement during a project helps to know how things are going, so that we can have early warning of problems that might get in the way of achieving project objectives and so that we can carry out any corrective actions and manage expectations. A secondary benefit is that the information so gathered can be used to improve the planning and performance of future projects. Typical Key Performance Indicators are schedule and budget compliance, number of scope changes, number of issues and defects, and stakeholder satisfaction. There is broad agreement that schedule and budget compliance during the course of the project are essential indicators. Projects must end and completion time is often closely linked to the business objectives that drove the project's initiation. Tracking to a budget in dollars and/or resource time is a key indicator because it gives us a sense of whether we are implementing as we had expected to perform. In most cases, project sponsors and clients are cost sensitive of how much they will spend on the project and they want to know it before the project is over.

Assessing the degree to which the project is tracking to its schedule and budget provides an indication of whether the team is going to meet stakeholder expectations (a critical objective in any project). It highlights the need to look into the causes of variance. Causes may be poor estimating, loss of resources, price changes, underperforming resources, too many changes, errors, omissions and defects, etc. Once the causes are understood a course of action can be decided, either accepting things as they are or making changes to remediate any problem that has been identified (Paradise, 2007). As in earned value management there is need to combine schedule and budget perspectives to get a true sense of overall project health. Do not rely on these measures independent of one another, a project can be under budget because it is behind schedule, because prices have gone down, because performers have used clever means to get their work done less expensively, or for other reasons. A stakeholder who is budget oriented can easily get the wrong idea of project health by looking at stand-alone budget data.

To effectively measure performance, it is necessary to plan so that tasks are defined in terms of specific deliverables with clearly stated requirements. The availability of an accepted deliverable is the only measure of the successful completion of a task. It is all too easy to deliver something that doesn't work or meet requirements. Agile project approaches use Velocity as a KPI to measure the team's rate of progress. Velocity is the number of features (or use cases, components, deliverables, etc.) delivered versus the number planned. This is clearly measuring against schedule but highlights the need for linking tasks to concrete, useful deliverables. Whether or not you are using an Agile approach, it is a best practice to ensure that task completion is defined as the delivery of a specific and meaningful deliverable.

Other indicators, aside from schedule and budget performance, monitor the number and types of issues, changes, and/or defects and the degree to which they are quickly addressed. Issues are questions, disputes or problems that arise during a project and that must be addressed to satisfy stakeholders and ensure that the project is heading in the right direction. Issues vary in priority, complexity and the amount of time and effort they require. Issues are inevitable, plan for them and track the effort required to address them against your estimate. Scope changes result from requests for change in requirements. Changes require analysis, decision making and execution. Scope changes, particularly those that occur late in project life, are disruptive. When planning the project, it is best to estimate time, effort and cost to create a fund for expected changes and then to monitor actuals against this fund. Defects are discovered when testing is performed to validate deliverables. Defects require effort to determine their cause and correct or accept them. Again, it is best to estimate defects and their impact in duration and cost and to track against this estimate (Saks, 2006).

Each of these is a KPI. High instances of each indicate that there will be project schedule and budget slippage. Issues, changes and defects should be tracked and aged to give management a sense of what is happening outside of the schedule and budget. One of the most important and underutilized project performance indicators is stakeholder satisfaction. During the course of a project, assessing the degree to which clients, sponsors and performers are satisfied with responsiveness to their issues, the sense that progress is being made, the degree to which they are involved, the health of relationships and their general feeling regarding the project's performance.

### **National Industrial Training Authority (NITA)**

The National Industrial Training Authority (NITA) is a state corporation established under the Industrial Training (Amendment) Act of 2011. The Authority has five industrial training centers spread across the country. NITA regulates industrial training in Kenya that dates back to 1925 when the native industrial training depots (NITDS) were introduced by the colonial Government. In 1959, Industrial training ordinance was enacted to regulate apprentice and indentured learners in industry. In 1963, the Industrial Training ordinance became the Industrial Training ACT, Cap 237 which was amended in 1971 to establish the training levy fund and the National Industrial Training council (NITC) which had Directorate of Industrial Training (DIT) as its secretariat. The DIT was in 2011 successfully transformed into The National Industrial Training Authority (NITA) a semi-independent Government Agency with the National Industrial Training Board (NITB) replacing the National Industrial Training council. The National Industrial Training authority (NITA) is mandated to promote the highest standards in the quality and efficiency of Industrial Training in Kenya and ensure adequate supply of properly trained manpower at all levels in industry. The Authority regulates Industrial training by collection of the training levy, registration and accreditation of industrial training providers, coordination and overseeing of Industrial training and processing of reimbursement of industrial training cost claims. The

Authority is headquartered in Nairobi but has Industrial Training Centres (ITCs) at Kisumu (NITA Kisumu), Mombasa, (NITA Mombasa), Athi River (NITA Athi River). Two other Centres stationed at the headquarters in Nairobi are NITA Textile Training Institute (NTTI) and NITA Nairobi. The ITCs host a number of industry oriented courses targeting workers in the formal and informal sectors. The courses include short and long term programmes (proficiency courses, skill upgrading courses, artisan courses, and tailor made courses). The Centers provide full board accommodation, training rooms, workshops and recreational facilities. The responsibilities of NITA include; Management and Supervisory training; Apprenticeship Training, Craft, Technician (Skill-Upgrading), Indentured learners, National Industrial Attachment Programmes, Curriculum development, Trade testing and certification, Inspection of training providers; Administration of Industrial Training Levy Fund and Administration of the five Industrial Training Centers.

## **STATEMENT OF THE PROBLEM**

Projects operate in a rapidly changing and dynamic micro-environment. The Micro-environment has serious influence on the implementation and cost of the project. Micro-environmental influence in project occurs through complexity, uncertainty, competition for resources, flexibility, and rapid technological changes. In order to achieve the goal, the project must continually adapt to its micro-environment, which is constantly changing. Failure to adequately adapt to the environment is a major cause due to which project fails (Ishwarand Santosh, 2011). The micro-environment is located within the project and can be controlled by it. Internal micro-environment dictates what a project can do. Knowing the success or outcome on the performance of a project has a great deal of relevance to knowing the optimum practices. The effort put into the measurement of project performance in the country has portrayed little or no help in this direction. The possible, simple and most understanding way of measuring project performance with hard data is therefore needed in this regard. Performance of group of projects managed by an organization may differ from performance of another group of projects with similar characteristics but managed by another organization. The kind of Project Management practices carried out by the different organizations for achieving project success may also influence variation in the performance of the projects. The significance of such differences in performance of the groups of projects is therefore necessary for determination of the characteristics of influential PM practices. Certain PM practices adopted may not necessarily have a significant satisfactory influence on projects performance whilst some have. There would therefore be the need to promote optimum practices and a second look taken at others that confront the success of industrial training in Kenya under NITA supervision.

## **GENERAL OBJECTIVE**

The general objective of this study was to examine the micro-environment variables influencing industrial training projects in Kenya with a case study of a NITA project

## **SPECIFIC OBJECTIVES**

1. To establish the influence of project planning on implementation of NITA Industrial training projects
2. To study the influence of top management support on implementation of NITA Industrial training projects.
3. To examine the influence of communication modes on implementation of NITA Industrial training projects
4. To assess the influence of Information Technology on implementation of NITA Industrial training projects.

## **THEORETICAL REVIEW**

### **Theory of Reasoned Action**

The theory of reasoned action (TRA) was developed by Martin Fishbein and Icek Ajzen in 1975, however reviews have been done. The theory was born largely out of frustration with traditional attitude–behavior research, much of which found weak correlations between attitude measures and performance of volitional behaviours (Householder & Greene, 2002). The components of theory of reasoned action (TRA) are three general constructs: behavioural intention (BI), attitude (A), and subjective norm (SN). TRA suggests that a person's behavioural intention depends on the person's attitude about the behaviour and subjective norms ( $BI = A + SN$ ). If a person intends to do a given behaviour then it is likely that the person will do it.

Behavioural intention measures a person's relative strength of intention to perform behaviour. Attitude consists of beliefs about the consequences of performing the behaviour multiplied by his or her evaluation of these consequences (Fishbein & Ajzen, 2010). Subjective norm is seen as a combination of perceived expectations from relevant individuals or groups along with intentions to comply with these expectations. In other words, "the person's perception that most people who are important to him or her think he should or should not perform the behaviour in question" (Fishbein & Ajzen, 2010).

Fishbein and Ajzen (2010) suggest, however, that attitudes and norms are not weighted equally in predicting behaviour. Indeed, depending on the individual and the situation, these factors might have very different effects on behavioural intention; thus a weight is associated with each of these factors in the predictive formula of the theory. For example, you might be the kind of a person who cares little for what others think. If this is the case, the subjective norms would carry little weight in predicting your behaviour (Miller, 2005). The theory of reasoned action has "received considerable and, for the most part, justifiable attention within the field of consumer behaviour, not only does the model appear to predict consumer intentions and behaviour quite well, it also provides a relatively simple basis for identifying where and how to target consumers' behavioural change attempts (Hartwick & Warshaw, 1988).

## **Resource- Based Theory (RBT)**

While Mintzberg and his like-minded contested the classic strategy theory primarily with respect to the strategy formation process, another field of scholars questioned the content of especially the industrial analysis approach to strategy prescribed by Porter (1980), where profit is explained by choice of industry and the gaining of market power. These scholars sought to explain superior performance due to the firms' resources and their ability to utilize them. The resource-based view (RBV) is a business management tool used to determine the strategic resources available to a company. The fundamental principle of the RBV is that the basis for a competitive advantage of a firm lies primarily in the application of the bundle of valuable resources at the firm's disposal (Wernerfelt, 1984).

To transform a short-run competitive advantage into a sustained competitive advantage requires that these resources are heterogeneous in nature and not perfectly mobile (Peteraf, 1993). Effectively this translates into valuable resources that are neither perfectly imitable nor substitutable without great effort. According to Barney (1983), a firm's resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc; controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness. A subsequent distinction, made by Amit & Schoemaker, (1993), is that, the encompassing construct previously called "resources" can be divided into resources and capabilities. In this respect, resources are tradable and non-specific to the firm, while capabilities are firm-specific and are used to engage the resources within the firm, such as implicit processes to transfer knowledge within the firm (Makadok, 2001).

Makadok, (2001) emphasizes the distinction between capabilities and resources by defining capabilities as "a special type of resource, specifically an organizationally embedded non-transferable firm-specific resource whose purpose is to improve the productivity of the other resources possessed by the firm". "Resources are stocks of available factors that are owned or controlled by the organization, and capabilities are an organization's capacity to deploy resources". Essentially, it is the bundling of the resources that builds capabilities. According to Peteraf (1993) the key points of the theory are, to identify the firm's potential key resources and then evaluate whether these resources fulfill the following criteria referred to as valuable, rare, In-imitable and Non-substitutable (VRIN).

## **RESEARCH METHODOLOGY**

### **Research design**

This study adopted a descriptive survey design. According to Gay (1981), a descriptive research is a process of collecting data in order to answer questions concerning the status of the subjects in the study. Descriptive survey designs were used to allow researchers to gather information, summarize, present and interpret for the purpose of clarification (Orodho, 2002). Borg and Gall

(1989) noted that descriptive survey research is intended to produce statistical information about aspects of education that interest policy makers and educators. The survey research was therefore useful because it was economical to take a sample of the population to generalize results for the entire population. Descriptive survey design was employed because it guaranteed breadth of observation and also provided for the accurate descriptive analysis of characteristics of a sample which was used to make inferences about population (Kerlinger, 1986). Descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2003). It can be used when collecting information about people's attitudes, opinions, habits or any of the variety of education or social issues (Orodho & Kombo, 2002). Descriptive survey design also enabled the researcher to obtain both qualitative and quantitative information from respondents which generally was a representative sample from a specific population. This became cost effective and was feasible in terms of time and other resources.

### **Target population**

The study targeted the firms which had benefited from industrial training projects undertaken by NITA between 2012 and 2015. Therefore, the accessible population was 250 firms. The respondents were the training managers in these firms.

### **Sample Size and Sampling Procedure**

According to Mugenda (2008) in a survey study, a researcher can take 10 percent to 30 percent of the total population as a suitable sample. In this study, therefore 30 percent of the 250 firms practicing industrial training through NITA were 75 companies, spread across the country. The distribution was as follows, Nairobi 15, Coast 15, Western region, Kisumu, Kericho and Kakamega 15, North Rift region of Nakuru and Eldoret 10, Central Kenya 10, and Eastern Kenya 10. The study used purposive sampling views from Training Managers. The list of sampled companies that have benefited from the NITA industrial training project are attached in Appendix II.

### **Research Instruments**

In this study, questionnaires and interview schedules were used. The instruments were used to complement each other and to give a deeper and wider exploration into research perspective which would give the research more quality. The use of questionnaire as a tool in this research was quite efficient because through them the researcher was able to obtain personal views from the respondents. In this questionnaire, structured or closed ended questions were used. Closed ended questions were used with the aim of helping the researcher to obtain the personal views of the respondents. The higher the score the more positive the opinion towards the subject, with the exception of questions which were negative and could show a lower score to indicate a more positive opinion. The questionnaires were administered to the Training managers.

## **Data Collection Procedures**

Before data collection, the researcher sought permission from Kenyatta University to enable him get a research permit from the National Commission for Science, Technology and Innovation (NACOSTI) under the Ministry of Education, Science and Technology (MOEST). After acquiring the permit, the researcher further sought permission from the Director General, National Industrial Training Authority (NITA), to collect data from NITA. This was done before the actual collection of data. The questionnaires were administered by the researcher to the respondents in an effort of minimizing biasness, and to assure confidentiality through a drop and pick later method. The questionnaires had both open and close-ended questions. The closed ended questions were used to test the rating of various attributes and this helped in reducing the number of related responses in order to obtain more varied responses. The open-ended questions provided additional information that might not have been captured in the close-ended questions. The questionnaire was carefully designed and tested with a few members of the population for further improvements. This was done in order to enhance its validity and accuracy of data to be collected for the study.

## **Data Analysis Techniques**

Study data was organized, presented, analyzed and interpreted using descriptive statistical techniques. The descriptive statistics that was used to summarize data included percentages and frequencies. The influence of micro-environment variables on delivery of effective industrial training was measured through measures on a Likert Scale whose weights was analyzed and weighted averages enumerated which was used to show the influence levels of the micro-environmental factors. The data was analyzed using the Statistical Package for Social Sciences (SPSS version 22.0). In addition, the researcher carried out a multiple regression analysis so as to determine the relationship between micro environment variables and implementation of industrial training projects in Kenya.

The regression equation ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$ ).

Where: Y = Implementation of industrial training projects; X1 = Project planning; X2 = Top management support; X3 = Communication modes; X4 = Information technology;  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$  = Regression Coefficients;  $\epsilon$  = Error term.

The data was broken down into the different aspects of relationship between micro variables and performance of NITA industrial training projects in Kenya. This offered a quantitative and qualitative description of the objectives of the study.

## **RESEARCH RESULTS**

The objective of this study was to evaluate the influence of internal organizational micro-environment on performance of industrial training projects regulated by NITA in Kenya. The

specific objectives were to establish the influence of project planning on implementation of NITA Industrial training projects, to study the influence of top management support on implementation of NITA Industrial training projects, to examine the influence of communication modes on implementation of NITA Industrial training projects and to assess the influence of Information Technology use on implementation of NITA Industrial training projects.

### **Project Planning and Project implementation**

The study realized that project planning is mainly facilitated by micro-environment which also comes in handy in project formulation, implementation and ultimately performance. It was indicated that the firms first determined the mission of a project before formulation at a mean of 3.07 and standard deviation of 0.861, the objectives of the projects were set to guide project planning at a mean of 3.34 and standard deviation of 0.901, the project strategies were clearly set out to counter planning at a mean of 2.7 and standard deviation of 0.810, policies guiding the acquisition and collaboration of resources to achieve organizational goals are set out at planning stage by the firms as indicated by a mean of 3.5 and standard deviation of 0.891 while alternative project options are formulated before project execution at a mean of 2.97 and standard deviation of 0.764. The project team identified future resource requirements to cushion miscellaneous expenses as indicated by a mean of 3.34 and standard deviation of 0.844 while project timelines are predetermined on planning as indicated by a mean of 3.43 and standard deviation of 0.768. This indicated that project planning was above board for the NITA industrial training projects being undertaken in Kenya.

### **Top Management Support and Project Implementation**

The study established that top management was the driver behind the initiation of the industrial training project in Kenya at a mean of 3.5 and standard deviation of 0.911 while it was indicated that the top management was the initiator of the project charter and validation of recovery time objectives (RTOs) and recovery point objectives (RPO) at a mean of 3.29 and 3.01 respectively. The top management however was below average in terms of attendance of kick-off meetings which in some organizations they never participated, formulation of final selection of the project continuity and back-up strategy, participation during emergency procedure drills and success planning exercise. This indicates that the support from top management among the firms with industrial training projects being regulated by NITA did not meet the expectations.

### **Communication and Project Implementation**

It was established that project communication was still below average with only use of social media communications for project team members for regular updates being average or moderate. Project management teams were found not to consult sufficiently with the team members on industrial project implementation and planning to promote cohesion and accountability at a mean of 2.71. The deliverables were also not adequately communicated and discussed to the team

members as indicated at a mean of 2.67 which would compromise project performance. Regular update meetings to put each member and project performance in check were also not to expectations at a mean of 2.74. Project expectations were not well set and communicated to those involved in most firms which made some team members not to meet project expectations. Generally, project communication, upward, downward and horizontal was below expectations and therefore needed improvement.

### **Project Information Technology and Industrial Training Project Implementation**

It was realized that at NITA project IT programs were prepared in time in consultation with the project teams by most firms sampled. Similarly project IT programs were often done to ensure the project is successfully implemented at a mean of 2.79 while most firms' project management teams ensured the project IT programs were adhered to. However, application of contingency to ensure cost overruns and slippages are handled in time was not up to date in most firms which makes projects unsuccessful same to handling of project problems in a timely manner to ensure the project sails well and is completed in time. This is a great challenge to project planning, formulation, implementation and subsequent evaluation. The IT programs gave a guideline and if not well followed lead to cost overruns and compromised implementation which has marred most government projects and more especially industrial training projects. It was also realized that the management policies also to a great extent influenced the nature in which a project was executed in an organization. The firms had different management systems and policies which determined how the project team members coordinated and collaborated to realize the deliverables. Weak internal controls lead to cost overruns, embezzlement of project funds, corruption and general project quality compromise. Strong internal financial controls ranging from accounts, audit to general finance promote diligent use of funds, accountability and transparency which contributes to project success.

### **REGRESSION ANALYSIS**

**Table 1: Coefficient of Determination ( $R^2$ )**

Model	R	R Square	Adjusted R Square	Std. Error	Sign.
1	0.920	0.846	0.7810	0.80139	0.04

The four independent variables that were studied, explain 84.6% of the performance of NITA industrial training projects as represented by the  $R^2$ . This therefore means that other factors not studied in this research contribute 16.0% of the performance of industrial training projects in Kenya. Coefficient of determination findings as explained by the P-value of 0.004 which is less than 0.05 (significance level of 5%) confirms the existence of correlation between the independent and dependent variables.

**Table 2: Multiple Regression Analysis**

	Unstandardized Coefficients B	Standardized Coefficients Std. Error	T Beta	Sig.
(Constant)	1.334	0.311	5.750	
Project planning	0.244	0.164	0.193	2.650 .0000
Top management support	0.296	0.0481	0.0327	3.534 .0027
Communication modes	0.398	0.0714	0.2325	3.686 .0012
Information Technology	0.218	0.0501	0.0484	2.450 .0010
				.0038

In addition, the researcher conducted a multiple regression analysis so as to determine the relationship between performance of NITA projects and the four variables. As per the SPSS generated table, the equation ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$ ) becomes:

$$Y = 1.334 + 0.244 X_1 + 0.296X_2 + 0.398X_3 + 0.218X_4$$

Where: Y = performance of NITA projects in Kenya, X1 = project planning, X2 = top management support, X3 = communication modes and X4 = Information Technology.

According to the regression equation established, taking all factors (project planning, top management support, communication modes and information technology) constant at zero, the performance of NITA projects will be 1.334. Further, taking all other independent variables at zero, a unit increase in project planning will lead to a 0.244 increase in project performance. A unit increase in top management support will lead to a 0.296 increase in project performance; a unit increase in communication modes use will lead to a 0.398 increase in project performance while a unit increase in information technology use will lead to a 0.218 increase in project performance. This infers that communication within the project cycle contributed more to the effective implementation of NITA projects followed by top management support.

At 5% level of significance and 95% level of confidence, communication modes had a 0.0010 level of significance, top management support had a 0.0012 level of significance, project planning showed a 0.0027 level of significant, while information technology showed a 0.0038 level of significance. Hence effective communication modes use is the most significant factor in contributing to the performance of NITA projects in Kenya. The t critical at 5% level of significance at k = 4 degrees of freedom is 2.315. Since all t calculated values were above 2.315 then all the variables were significant in explaining the project performance of NITA industrial training projects.

## **CONCLUSIONS**

The findings indicated that a majority of the firms which run industrial training projects in Kenya and regulated by National Industrial Training Authority had weak internal micro-environment controls. Industrial projects were not well planned in most firms which compromised their performance. Planning is an internal affair and therefore the management is to blame for poor planning since it directly affects implementation of any project. The top management support for industrial training projects was average in project initiation and validation while there was poor attendance of kick-off meeting by management, below average formulation of final selection of the project continuity back-up strategy which ultimately contributes to project failure. The management was also found to be poor in participation during the emergency drills and success planning exercise. This contributed significantly to poor performance of NITA regulated industrial training projects among the firms sampled. Project scheduling was found to be poor especially on application of contingency that ensures cost overruns and slippages are handled in time. Communication among project team members and management was also not up to date. The project management was found not to consult sufficiently with team members especially regarding deliverables, project updates and project expectations to the entire team involved. This to a great deal influenced negatively the performance of the Industrial training projects. However, not all the indicators of internal environment were out of place but only to a small extent which leaves a significant room for improvement.

## **RECOMMENDATIONS**

The study recommends that firms conducting industrial training projects and regulated by NITA should embrace effective, efficient and strong internal micro-environment mechanisms and practices to enhance their project implementation in terms of return on investments, productivity, cost management, cycle time, customer satisfaction, schedule performance, employee satisfaction, and alignment with strategic business goals. The study recommends further that, the firms should work closely with NITA and other institutions that provide complementary services such as universities, colleges and the Ministry of Labor both in the County government the National government for their benefit of ensuring all training projects are successful and that all companies have sufficient qualified workforce at all levels of industry.

## **REFERENCES**

- Arguinis, H. and Kraiger, K. (2009), '*Benefits of training and development for individuals and teams, organizations, and society*', Annual Review of Psychology, 60, 451–74.
- Arthur, W., Bennett, W., Edens, P. S. and Bell, S. T. (2003), '*Effectiveness of training in organizations: a meta-analysis of design and evaluation features*', Journal of Applied Psychology, 88,234–45.
- Awoniyi, E. A., Griego, O. V. and Morgan, G. A. (2002), '*Person-environment fit and transfer of training*', International Journal of Training and Development, 6, 25–35.

- Baldwin, T. T. and Ford, J. K. (1988), '*Transfer of training: a review and directions for future research*', *Personnel Psychology*, 41, 63–105.
- Baldwin, T. T., Ford, K. J. and Blume, B. D. (2009), '*Transfer of training 1988–2008: an updated review and agenda for future research*', *International Review of Industrial and Organizational Psychology*, 24, 41–70.
- Bandura, A. (1977), *Social Learning Theory* (Englewood Cliffs, NJ: Prentice Hall).
- Bandura, A. (1982), '*Self-efficacy mechanism in human agency*', *American Psychologist*, 37, 122–47.
- Blume, B. D., Ford, J. K., Baldwin, T. T. and Huang, J. L. (2010), '*Transfer of training: a meta-analytic review*', *Journal of Management*, 39, 1065–105.
- Burke, L. A. and Hutchins, H. M. (2007), '*Training transfer: an integrative literature review*', *Human Resource Development Review*, 6, 263–96.
- Burke, L. and Hutchins, H. (2008), '*A study of best practices in training transfer and proposed model of transfer*', *Human Resource Development Quarterly*, 19, 107–28.
- Burke, M. J., Chan-Serafin, S., Salvador, R., Smith, A. and Sarpy, S. A. (2008), '*The role of national culture and organizational climate in safety training effectiveness*', *European Journal of Work and Organizational Psychology*, 17, 133–52.
- Cheng, E. W. L. and Hampson, I. (2008), '*Transfer of training: a review and new insights*', *International Journal of Management Reviews*, 10, 327–41.
- Cheng, E. and Ho, D. (2001), '*A review of transfer of training studies in the past decade*', *Personnel Review*, 30, 102–18.
- Chiaburu, D. S. and Lindsay, D. R. (2008), '*Can do or will do? The importance of self-efficacy and instrumentality for training transfer*', *Human Resource Development International*, 11, 199–206.
- Chiaburu, D. S. and Marinova, S. V. (2005), '*What predicts skill transfer? An exploratory study of goal orientation, training self-efficacy and organizational supports*', *International Journal of Training and Development*, 9, 110–23.
- Clarke, N. (2002), '*Job/work environment factors influencing training effectiveness within a human service agency: some indicative support for Baldwin and Ford's transfer climate construct*', *International Journal of Training and Development*, 6, 146–62.
- Colquitt, J. A., LePine, J. A. and Noe, R. A. (2000), '*Toward an integrative theory of training motivation: a meta-analytic path analysis of 20 years of research*', *Journal of Applied Psychology*, 85, 678–707.
- Cromwell, S. E. and Kolb, J. A. (2004), '*An examination of work-environment support factors affecting transfer of supervisory skills training to the workplace*', *Human Resource Development Quarterly*, 15, 449–71.
- Facteau, J. D., Dobbins, G. H., Russel, J. E. A., Ladd, R. T., Kudisch, J. D. (1995), '*The influence of general perceptions of the training environment on pre-training motivation and perceived training transfer*', *Journal of Management*, 21, 1–25.

- Ford, J. K. and Weissbein, D. (1997), '*Transfer of training: an updated review*', *Performance and Instruction Quarterly*, 10, 22–41.
- Ford, J., Smith, E., Weissbein, D., Gully, S. and Salas, E. (1998), '*Relationships of goal orientation, meta-cognitive activity, and practice strategies with learning outcomes and transfer*', *Journal of Applied Psychology*, 8, 218–33.
- Georgenson, D. L. (1982), '*The problem of transfer calls for partnership*', *Training and Development Journal*, 36, 75–8.
- Gilpin-Jackson, Y. and Bushe, G. R. (2007), '*Leadership development training transfer: a case study of post-training determinants*', *Journal of Management Development*, 26, 980–1004.
- Goldman, D. (2000),
- Goldstein, I. L. and Ford, J. K. (2002), *Training in Organizations*, 4th edn (Belmont, CA: Wadsworth Thompson Learning).
- Hawley, J. D. and Barnard, J. K. (2005), '*Work environment characteristics and implications for training transfer: a case study of the nuclear power industry*', *Human Resource Development International*, 8, 65–80.
- Heimbeck, D., Frese, M., Sonnentag, S. and Keith, N. (2003), '*Integrating errors into the training process: the function of error management instructions and the role of goal orientation*', *Personnel Psychology*, 56, 333–61.
- Holladay, C. and Quiñones, M. (2003), '*Practice variability and transfer of training: the role of self-efficacy generality*', *Journal of Applied Psychology*, 88, 1094–103.
- Hutchins, H. M. and Burke, L. A. (2007), '*Identifying trainers' knowledge of training transfer research findings – closing the gap between research and practice*', *International Journal of Training and Development*, 11, 236–64.
- IBM (2008), *Unlocking the DNA of the Adaptable Workforce, the IBM Global Human Capital Study* (Milwaukee, WI: IBM).
- Judge, T. A., Jackson, C. L., Shaw, J. C., Scott, B. A. and Rich, B. L. (2007), '*Self-efficacy and work-related performance: the integral role of individual differences*', *Journal of Applied Psychology*, 92, 107–27.
- Kanfer, R. and Ackerman, P. L. (1989), '*Motivation and cognitive abilities: an integrative/aptitude-treatment interaction approach to skill acquisition*', *Journal of Applied Psychology*, 74, 657–90.
- Keith, N. and Frese, M. (2005), '*Self-regulation in error management training: emotion control and meta-cognition as mediators of performance effects*', *Journal of Applied Psychology*, 90, 677–91.
- Keith, N. and Frese, M. (2008), '*Effectiveness of error management training: a meta-analysis*', *Journal of Applied Psychology*, 93, 59–69.
- Kontoghiorghes, C. (2001), '*Factors affecting training effectiveness in the context of the introduction of a new technology – A US case study.*' *International Journal of Training and Development*, 5, 248–60.

- Kraiger, K. (2003), *Perspectives on Training and Development*. Handbook of Psychology: Volume 12, Industrial and Organizational Psychology (Hoboken, NJ: Wiley), pp. 171–92.
- Lim, D. H. and Johnson, S. D. (2002), ‘*Trainee perceptions of factors that influence learning transfer*’, *International Journal of Training and Development*, 6, 36–48.
- Locke, E. and Latham, G. (2002), ‘*Training a practically useful theory of goal setting and task motivation: a 35-year odyssey*’, *American Psychologist*, 57, 705–17.
- Marler, J. H., Liang, X. Y. and Dulebohn, J. H. (2006), ‘*Training and effective employee information technology use*’, *Journal of Management*, 32, 721–43.
- Merriam, S. B. and Leahy, B. (2005), ‘*Learning transfer: a review of the research in adult education and training*’, *PAACE Journal of Lifelong Learning*, 14, 1–24.
- Michalak, D. F. (1981), ‘*The neglected half of training*’, *Training and Development Journal*, 35, 22–8.
- Naquin, S. S. and Holton, E. F. III (2002), ‘*The effects of personality, affectivity, and work commitment on motivation to improve work through learning*’, *Human Resource Development Quarterly*, 13, 357–76.
- National Safety Council (2010), *Summary from Injury Facts*, 2010 Edition.
- Neisser, U., Boodoo, G., Bouchard, T. J., Boykin, W. A., Brody, N., Ceci, S. J. et al . (1996), ‘*Intelligence: known and unknowns*’, *American Psychologist*, 51, 77–101.
- Ordoñez, L., Schweitzer, M. E., Galinsky, A. D. and Bazerman, M. H. (2009), ‘*Goals gone wild: How goals systematically harm individuals and organizations*’, *Academy of Management Perspectives*, 23, 6–16.
- Paradise, A. (2007), *State of the Industry: ASTD’s Annual Review of Trends in Workplace Learning and Performance* (Alexandria, VA: ASTD).
- Pfeffer, J. (1998), ‘*Seven practices of successful organizations*’, *California Management Review*, 40, 96–124.
- Robbins, S. P. and Judge, T. A. (2009), *Organizational Behavior* (Upper Saddle River, NJ: Pearson Prentice Hall).
- Rouiller, J. Z. and Goldstein, I. L. (1993), ‘*The relationship between organizational transfer climate and positive transfer of training*’, *Human Resources Development Quarterly*, 4, 377–90.
- Saks, A. M. and Belcourt, M. (2006), ‘*An investigation of training activities and transfer of training in organizations*’, *Human Resource Management*, 45, 629–48.
- Salas, E. and Stagl, K. C. (2009), ‘*Design Training Systematically and Follow the Science of Training*’, in E. Locke (ed.), *Handbook of Principles of Organizational Behavior: Indispensable Knowledge for Evidence-Based Management*, 2nd edn (Chichester: John Wiley & Sons), pp. 59–84.
- Salas, E., Wilson, K., Priest, H. and Guthrie, J. (2006), ‘*Design, Delivery, and Evaluation of Training Systems*’, in G. Salvendy (ed.), *Handbook of Human Factors and Ergonomics*, 3rd edn (Hoboken, NJ: John Wiley & Sons), pp. 472–512.

- Taylor, P. J., Russ-Eft, D. F. and Chan, D. W. L. (2005), '*A meta-analytic review of behavior modeling training*', *Journal of Applied Psychology*, 90, 692–709.
- Tziner, A., Fisher, M., Senior, T. and Weisberg, J. (2007), '*Effects of trainee characteristics on training effectiveness*', *International Journal of Selection & Assessment*, 15, 2, and 167–74.
- Van den Bossche, P., Segers, M. and Jansen, N. (2010), '*Transfer of training: the role of feedback in supportive social networks*', *International Journal of Training & Development*, 14, 81–94.
- Van der Klink, M., Gielen, E. and Nauta, C. (2001), '*Supervisory support as a major condition to enhance transfer*', *International Journal of Training and Development*, 5, 52–63.
- Van Wijk, R., Jansen, J. J. P. and Lyles, M. A. (2008), '*Inter- and intra-organizational knowledge transfer: a meta-analytic review and assessment of its antecedents and consequences*', *Journal of Management Studies*, 45, 830–53.
- Vancouver, J. B. and Kendall, L. N. (2006), '*When self-efficacy negatively relates to motivation and performance in a learning context*', *Journal of Applied Psychology*, 91, 1146–53.
- Velada, R., Caetano, A., Michel, J. W., Lyons, B. D. and Kavanagh, M. J. (2007), '*The effects of training design, individual characteristics and work environment on transfer of training*', *International Journal of Training and Development*, 11, 282–94.
- Verburg, R., Den Hartog, D. N. and Koopman, P. L. (2007), '*Configurations of human resource management practices: a model and test of internal fit*', *International Journal of Human Resource Management*, 18, 184–208