

Addressing the Skills Shortage in South Africa: A Case Study of a Sector Education and Training Authority

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Abstract—Training and development are important in ensuring that the goals of an organisation (and nation) become a reality. However, since depending on business to voluntarily address the skills agenda will not necessarily achieve the desired results, governments have to take responsibility and aggressively drive the training and development agenda. South Africa has enacted various legislations to address the skills development agenda, one such being the Skills Development Act which mandated the establishment of Sector Education and Training Authorities. This paper explored the effectiveness of one, namely, the Fibre Processing and Manufacturing Sector Education and Training Authority, in addressing the skills shortage in South Africa, by surveying a non-probability sample of training managers, SETA officials and employees from the Department of Agriculture Forestry and Fisheries based in Pietermaritzburg, South Africa. It became evident that: the Performance Management and Development System and skills audit are the most common methods used to identify training needs; the existence of the Fibre Processing and Manufacturing Sector Education and Training Authority has not been well communicated; the Department of Agriculture Forestry and Fisheries complies with the legislation, by submitting Workplace Skills Plans annually; however, the Department of Agriculture Forestry and Fisheries does not invest enough on employee development, thus contravening the Skills Development Act No. 97 of 1998. Given the aforementioned, strategies are recommended for improvement of the situation in the sector.

Keywords— Skills shortage; Skills development; Education and Training; Sector education and Training authority

I. INTRODUCTION

Sector Education Training Authorities (SETAs) were established to support the various sectors in terms of skills training by inter alia, making funds available for training, for example mandatory and discretionary funds for those employers who comply with legislation relevant to the establishment of the SETAs. The main functions of a SETA include ensuring that South Africans are equipped with the necessary skills that will allow them to compete in the global market. Given the country's background, South Africa faces challenges of high levels of unemployment as well as the effects of the HIV/AIDS pandemic which depletes skills. For South Africa to be able to become a competitive player in the global market, it has to address these challenges.

The Skills Development Act No.97 of 1998 [6] which was promulgated to build the skills of the South African workforce

requires each sector to compile a Sector Skills Plan (SSP), which is informed by the Workplace Skills Plan (WSP), where each sector has to identify scarce and critical skills. Each SETA compiles its SSP based on information contained in the WSP, and once the SSP has been compiled, SETAs encourage companies to address the scarce and critical skills through offering them discretionary and mandatory grants. The Skills Development Act No.97 of 1998 [6] encourages companies to promote occupation-based learning programs, namely, those which addresses occupation linked training. One way of doing this is through learner ships, whereby employees that enroll in the learning programs need to enter into an agreements with the employer and the training service provider. In these agreements, the learner commits to attending and completing the learning program. A SETA has to perform quality assurance functions delegated to it by the Quality Council for Trades Occupations (QCTO), liaise with provincial offices, Labour Centres and relevant education bodies to improve information about placement opportunities.

The forestry sector contributes greatly to the economy of the country for example, in 2003 the components of the forestry value chain contributed an estimated R12.2 billion to the Gross Domestic Product (GDP) and the industry employed an estimated 170 000 people (permanent, contract and informal workers), a large proportion of which are poorly skilled and concentrated in rural areas, where there is also high unemployment. The contribution of the sector amounts to 1% of SA's total GDP and, the job creation equated to 1.4% of the total formal employment, which is comparable with other large sectors. In 2012, the Minister of Higher Education and Training commissioned a review of the performance of all SETAs which resulted in restructuring and reorganizing the SETAs. The Forest Industry Education and Training Authority (FIETA) was affected by the realignment which led to it merging with the Media, Advertising, Publishing, Printing and Packaging (MAPPP) SETA and the Clothing, Textile, Footwear and Leather (CTFL) SETA, to form the Fibre Processing and Manufacturing (FP&M) SETA [29]. This restructuring influenced this paper in that it raised questions about the effectiveness of the FP&M SETA in addressing scarce and critical skills in the forestry sector and, how government views the contributions which are being made by this SETA. Chapter 3, Section 10 of the Skills Development Act No.97 of 1998 [6] which deals with the functions and responsibilities of the Sector Education and Training Authorities (SETA) outlines the fundamental role as being to

assist organizations which belong to the sector through skills development.

With the above in mind, this study attempts to determine the effectiveness of the FP&M SETA in addressing the skills shortages in South Africa. More specifically, the objectives of the study on which this paper is written were to determine how effective the FP&M SETA has been in addressing scarce and critical skills in the forestry sector in South Africa; ascertain the role of stakeholders in ensuring that there is synergy in implementing and coordinating all the activities in the forestry sector as dictated by the SSP; and verify whether the FP&M SETA adheres to the prescriptions of the NSDS 111.

In order to contextualize the research, the generic literature on training and development is followed by a brief discussion of relevant legislation which governs the mandate of the SETAs in South Africa and, thereafter findings for the exploratory assessment of the specific SETA is reported.

II. LITERATURE REVIEW

A. Training and Development

[10] Asserts that over the past few years the field of education, training and development (ETD) has been developed in a significant manner. Organizations have come to realize that they need people who have the requisite skills, since skilled people will benefit both these organizations and the country, which will then lead to economic growth. Notwithstanding all the positive developments and the emphasis placed on skills development in South Africa with the aim of addressing the skills shortages, ETD as a professional occupation is relatively new in South Africa.

In leading countries like the USA and UK this profession has been developing over many years, a typical example being the American Society for Training and Development (ASTD) which championed the science and the practice of training, both at national and international level, for over 60 years. Although the aforementioned compares poorly to South Africa where the science of ETD is just under two decades old, over the last decade some significant strides have been made. The current legislation in South Africa which is aimed at skills development, is fundamental in that these frameworks are supplemented with sound and professional ETD practices.

It is crucial that the workforce in South Africa is appropriately trained and ready for the challenges in the workplace, and to be able to compete globally, the country needs to make skills development its number one priority. In South Africa, various legislations were enacted, one being the Skills Development Act and the Skills Development Levies Act No 9 of 1999 [13], which prescribe that employers have to set aside 1% of their total payroll for training of employees. This levy is paid to the South African Revenue Services (SARS) and claimed back by the employers by submitting costs for staff training. Non-payment or late payment of the levies by employers results in interest and penalties being charged [3].

SETAs are mandated to develop a Sector Skills Plans (SSPs) in line with the Skills Development Act No 7 of 1998 section 10 (1) [6], which plans have to be part of the framework for the National Skills Development Strategy (NSDS). The National Skills Development Strategy (NSDS) is

a strategic document that covers everything that has to do with skills development and guides the sector during skills planning. The SSPs compiled by the SETAs [3], are aimed at identifying the skills needs (skills shortages, skills gaps and skills supply) of industry/economic sectors, based on the Standard Industry Classification (SIC) codes allocated to each individual SETA. The SSPs pay particular attention to the analysis done by the SETA with respect to skills requirements, and also analyses economic development and employment patterns [2].

To be able to drive the National Skills Development (NSD) strategy, the skills development system needed to improve so that it can be both more effective and efficient. This strategy encompasses a variety of interventions that will lead to career paths, career development and promoting sustainable employment and in-work progression [2]. The NSDS 111 supports the integration of both practice and theory in the workplace, and aims at integrating new employees in the workplace, especially those who have just finished school and those who have been unemployed for a long time. New employees need to be trained in order for them to be able to adjust in the new environment and succeed in the workplace. The strategy also pays particular attention to those individuals who do not have the necessary skills that are required in the workplace. It also opens up opportunities for them to participate in other programs like, writing and numeracy skills to enable them to access employment. The NSDS 111 plays an important role in making certain that South Africa responds to the demands of the labour market for skilled people so that the country can be able to participate in the global markets. Once the skills of employees improve their lifestyles will improve because they will be able to compete for positions when they are advertised. This means that there must be a working relationship between employers, training institutions and the SETAs. The National Skills Development Strategy 111 responds to the challenges impacting on the ability of the economy to expand and provide increased employment opportunities [4].

In light of the above, this study on which the paper has been developed was conducted to scrutinize the FP&M SETA's functions to determine its effectiveness in addressing scarce and critical skills in the sector, following the methodology described below.

III. METHODOLOGY

A. The Research Design

A quantitative research design was used where questionnaires were used to gather information from participants. To make the process easier, participants were gathered in a training center and led through the questions. Questions were explained in isiZulu (the local language) for employees who were not fluent in English.

B. Sampling

The research population comprised training managers, FP&M SETA officials, and employees from the Department of Agriculture Forestry and Fisheries (DAFF) based in Pietermaritzburg, South Africa. A probability sampling technique, namely simple random sampling was used, where every member of the sample had an equal chance of being

selected. The population size for this study was 100 participants, and only 50% of the population was used as a sample [7].

C. Data Collection

Three separate questionnaires were developed, one directed at training managers, another at the training beneficiaries, and one was directed at the SETA officials. The questionnaires were completed by the target population under the researchers' supervision. Desks were spaced out as much as possible, and in most cases questionnaires were completed in exam-like conditions, with talking was strongly discouraged, and little or no access at others' questionnaires [8]. The three questionnaires, A, B and C were designed with different purposes in mind. Questionnaire A which was for employees or training beneficiaries/employees, comprised six questions which required respondents to indicate the skills and competencies required for the work that they performed. It also enquired about the obstacles and challenges that they encountered regarding training and development. Questionnaire B, which comprised eight questions attempted to gather information about how training managers addressed skills shortages. Questionnaire C which comprised 13 questions aimed to gather information on how project managers 'market' the SETA, and the projects that they are responsible which are aimed at addressing skills and skills shortages. Respondents were informed about the purpose of the research and they were assured of the confidentiality of their responses.

D. Validity and Reliability

To ensure validity and reliability, a pilot study was conducted in the workplace using the questionnaires, and interviews were also conducted with a sample group. The results obtained were the similar to that obtained from the respondents who participated in the main study using the same questionnaire. Although there are many types of validity, namely, face validity, concurrent validity, predictive validity, construct validity and convergent validity, only content validity has been assured in this study. To ensure content validity, past research was examined to identify the main variables to be included in the questionnaires.

E. Data Analysis

The data was edited by checking each questionnaire and ensuring that it was correctly completed. The questionnaires were pre-coded which is essential for data analysis; the numbers in parentheses indicated the data field where each coded response was added on the data record. Simple frequency table were developed from the responses.

IV. FINDINGS

Seventeen (17) percent of the respondents were administration clerks, 4 % were junior managers, 14 % were involved in junior technical operations, 2 % were senior managers, 5 % were involved in senior technical operations, 24 % were support staff, and 34 % were technical support staff. The majority of staff were at least 50 years old. Three respondents indicated that they had a budget of between R100 000–R300 000; one had a budget of between R301 000–R500

000 and only two had a budget of over R500 000. All respondents reported having six interns each. The presence of interns can be interpreted as a sign of capacity building and skills development.

It became evident that only three respondents had 1–5 years' experience as training managers, two respondents had 6–10 years' experience as training managers, and one respondent had more than 10 years' experience as a training manager. Half of the respondents have less than 10 years' experience as training managers. It was also ascertained that only three respondents indicated that their establishment employed between 100–200 staff, and three others also indicated that they had more than 400 staff.

With respect the importance of staff development, on a scale of 1–to–5, an overwhelming majority (90%) of respondents identified it is "critically" important. Forty six (46) percent of the respondents knew about the SETA, and 52% said they do not know about it. Furthermore, an insignificant minority (8%) of the respondents said that the SETA does address skills shortages.

The vast majority (5/6) of the respondents indicated that it is 'extremely important' to receive training, and all respondents that participated in the study indicated that they had submitted the WSP in the previous year. Table 1 reflects the suggestions for SETAs for addressing skills shortages.

The SETA respondents indicated that marketing the SETA is extremely important, and they all agreed that the SETA is effective in addressing the skills shortage. The vast majority (93%) of the respondents indicated having had attended on average one training or work related conference/workshop in the previous two years. All the SETA respondents indicated that the SETA does offer skills programs. Five respondents indicated that the skills programs carried credits towards a qualification.

It became evident that the vast majority (52%) of the respondents did not know about their SETA, and only 46% of the respondents indicated that they knew about the FP&M SETA. It was evident that 76% identified Skills Audit and PMDS as the most common methods used to identify training need in the workplace.

A. Training Managers' Perspectives

Three respondents indicated that the SETAs are "highly effective" in addressing the skills shortages whereas, the other three indicated that it is "merely" effective. All six respondents indicated that their organizations are making use of discretionary grants. Some 90% of the respondents indicated that it is "very important" for employees to attend training and 5% indicated that it is "extremely important." All training managers indicated that they submitted their WSP in the previous year. With respect to "how fundamental it is for employees to receive training in the workplace," it was evident that the vast majority (five) stated that it is "extremely important." With respect to the skills programs offered by the SETA, it became evident that all the programs were credit bearing.

TABLE I. SUGGESTIONS FOR TRAINING

ASD	DEP DIR	PHRO	SHRO	Training coordinator
Focus on assisting in rural areas	The SETA should target the youth in the rural areas by working through community leaders/structures that will be in the position to identify the needs of the communities to ensure that any intervention implemented will translate into economic and social upliftment of that community.	Funding FET colleges and training centres for scarce and critical skills	Invest more money on leadership programmes	Shorten the process of implementation
Cooperation of DAFF, Forestry Directorate in FP&M SETA workshops so as to be equipped with knowledge of what is done by the SETA	Schools can be adopted to ensure that learners can be identified and funded until tertiary level in order to create a pool of graduates especially researchers who will serve the forestry sector in addressing the issues of e.g. climate change and thus contributing to economic development of the country.	Awarding bursaries	SETA should make themselves visible to institutes	Extend to rural areas
Transfer of Forestry budget from Agriseta to FP&M SETA		Competitions in scarce and critical skills from crèches	Also make funding available to encourage internship programs	
Reduce requirements for assistance		Community capacity building	SETA should come up with good learning interventions	
Allocating budget for skills development not only for DAFF employees but also for Forestry		Fund learner ship and internship	Work closely with government institutions	
Increase budget allocation for training				
Allocation of enough budget for all provinces to avoid prioritising those areas with plantations				
Identify training with possibility of employment after completion				
Recruit staff with interest in training and development				

The Marketing and Communications Manager indicated that the FP&M SETA has strong working relationships with specific Higher Education Institutions, specifically ones that offer programs that address the sector scarce skills. The SETA also makes available bursaries for unemployed graduates and post graduates. The Monitoring and Evaluation specialist indicated that the SETA has formed partnerships with Further Education and Training Colleges (FETCs) and the SETA assists the FET's to register their sector qualifications, and the SETA also places learners in companies for experiential learning and internships, as well as training lecturers.

The sector skills specialist indicated that they have formed partnerships with different tertiary institutions to assist their students with workplace experience. The Skills Planning and Research Manager said the SETA is trying to tap into the research units of tertiary institutions to work collaborate with

them to build the research capacity of graduates who will in turn assist the SETA's to close the gap on the mismatch of critical and scarce skills in South Africa and benchmarking their skills to that internationally. The Skills Planning Coordinator indicated that they have a Memorandum of Understanding (MoU) with all FETC's and specific universities, but the SETA only support programs within the sector.

It also emerged that the most popular methods used to address skills shortage were Performance Management and Development System (PMDS) and skills audits. Forty eight (48) percent of the respondents indicated that the SETA does address the skills shortages and 42% indicated that it does.

Table 2 reflects suggestions by SETA staff on what 'more' the SETA could do to address skills shortages.

TABLE II. SUGGESTIONS FOR TRAINING

Monitoring and Evaluation Specialist	Sector Skills Specialist	Marketing and Communications Manager	Monitoring and Evaluation Manager	Skills Planning Coordinator	Skills Planning & Research Manager
SETA can help to track and trace qualified/ skilled people	Yes, we need more foot soldiers on the road, get communities to know about SETAs and how they can benefit from them. SETA has been doing this for the past years but we still need to reach out to the deep rural areas.	Yes, the FP&M SETA could facilitate partnership between industries and further and higher education institutions as well as private providers to developed relevant occupational qualifications that will address the identified skills shortage.	Yes, individuals (especially working for the SETA) should experience the rural difficulties and challenges which all South African citizens/all different cultures as South Africans are all equal and be treated equally to reduce the high rising number of unemployment as well as poverty in our country.	No response	When the Skills Development Act No97 of 1998 was promulgated one would think there will be improvements, and the efforts of the SETAs will be acknowledged. About millions of learners have been trained by SETAs. The industry has to ensure that it cooperates with the SETA.
				No response	It is imperative for all stakeholders to work together that is the industry, institutions, communities, learners, unemployed graduates, school drop outs and the SETAs in order to find the niche that can best address skills shortages.
				No response	All SETA's to have one monitoring and evaluation tool that can consolidate and control the information; this will then show the results.
				No response	With clear mandate, accurate, efficient, effective and economical drive and the SETA can and will be able to assist in closing skills shortage.

V. EASE OF USE

It became apparent that the Performance Management and Development System (PMDS) and skills audit are the most common methods used to identify training needs and skills shortages respectively. These training needs are captured in the Personal Development Plans (PDP) for each employee, since the PMDS is a system to manage and develop the performance of employees with a view to achieving both individual and institutional excellence. Monitoring and evaluation is not included in the policy in order to measure the effectiveness of the system. Some employees within the DAFF view PMDS as a tool for incentives, and not necessarily for development.

There is a gap in the DAFF policy on the Employee Development since it does not include information about how skills audits will be conducted and managed. The skills audit is a measurement of the skills and knowledge an organization requires. In South Africa, the NSDS 111 [4] is used to deal with the issue of skills through training and development. The

existence of a training budget suggests commitment to training. The Skills Development Levies Act (SDLA) No 9 of 1999 requires employers to set aside 1% of the total payroll for skills development. However, it is clear that there is a gap when one looks at what South Africa is spending on skills development, since only 0.4% was budgeted for training by DAFF in Pietermaritzburg.

The presence of interns can be interpreted as a sign of capacity building and skills development. However, the current one year internship period should be reviewed as most employers require employees to have at least three years of work experience. Furthermore, it became evident that the DAFF has an Experiential Training, Internship and Professional Development Policy [1].

Fifty percent of the staff sampled did not know about their FP&M SETA, which is a new SETA that was formed by merging a number of SETAs. Information needs to be communicated to all employees even to those in lower levels. Social networks, like Facebook, Twitter, What's App etc. as

well as internal newsletters from the SETA may be used, since staff can easily access these. Not knowing about the existence of the SETA may be a possible reason why some employees indicated that the SETA does not address the skills shortages.

It also emerged that the majority of skills programs offered were credit bearing. When the training course bears credits, it communicates to students that academic substance is associated with the content, and therefore, the course is worthy of serious, committed effort. Furthermore, when they receive course credit participating students are rewarded for their efforts [5]. The SETA staff indicated that organizations make use of discretionary grants. The DHET has issued guidelines for the implementation of the Grant Regulations with the purpose of granting “room for SETAs to be creative” as they understand that “all sectors are different” [2]. Respondents provided examples of different ways that SETAs have been involved with tertiary institutions. According to the respondents, the SETA has a strong working relationship with tertiary institutions through partnerships that it has formed. The SETA also makes available bursaries for students in specific study fields. Having a good working relationship with tertiary institutions will assist institutions to design a curriculum based on what the industry wants, so that by the time students finish their studies they already know what the industry is looking for. This involvement shows that there is synergy between the SETA and tertiary institutions. This is supported by the Higher Education Act No 101 of 1997 [6] which provides for a unified and nationally planned system of higher education.

Furthermore, it became evident that the DAFF complies with the legislation, and they submit their WSP annually. This is the document that organizations use to tabulate their skills needs and list the interventions that they will employ to address the skills needs. This is supported by the guideline on the completion of the 2012–2013 workplace skills plan and the annual training report for employers in the ETD sector by the ETD SETA.

With respect to the research objectives, it may be concluded that although the FP& M SETA is fairly effective in addressing scarce and critical skills in the forestry sector in South Africa, there are gaps which needs to be address. Furthermore, there is need for greater synergy among stakeholders in implementing and coordinating all the activities in the forestry sector as dictated by the SSP. It is evident though that the FP&M SETA adheres to the prescriptions of the NSDS 111.

VI. CONTRIBUTIONS AND LIMITATIONS OF THE STUDY

The findings of this exploratory study will assist the authorities to reflect on the performance of the SETAs in

general and that of the FP&M SETA in particular, and to institute strategies to remedy the shortcomings highlighted through this study. This could be addressed by inter-alia, ascertaining what strategy the SETAs are following in addressing skills shortages, exploring the relationship that the SETA has with the relevant sector, and compiling recommendations for improving skills training, which recommendations could be considered at the annual general meetings held by the SETAs.

In terms of limitations, it should be noted that the study concentrated on the DAFF in Pietermaritzburg only, although the DAFF has offices in all nine provinces. Furthermore, only 100 respondents from the DAFF were included in the study. Thus, there were limitations in making any generalizations from these findings.

Given the limitations outlined above, future studies should strive to address these. Moreover, skills development is critical; thus on-going research is necessary to address not only the performance of institutions currently established to address skills related issues, but to explore alternative strategies and the need for more state intervention, and stronger public-private partnerships.

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