# Assessment of Employee Awareness and Understanding of Quality at the ABC Company

Sambil Charles Mukwakungu, Charles Mbohwa

Department of Quality and Operations Management University of Johannesburg Johannesburg, South Africa sambilm@pjcafrica.com, cmbohwa@uj.ac.za

#### **Abstract**

The study discusses employees' awareness of quality. According to the literature, the success of quality depends on a number of factors such as quality awareness, quality understanding and the benefit of quality of quality at workplace. The objective of the study is to assess the extent to which employees of the ABC Company are aware of quality and they do understand quality at their work, as well as to establish the benefit that comes with quality. To carry out the study a mixed research methods approach was used for research in six departments with the ABC Company. A sample of more than 50% of the total staff complement made up of 88 employees was selected. Data was collected in a form of questionnaires. Face to face interviews were also conducted. According to the findings there are critical factors that hinder the awareness and understanding of quality at the workplace, such as communication, management support, adequate training for employees. This particular research aims at providing a practical insight into service organisations' understanding of their quality management system from their employees' perspective. This should allow the organisation to improve how quality is perceived internally, subsequently the perception of quality by their customers.

#### **Keywords**

Quality management system, ISO 9001:2015, quality awareness, Cost of quality

#### 1. Introduction

Quality is about making the organization perform to the best of its ability for their stakeholders. From improving the processes, product, systems and service that the organization provides to their customers, and to make sure that the organization as a whole is fit and is effective (Stevenson, 1999). Various organizations are now turning to programs of quality management in the effort to improve their performances. To such extent that organisations aim to improve on their products, and the quality of their services when implementing quality programs. It can be noted that these programs include, but not limited to empowering employees, involving employees in organization decision making and communicating to employees the vision and mission of the organization, which requires good communication from top management to employee at workforce level.

Employee awareness is the degree to which employees knows a particular situation, policies, documents or any other important information related to their organisations. Therefore, it is very critical for employees to understand their suppliers, customers, shareholders as well as their community. This is due to the fact that delivering as an organization means you must know who your stakeholders are and understand what your stakeholders want or expected from you as an organization in order to meet those needs and exceed their expectations now and in the future. With this in mind, it is important to indicate that employees central to the implantation of any quality programs within the organisation. As indicated by Goetsch and Davis (2014), out of the eleven characteristics of Total Quality approaches, eight literally refer to employees' participation. These characteristics are depicted in the figure below, with characteristics related to employees circled in red.

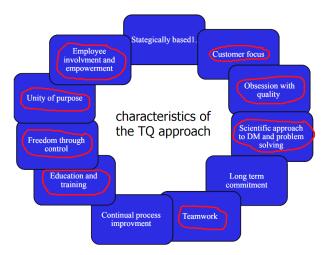


Figure 1. Characteristics of Total Quality (Goetsch and Davis, 2014)

Continuous improvement (CI) is a recurring activity that always seeks to increase the organization's efficiency and effectiveness in fulfilling the organization's requirements as well as its stakeholders (Suppliers, Customers, Investors, employees and community). The main aim of a CI program is to make things better etc. the processes, products and customers service. CI is one of the quality management principles, and making it an important organization objective should be paramount to management. Clause 8.5.1 of the quality management systems IS09001:2015 states that the organization shall continually improve the effectiveness of the quality management system (QMS) through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive action, and management review. QMS certification has become a key for a successful business, in recent years, to such an extent that every business requires continuous review of procedures and strategies to be in the market with a good name. One needs to maintain the standard and quality of the work done should one aims to be on the top of the industry.

#### 1.1 The Case Study

The ABC Company is a precious metal refining company operating in South Africa, with 400 employees. The company was established in 1920 and experienced tremendous growth with high profits. However, from the year 2013, the company started making a loss for the first time in its history. The issue started when the JDE ERP software was changed to SAP. Gold was lost in the system and with no one being held accountable for that even to date. External expert and investigators were called in to investigate, however their investigation did not yield positive results. Management approved a polygraph test to see if employees were not stealing the precious metal from the company. Subsequently, a number of employees were implicated in the process and lost their jobs. Although the polygraph process yielded positive results, it deeply affected employees who are now in constant fear of losing their jobs should they fail the test. Employees who were hit the most were those at production level. Several attempts by management were used to remedy the lack of trust displayed by employees. However, these attempts were not successful, resulting in close to 40% of trained as well as experienced employees leaving the company. The following year the company made a loss again due to overseas customers rejecting the precious metal due to poor product quality.

# 1.2 Purpose and Objectives of the Study

The purpose of this study is to assess the extent to which the employees of the ABC Company, at production level do understand what quality entails in their jobs and are aware of what is needed from them when it comes to quality requirements at production level. The research will establish whether and not employees are interested in participating in quality improvements in the organisations.

#### 1.3 Rationale and Significance of the Study

Quality management systems certification helps organizations to meet this goal without any difficulty. All the guidelines mentioned under this certification should be followed diligently by the companies. Following the rules will ensure that the organisations have a good turnaround and make the most profit. Trust and confidence towards such companies are higher and they will have a better edge over others in their particular industry. With customers increasingly demanding better quality products, cost, and support, it is evident that companies should make QMS a priority or else companies run the risk of losing their market share. As a results, organisations should involve

employees in all the quality related issues, and management should make sure that quality is understood by everyone in the organization. However, many organisations have quality departments and employees tend to think that quality is a responsibility of the quality department, while quality should be everyone's responsibility.

The output of any organisation relies on its employees. The study will explore how employees understand and assess their day-to-day performance and their perception of quality. This study will not only benefit manufacturing companies in south Africa but will also benefit mining industry as a whole.

# 2. Brief Literature Review

According to Sekaran and Bougie (2016), literature review is a process whereby the researcher has to undergo in search of the information of his or her interest from a secondary data of unpublished and published work and evaluate the work similar to the problem. This section will outline the literature related to the problem being investigated.

#### 2.1 Quality

Various authors have already defined quality in length. The notion of quality refers to satisfying or exceeding customer requirements and expectations, and consequently to some extent it is the customer who eventually judges the quality of a product (Shen et al., 2000) (Mok, C., Sparks, B. and Kadampully, J., 2013), (Sood, K., Intel Corporation, 2012) and (El Saghier, N. and Nathan, D., 2013). From the literature, it is easy to say that quality is about making the organization perform to the best of its ability for their stake holders, from improving the processes, product, systems and services that they provide to their customers to make sure that the organization as a whole is fit and it's effective. According to Deming, there is a lot of disagreement regarding the meaning of quality. It has been argued by many managers that quality is a good productivity, as the organisation's quality improves, the cost will decrease because of fewer snags and delays, fewer mistakes, less rework, and the organisation will use material and time more efficiently, which will results in improved productivity. Furthermore, Deming reported from a study of 86 managers in the eastern United States whereby these managers were asked to give their definition of quality and they responded as follows: Speed of deliver, Perfection, Total customer satisfaction and custom service, Doing it right the first time, Consistency, Pleasing customers and Compliance with procedures and policies.

Goetsch and Davis (2014) sums up all the definitions of quality as being a dynamic state associated with product, services, people, processes, and environments that meet customer needs and expectations and help produce superior value.

#### 2.2 Quality Awareness

The aim of quality awareness at workplace is to develop managers, team leaders and production staff with skills, knowledge and attitude to create quality cultures and mind-sets in the workplace. Meeting standards and continuous improvement are the key drivers of quality awareness. However, this awareness should be created through excellent communication of quality strategy within the organisation. Oakland (2014) contends that this basic communication process is conceivably the most disregarded piece of many businesses' operations, yet inability to impart adequately makes pointless issues, bringing about disarray, loss of intrigue and in the long run in declining quality through evident absence of direction and boost. This communication of quality strategy is internal in nature, which implies how important customer service is that internal customer service precedes external customer service. Emphasize is placed on solving problems, being proactive, adhering to requirements, customer service, prevention, ownership, company imagine, branding, right first time, profit, cost of non-conformance, team work and right attitude. Therefore, awareness and commitment to quality at the point of production or administration conveyance is similarly as fundamental as at the extremely senior level. This implies that all employees ought to get nitty gritty training on the procedures and techniques pertinent to their own work. Clearly, they should have fitting specialized or 'employment' training, yet they should likewise comprehend the prerequisites of their clients.

Quality awareness plays a vital role in reducing total quality costs. Figure 2 below depicts the relationship between quality related costs (failure, appraisal and prevention costs) and the level of quality awareness and improvement. The more aware employees are regarding the organisation's quality strategy, the more involved they become in efforts to improve quality within the organisation.

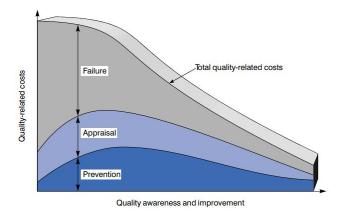


Figure 2. Increasing Quality Awareness and Improvement Activities (Oakland, 2014)

### 2.3 Quality Cost

The historical backdrop of assessing the cost of quality (CoQ) (once in a while alluded to as the cost of poor quality) dates to the primary release of Juran's QC Handbook in 1951 (Pyzdek and Keller, 2014). One cannot talk about the CoQ without mentioning its different components as noted by Campanella (1999):

- **Prevention Costs** referred to as the costs of all activities specifically designed to prevent poor quality in products or services. Examples are the costs of new product review, quality planning, supplier capability surveys, process capability evaluations, quality improvement team meetings, quality improvement projects, and quality education and training.
- Appraisal Costs are the costs associated with measuring, evaluating, or auditing products or services to assure conformance to quality standards and performance requirements. These include the costs of incoming and source inspection/test of purchased material; in process and final inspection/test; product, process, or service audits; calibration of measuring and test equipment; and the costs of associated supplies and materials.
- **Failure Costs** are noted to be the costs resulting from products or services not conforming to requirements or customer/user needs. Failure costs are divided into internal and external failure cost categories.
- Internal Failure Costs are costs occurring prior to delivery or shipment of the product, or the furnishing of
  a service, to the customer. Examples are the costs of scrap, rework, re-inspection, retesting, material review,
  and down grading.
- External Failure Costs are costs occurring after delivery or shipment of the product, and during or after furnishing of a service, to the customer. Examples are the costs of processing customer complaints, customer returns, warranty claims, and product recalls.
- **Total Quality Costs**, as depicted in Figure 2 above, are the sum of the above costs. It represents the difference between the actual cost of a product or service, and what the reduced cost would be if there were no possibility of substandard service, failure of products, or defects in their manufacture.



Figure 3. Costs of Quality – the Hidden Costs Using the Iceberg Analogy (Antony et al. 2016)

From the above, it is important to indicate that most of these costs are hidden costs, as delineated in Figure 3. Unless particular quality costs recognizable proof endeavors have been attempted, few bookkeeping frameworks really incorporate arrangement for distinguishing quality expenses (Pyzdek and Keller, 2014).

Although most CoQ are hidden, their drivers must be understood in order to realize significant savings of the turnover or annual spend of both service as well as manufacturing industries by preventing quality failures which translate directly to improved bottom line performance (Oakland, 2014).

Prevention Appraisal **Internal Failure** External Failure Preventive maintenance costs Inspection costs NCR data Warranty · People hours · Hours spent on QC inspection · Cost of time and materials · Warranty provision • Warranty claims · Materials costs and test to repair or rework products by product group Improvements to · Hours spent on operator processing equipment self/peer group inspections Confirmed complaints Scrapped product External inspections Training costs Customer related -• Internal trainer hours Hours to support customer Materials and labour to direct • External training costs inspection visits point of scrapping Refunds • • Hours spent in training Factory costs to support visits including allowance for Product recalls Third party examinations added value from previous Excess carriage to operations replace products

Waste above the expected

Costs of rejected incoming

materials – including factory

downtime if this is an effect

vield from the process

Materials

• Time

Customer related -

Loss of reputation

Loss of goodwill

support in the field (or

answer questions and

respond to incorrect user

Technical product

via call centre) to

perceptions

and repeat business

indirect

Checking of incoming raw

• Testing materials used

· Product design reviews

· Hours spent on internal audits

materials

Hours spent

Quality system

Table 1. The Drivers of CoQ (Oakland, 2014, p. 155)

#### 3. Methodology

· Hours spent

analysis

Quality system

specifications

· Development and

· Requirements analysis and

development of clear

maintenance of clear internal documentation Investment in improvement

projects including defect

investigation and root cause

· Costs of materials used

Methodology is a way in which a research problem is systematically solved in research methodology, the methodology may include interviews, surveys, publication research, and other research techniques, both present and historical could be included. This particular section outlines the research design, the sampling procedure, the population under the study and how data was collected. Ethical considerations pertaining to the research study are also addressed, together with the validity and reliability of the study.

#### 3.1 Research Design

A mixed-methods approach was used for this study because it provided detail and in-depth information and it also created openness from the respondents. As detailed by Mukwakungu and Mbohwa (2016), Jogulu and Pansiri (2011) demonstrate that business study has ended up being progressively mind boggling and multi-layered, requiring new methodologies for taking a gander at look into issues and researching data to clear up and clarify social marvels. Tashakkori and Teddlie (1998) additionally determines that the utilization of blended strategies procedure permits the counterbalance of the conceivable limitation of one strategy by the quality of the other. In this specific examination, the utilization of blended techniques investigate configuration gives a significant comprehension of the analyzed conduct or a superior thought of the importance behind what is happening as far as key quality arranging and its part in CI endeavors at the fleeting safety net provider. Tashakkori and Teddlie (1998) built up a system of six sorts of blended techniques examines as spoke to in Table 2. One crucial part of blended strategy, as expressed by Sandelowski (2000), is that it gives a dynamic other option to developing the degree and improving the illustrative energy of studies.

Table 2. Type of Mixed Methods (Mukwakungu and Mbohwa, 2016)

TYPE I	Confirmatory Investigation Qualitative Data Statistical Analysis	түре іі	Confirmatory Investigation Qualitative Data Qualitative Analysis
TYPE III	Exploratory Investigation Quantitative Data Statistical Analysis	TYPE IV	Exploratory Investigation Qualitative Data Statistical Analysis
TYPE V	Confirmatory Investigation Quantitative Data Qualitative Analysis	TYPE VI	Exploratory Investigation Quantitative Data Qualitative Analysis

The use of Mixed Methods in this study ultimately allows subjective data obtained through interviews that were conducted at ABC Company to illuminate quantitative results so as to enhance the validity and dependability of the study as depicted in Figure 4. Greene et al. (1989) note five very broad purposes for using mixed methods design: (1) triangulation, (2) complementarity, (3) development, (4) initiation and (5) expansion



Figure 4. Mixed-Method Research Design

The above design which is executed in this specific paper, began with quantitative data being gathered utilizing an organized survey, and the information being broke down utilizing quantitative techniques, trailed by the accumulation of subjective data through semi-organized meetings and the information from the meetings being dissected utilizing subjective information investigation. To finish up the procedure, quantitative outcomes were utilized to shape the subjective research inquiries, testing, and information gathering.

#### 3.2 Population and Sampling

A sample is a portion of data drawn from the entire population; the sample must be a representative of the entire population. A population is defined as the entire group, events or objects that one wishes to research on or wish to investigate (Sekaran & Bougie, 2016). Advantages of sampling are that costs are reduced, collection time as well as overall accuracy of data is improved. There are two major types of sampling design, which are called probability and none probability sampling. For the purpose of this study, random sampling and voluntary response sampling method were chosen for the study. Random sampling was chosen to ensure that the sample taken is a representative of the entire population, whereas voluntary response judgment, which is a design of non-probability sampling, was used. The area of focus was production employees; consequently, no line managers were involved in this particular study. Voluntary response judgement implied that participants were requested to volunteer to partake in the study with no one being forced to partake if there was no interest. Table 3 below provides a breakdown of the different departments within the ABC Company and the distribution of employees who took part in the study.

Table 3. Distribution of Participants from Departments Involved in the Study

Department	Number of Production		duction Employees ng in the Study	Shift per Department
	Employees	f	Percentage	Department
1. Laboratory	25	14	56%	2
2. Melt-House	19	10	53%	3
3. Electro-Gold	12	8	67%	3
4. Electro-Silver	14	9	64%	2
5. Fine Gold	10	5	50%	2
6. Semis Coins	8	4	50%	2
Total	88	50	57%	

#### 3.3 Data Collection Procedures

There are several methods of data collection in different settings and different sources of data. However, the importance ones are observation method, interview method, through schedules, and through questionnaires. Interviews supported by observations seem to be the most preferred methods of data collection for qualitative studies (Polkinghorne, 2005), while questionnaires are preferred methods for quantitative ones (Jick, 1979). Observations

helps in collecting data people's behaviours and actions which could not be videotaped or recorded, however observation method has limitation such as unforeseen factors that may interfere with the observation task. Collection of data through questionnaires can either have close ended or open-ended questions and more often it can combine both (Sekaran & Bougie, 2016). For the purpose of this study, questionnaires and interviews were the methods used for collecting data. Face-to-face interviews with structured questionnaire were used to collect data from the respondents. The identified respondents were contacted two weeks in advance, in order to obtain permission from management to partake in this research exercise.

# 3.4 Data Analysis and Interpretation

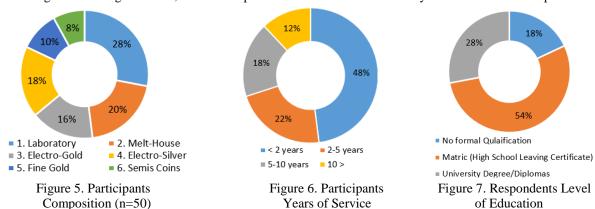
Research data analysis is the process of applying statistics to analyse collected data and making sense of it. There are six different method of analysing data in qualitative method which is argument analysis, discourse analysis, grounded analysis, content analysis and narrative analysis (Sekaran & Bougie, 2016). In this study a content analysis technique was used as it offers a lot of advantages to researchers and is suitable for this study. It looks directly into communication via text and can provide cultural insights over time through text analysis. Statistical applications were used to frequency distribution of responses from the questionnaire.

# 4. Research Findings

This section examines and discusses the results of the survey findings. The study was Mixed-Methods one with emphasis placed on qualitative elucidating the quantitative findings.

#### 4.1. Participants Composition, Gender Distribution, and Years of Service

The study sampled 88 participants from six departments from the production level at the ABC Company. The entire sample of respondents who participated in the study answered all the questionnaires. Figure 5 shows the composition of respondents from all six department in terms of their representation within their respective departments. It is evident at the majority of respondents is from the laboratory department, which is the department that analyses the metal to ensure that it is as per customer specifications. All the other production areas depend on the laboratory for results and for all their processes to carry on. The Laboratory sample is followed by Melt-house, which is the receiver of the metal from the mines; this is where the process starts. The Melt-house also has a high number of employee. Therefore, it is evident that the Laboratory and Melt-house are the most critical departments in the whole company because without the laboratory results, all the departments will not be able to continue with their processes and also without Melt-house melting and cleaning the metal, the other departments will not be able to carry on with their various processes.



The study participants were unequally representation terms of their gender, with only 18% of the sample being females and the remaining 82% being males. It has been stated that in the past, only men could work in the production since its hard labour and women were only considered for HR positions.

Figure 6 provides an overview in terms of years of service of the respondents at the ABC Company. The largest number (48%) respondents indicated that they were employed at the company for less than 2 years, followed by 22% respondents stating that they have been with the ABC company between 2 to 5 years, 18% reported they have been working for ABC Company for a period between 5 to 10 years. While only 12% were employed for more than 10 years. The ABC Company has majority of relatively new employees as well as loyal employees who have worked for the company for more than 10 years.

As depicted in Figure 7, from the sample of 50 respondents at production level, it is clear that majority of employees in the company who participated in the study only have matric at 54% from the sample, followed by employees with university diploma or degree at 28%. While 18% of participants they do not have any formal qualification or matric.

#### **4.2. Questionnaire Results**

The segment of the questionnaire being discussed in this section had six sub-sections namely employee commitment, management support, communication, training, knowledge of the organisation, and lastly knowledge testing.

## **4.2.1.** Employee Commitment

Table 4. Questionnaire Results on Employee Commitment

	Alv	vays		ery ten	Sometime		Rarely		Ne	ver
B.1. Employee commitment	f	%	f	%	f	%	f	%	f	%
B.1-1 I participate in improving my department	26	52	13	26	8	16	2	4	1	2
B.1-2 I give ideas on how to improve production	22	44	13	26	9	18	4	8	2	4
B.1-3 I provide my input when necessary	28	56	10	20	8	16	4	8	0	0
B.1-4 I take quality serious at workplace	24	48	14	28	7	14	3	6	2	4

An interesting observation in Table 4 shows that a higher number of employees 52% are committed and take part in improving the organisation and they take quality serious in the company, followed by 28% that says they participate but sometimes not all the time, and as always in the company there are those employees who will take part only if price is involved at 15% they say they participate if you offer a price, and only few at 5% who say do not participate.

# 4.2.2. Management Support/Commitment

Table 5. Questionnaire Results on Management Support/Commitment

	Alv	Always		Always		Always		ery Iten	Some	etime	Ne	ver	No Su	
B.2. Management Support/Commitment	f	%	f	%	f	%	f	%	f	%				
B.2-1 Management seek to drive out fear	2	4	3	6	6	12	22	44	17	34				
B.2-2 Management support my ideas and input	3	6	8	16	12	24	16	32	11	22				
B.2-3 Management is committed to quality management training	4	8	5	10	4	8	8	16	29	58				

Table 4.6 shows that a 44% that says management do not drive out fear from employees, on average in figure 4.7, 50% says management are not committed to quality and they do not support them, and only 6% of the participant says they do support them. This is bad for the company because if employees do not get support from management, they can't bring up their ideas forward because they afraid that they will be rejected, and if management are not committed to quality that affect the whole quality of the organisation.

#### 4.2.3. Internal Communication

Table 6. Questionnaire Results on Internal Communication

Tuote of Questionium of Tresums on Internal Communication										
	Always Very Often				Never		N Su	ot ire		
B.3. Communication	f	%	f	%	f	%	f	%	f	%
B.3-1 The quality policy was effectively communicated to me	5	6	6	12	2	4	12	24	25	50
B.3-2 Senior Management communicates the strategy of the organisation on a continuous basis to me?	3	6	5	10	12	24	13	26	17	34
B.3-3 Company changes are communicated to me	7	14	9	18	3	6	12	24	19	38

It is evident that majority of the employees have no idea of the quality policy of company ABC and it has never been communicated to them by anyone in the company as figure 4.8 shows that 70% says it was never communicated to them. The ISO 9001:2015 states that quality policy shall be communicated to everyone within the organisation. However, it seems like most of production employees were not being informed, with only 25% indicating that they were informed, while only 10% understood it and 15% who did not understand the quality policy at all.

#### 4.2.4. Training

Table 7. Questionnaire Results on Training

	Always		Always Very Often		Alwaye		Sometime		Never		Not Sure	
B.4. Training	f	%	f	%	f	%	f	%	f	%		
B.4-1 Training and transfer of quality knowledge is provided by the company	0	6	2	4	6	12	12	24	30	60		
B.4-2 Training is provided by my company on the decision-making skills	4	8	6	12	9	18	14	28	17	34		

It was found that 72% of the respondents disagreed with the following statement *training and transfer of quality knowledge is provided by the company* in Table 4.8 and that none of the respondents strongly agreed with the statement.

This is an indication that there training is a problem at the ABC Company. Table 4.8 shows that only 2% of participants agreed with the above-mentioned statement and 18% were not sure.

# 4.2.5. Knowledge of the Organisation

The analysis of the questionnaire results indicates that 61% of the respondents noted that that accountability, integrity, customer satisfaction, perfection, respect and responsibility are the values of the ABC Company.

#### **4.2.6.** Knowledge Testing

This was done to test the knowledge and understanding of employees when it comes to quality. The questionnaire, which was distributed via email to a total of 50 employees (n), was to be responded to anonymously. Employees were given a chance to go through the questions before attempting to answer, with the rules clearly stating that they respondents were not supposed to be helped by anyone when answering the questions. There were three options, true, false and Do not know. The figure below shows the response percentage from participants.

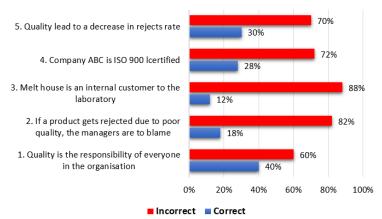


Figure 8. Correctness of Answers to Knowledge Testing

This questionnaire was designed based on the organisation quality policy which contains all the correct answers to the questions. In order to objectively measure the level of knowledge of the respondents, respondents who were correct and not correct and the not sure answers were taken as not correct. The figure above depicts the result of the assessment of those who were correct and those who were not.

#### 5. Conclusion

This section of the paper concludes with a discussion on aspects related to the assessment of employee commitment, management commitment/support, internal communication, employee awareness (including knowledge and understanding of the company's Quality Policy), as well as training.

- A) Employee Commitment
  - Employees are committed to participate in improving the organisation. However, that commitment from employees could be affected by the awareness and knowledge when it comes to quality, because if one does not have the knowledge of quality, one will not be able to provide ideas in improving the organisation.
- B) Internal Communication
  - Management is not clearly communicating to its employees. In order for employees to be aware of quality matters in the organisation, it starts with management communicating the company policies and quality issues with its employees. However, as the results discussed earlier have shown, there is a lack of communication from management.
- C) Management Commitment/Support
  - According to the results of the survey presented in the previous section, employees of the ABC Company indicated that management is not supportive; this is evident on training related to quality as there is none provided. Quality starts with top management committing themselves and supporting employees with anything that is related to work.
- D) Employee Awareness, Knowledge and Understanding of Quality Policy

  The results of the survey presents the evidence that employees of ABC Company are not aware of quality in their workplace. With 74.4% of employees not understanding quality in their organisation, there is an indication that a major problem, as a company that is experiencing a loss every year. A change of how processes are performed need to be considered strongly from top management up all the way down to production employees.

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#### E) Training

Training specifically on quality is barely provided to employees of ABC Company, which in normal cases lead to poor quality service. Poor quality cost the company substantial amount of money due to mistakes made by low level employees up to high level positions.

According to the findings, factors that affect the quality awareness and understanding at production level are lack of communication from top management, job insecurity, lack of training on quality in their respective departments and the organisation as whole. Although employees are committed to improve quality, the lack of knowledge is a major issue since training is not provided. Management commitment/support is also an issue within the company.

#### 6. Recommendation

The study recommends that management set up in-house or external training for its employees. Employees need to understand their work, quality related to their work, and what is expected from them in terms of improving their department output. The company also need to provide training on ISO 9001:2015 to enable employees to understand what this quality standard entails. It is also recommended that during their weekly safety meeting, supervisors should include a quality awareness topic, for example, who is a customer (internal and external)? In this way employees will always be aware of quality in their respective department.

Management needs to come up with a system that will improve communication within the organisation. It is critical that communication flows from high levels to low levels positions within the company. Internal quality audit should be held every month in different departments focusing on communication as it should be one of the factors that these audit exercises should look out for according to ISO 9001:2015.

It is evident that employees of company ABC do bring forth ideas and are committed to improving the company's performance as it is currently struggling. It is recommended that the company run competitions on improving the quality in the workplace. This competition would provide incentives on a quarterly basis to motivate the 15% that will only participate when there are monetary rewards involved.

ABC Company should also look into balancing the gender representation in the production level. It has been identified that gender equity is literally non-existent, therefore bringing a gender balance might improve the organisation's performance as female workers would gain confidence in numbers as opposed to being intimidated by their male counterparts, as it is currently the case.

but balancing the gender might even help the company in improving.

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# **Biographies**

Sambil C. Mukwakungu is an award-winning academic who has been lecturing Operations Management to first year students, Food Production, and Quality Management at the University of Johannesburg since 2009. His passion for teaching and learning has allowed him to make a difference in at least one student's life every year. He is a young researcher who is still establishing himself in knowledge creation with keen interest in Service Operations Management, Lean Operations, Continuous Improvement, as well as business innovation and innovation in Higher Education. He was awarded Best Track Paper Award in the 2016 IEOM Conference in Rabat, Morocco, and with his team from the IEOM UJ Student Chapter, he is recipient of the 2018 IEOM Outstanding Student Chapter Gold Award for exceptional chapter activities and contributions to the field of industrial engineering and operations management.

**Prof Charles Mbohwa** serves as Executive Dean of the Faculty of Engineering and the Built Environment at the University of Johannesburg (UJ). As an established researcher in the field of sustainability engineering and energy, Prof Mbohwa's specialisations include sustainable engineering, energy systems, Life-Cycle Assessments (LCA's) and bio-energy/fuel feasibility and sustainability with general research interests in renewable energies and sustainability issues. Prof Mbohwa's current research in sustainability engineering includes: Social and climate change comparison of bio-diesel life cycle impacts in Brazil and South Africa; Life Cycle Assessment and Comparisons of Rail and Road

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Freight Transportation in China and South Africa; The Potential, Energy and Environmental Impacts of Bio-energy in the Sugar Industry in South Africa; and the Economic, Energy and Environmental Evaluations of Biomass-based Fuel Ethanol based on Life Cycle Assessment. He is a co-author of the second chapter of the United Nation's Environmental Programme's (UNEP) Global Guidance Principles for Life Cycle Assessment Databases: A Basis for Greener Processes and Products 2011. In addition he is Project Leader for the Development of the Climate Change Response Strategy and Action Plan for the Gauteng Department of Agriculture and Rural Development: Use of indigenous knowledge.