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Respondent 6:

Tjoo, very rare I only attended quality training 3 times in ten years' time. Respondent 4:

"Like I told you that I have been with the company for 8 years. I only attended the quality training once at the beginning of 2016".

Respondent 3: (a production manager)

"As a production manager I do attend quality meetings but this year I haven't attended any training".

From the statements of the respondents it is evident that management has not committed to employees' training for the past 20 years. According to Dileep, Rau and Satish (2014:35) the cultural factors compatible for Six Sigma include more consciousness programmes focusing on the benefits of quality improvement programmes to the employees. The analysis also showed a worrying factor suggesting that training is only given to the production managers. However, Hendricks and Kelbaugh (1998) cited in Sasthriyar (2006) posit that before Six Sigma can be adopted, there should be an introduction to the "belt system". The belt system provides specific training to all levels of the organization. It was further observed that most of the machine operators were running machines without training, training records were absent. For Six Sigma methodology to be successful, there ought to be full commitment of top management Fursule et al. (2012:2).

4.2 Theme 2: Attitude of the Employees towards Quality

The attitude of employees towards quality refers to the positive and negative attitude of the employees in all levels of the organisation.

Table 4.2 Attitude of the employees towards quality

Sub Themes	Identified Opportunities/Issues
Positive attitude	<ul style="list-style-type: none"> • Understanding of quality management frameworks, tools, and concepts
Negative attitude	<ul style="list-style-type: none"> • Lack of pride in workmanship • Don't care attitude • Resistance to change • No corporation among employees

4.2.1 Positive attitude

In this context, positive attitude refers to the willingness of employees to change, co-operate, and to take charge of their performance. The majority of the participants suggested that Six Sigma can improve employee's attitude towards quality management.

Respondent 4:

"Jaa, I think Six Sigma can be able to improve employee's attitude to quality because people are doing as they please because the defects are not monitored. People keep on making scrap and the short length".

Respondent 7:

"Jaa, I think Six Sigma can be able to eliminate defects because cables will get fixed from the previous process".

Respondent 6:

"Yes, the defects can be eliminated because it is the method that will be focusing on quality. The problems will be solved from the start of the process to the end of the process".

Respondent 8:

"I think Six Sigma can reduce defects because it has special tools that assist in solving problems within the process".

The findings revealed that the respondents had an understanding of what six sigma entails. Respondent 4's response showed confidence in the implementation of Six Sigma as a quality management tool.

4.2.2 Negative attitude

Negative attitude refers to unruly behaviours of the employees that relate to resistance to change, lack of discipline, and lack of pride in own work. Some participants did not believe that the organisation is in a good position to improve quality management.

Respondent 5: (an operator with 20 years' experience)

"I think the technology that we are using in our machines is very outdated. Implementing Six Sigma can be challenging because it deals with how best you can reduce the defects and make improvements. With the state of our equipment is highly impossible. I think the management is overlooking that because it can cost the company a lot of money".

From Respondent 5's statement it emerged that proper maintenance strategy of the machines crucial in eliminating defects, was lacking. Through observations it was confirmed that some machines were always making defects because they tripped during the run. A programme such as total productive maintenance (TPM) could assist in reducing breakdowns.

Respondent 5:

"When an operators makes scrap they pass it to the next process, they pass the buck to the next process".

Respondent 10:

"They have this attitude of don't care, the other stages will see. Or the problem is passed to the next process".

Respondent 10 and Respondent 5's statements highlight the attitude of the employees towards quality: defects are not rectified, instead, they are sent to the next process which increases failure rate as defective products will be ultimately scrapped internally or rejected by the customer. Looking at the non-conformance area and product failure analysis, it was evident that some of the defects could have been verified at a previous processes.

Respondent 1:

"Our employees doesn't care much about quality, they do not adhere to the PDS"

According to Respondent 10, ABC Electric employees do not care about quality. The following issues emerged when the respondents were asked the following question:

How can you describe your company's culture in relation to quality management?

Respondent 10:

"I think the culture is poor, because quality gets recognized when there is no workload. Because if you can check, our quality gets neglected when there is lot of work. They based on volumes and neglect the quality".

Respondent 2:

"Eish, I can say people are ignorant, that is the culture, ignorance. Because, I think there are quality and process department that should be making follow ups (Shaking head) it shows that we are ignorant"

Respondent 1:

"The culture is not good, the employees think quality improvement is the job of a process technician. They do of the products".

Respondent 5:

"Well, we still lacking. If you get a customer complain one will ask himself a question as to how did the cable pass the stages without being checked thoroughly. So I would say the quality department is not doing its job properly".

Respondent 8: (a SHERQ coordinator with 20 years of experience)

"There is always a tension between the quality department and the rest of the organisation with regard to who is responsible for quality. Quality is not the responsibility of QA department but each and every employee in all levels throughout the organisation."

It emerged from Respondent 8's utterances that there is role ambiguity when it comes to quality management, certain employees do not want to be accountable. Through observations, it was noted that ABC Electric's top management are result orientated. Top management's concern is on targets, to get the products to the customers on time and the rest of the employees in the organisation behave in the same manner. This confirms the theory posited by (Brown, 2014:69) that transforming organisational culture is not easy because culture comes out of shared behaviours and the working relationships of organisation members developed over time.

According to Jirasukpraset, et al. (2012:480) organisations that adopt Six Sigma as a culture for continuous improvement achieve cost savings, increase product quality and enhance customer satisfaction. The strength of Six Sigma is to establish a culture of continuous improvement that rely on a combination of transforming the way in which work is performed by changing processes, and teaching employees better ways of understanding processes and problem-solving techniques.

4.3 Theme 3: Information and communication

Information and communication refers to the way the employees at all levels communicate with regards to quality management. The theme also takes into consideration the way in which information is disseminated throughout the organisation.

Table 4.3 Information and communication

Sub themes	Identified Issues
Inadequate communication	<ul style="list-style-type: none"> • Lack of clear goals and objectives • Inadequate information on quality management • Role ambiguity • No quality meetings
Feedback on quality targets	<ul style="list-style-type: none"> • Customer feed-back not communicated to employees • Quality targets not communicated • Defects level not reported

4.3.1 Communication

Lack of communication refers to the inability of employees to communicate openly and effectively at all levels throughout the organisation. Lack of communication also refers to poor communication between management and shop floor employees. Additionally, it concentrates on how informed the respondents are. The following were the respondent's views:

Respondent 7:

"Eish, they are the one creating problems because...let me make an example, when there are changes they don't talk to us as operators, they just implement change without informing us".

Respondent 10:

"Even the meetings I haven't attended any meeting, I only sit with my boss and we have discussions but not formal meetings".

Respondent 2:

"Jaa, I hold quality meetings with the operators, quality is an item in a production meeting".

Respondent 10:

I have been with the company for 20 years; I haven't attended any quality meeting.

Respondent 7's statement indicates that management strategic objectives do not cascade down to the shop floor employees and shop floor employees do not have input on changes that are made by the top management.

Respondent

10 is a section leader but has never attended any quality meeting. It was observed that there is no effective

communication in ABC Electric, there are no visual boards that indicate quality performance. There is no area to hold the quality meetings. Meetings are a very important form of communication that provide feedback to employees.

4.3.2 Feedback

Feedback refers to employees' knowledge of customer complaints, quality targets and defect levels. It includes the organisational structure of ABC Electric and how information is disseminated. The following were responses:

Respondent 2:

"Eehh, after a long time, I haven't heard of customer returns for quiet sometimes".

Respondent 10:

"Well in my department we use to have customers complain sometime last year. On numerous numbers of occasions but now is there but not more often".

Respondent 7:

"Yes, I think communication is very important. Talking with the people and show them their mistake will bring about change".

It is clear that the employees are not getting enough feedback from their customers. Through observations, it was

uncovered that customer complaints do not reach shop floor employees. As a result, the employees are not informed

about the level of customer satisfaction. Employees do not know failure rate because constant feedback is not

provided. Ignorance and lack of information results in uncertainty.

5. CONCLUSION AND RECOMMENDATIONS

This study sought to answer the following research questions:

- What perceptions within ABC Electric on quality management can be leveraged for adoption of six sigma to alleviate quality issues in its value chain?
- What gaps exist within ABC's quality management framework that could be closed through adoption of six sigma?
- What values and norms contribute to the culture within ABC and how do these impact on management of quality?

Research Question 1: **What perceptions within ABC Electric on quality management can be leveraged for adoption of six sigma to alleviate quality issues in its value chain?**

- Quality management is well understood by both employees and managers at ABC. Both Managers and shop floor workers are aware of six sigma and ISO 9001 quality management frameworks and the requirements that ensure production of quality products.
- Employees at ABC understand that monitoring and control are an essential component for effective operation of processes and their improvement. This is essential for implementation of a quality improvement programme such as six sigma.

Research question 2: What gaps exist within ABC's quality management framework that could be closed through adoption of six sigma?

- Management does not provide the necessary resources to assist employees solve quality problems. Without quality tools to collect and analyze data, process performance cannot be improved. Root causes of quality problems cannot be identified. The execution of the Six Sigma methodology secures buy-in from top management in order to succeed.
- There is no proper documentation in place. Defective products are passed down to subsequent processes without documentation resulting in high failure and scrap rates.
- Management is not committed to education and training of its workforce. Training is both selective and seldom. Six sigma requires that training be provided to all levels of the organization in line with the belt system. Employees have to cope with challenges of learning e.g. statistics
- ABC Electric's organizational structure is bureaucratic. Information does not flow down to employees due to the many layers of management. Customer satisfaction and feedback information are not communicated to the employees. Lack of quality meetings and quality meeting area are cardinal to culture that is not quality focused.

Research question 3: What values and norms contribute to the culture within ABC and how does it impact on management of quality?

- A quality culture is non-existent at ABC Electric. This is demonstrated by the shift of focus by management from quality to meeting deadlines when due dates approach. Managers at ABC perpetuate poor quality within the value chain by allowing defective products to continue to downstream processes. Culture comes out of shared behaviours and the working relationships of organisation members developed over time.
- The absence of a quality oriented culture in ABC Electric is clearly demonstrated by lack of support among fellow employees, employees pass down defective products to fellow workers at next processes.
- There is also no accountability for quality of work within the organization. Operators feel that quality management is the responsibility of process technicians, who in turn think that it is the role of the quality department. This ambiguity of roles and responsibility which causes uncertainty is not in line with a quality focused culture. In a quality focused organizational culture, quality is everybody's responsibility, each being responsible for the quality own work.
- The leadership style at ABC is transactional oriented. Transactional leadership promotes compliance rather than corporation among workers. In corporation leaders work with subordinates to identify needed change. Managers at ABC Electric make changes without informing shop floor workers and this has resulted in adversarial relationships and resistance to change. In implementation Six Sigma projects top managers have to be hands-on with pinnacle management, eagerness and involvement in providing required resources.

Based on the findings of this research study, it is recommended that ABC Electric implement Six Sigma to address the quality problems and reduce failures. There already exists an understanding and appreciation of quality concepts within ABC Electric's managers and employees which can be leveraged for successful implementation of Six Sigma. The understanding most probably stems from the implementation of ISO 9001 which unfortunately has not been maintained resulting in the company not realizing its benefits.

Based on the conclusions to the findings the following were the recommendations:

- ABC Electric should embark on a company-wide training programme. The training should cascade from top management to shop floor workers in line with the Six Sigma belt system. Investing in training will also

enable the organization to implement total productive maintenance. Investment in new technology and machines is recommended in the long run.

- ABC Electric should flatten its organizational structure through development of a team based organization. Teamwork fosters accountability, responsibility, and ownership among other benefits. A flattened organizational structure will remove bureaucracy and result in improved communication.
- ISO 9001 must be applied vigorously throughout the entire organization so as to assist in managing the business improvement initiative of six sigma. Compliance to the requirements of ISO 9001 will set the foundation for the implementation of the six sigma methodology while six sigma will provide the necessary tools for process control resulting in the effective operation of the ISO 9001 quality management system. Hence the two will complement each other.

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Biography

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