ASSESSING THE CHALLENGES TO THE IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT IN THE DEVELOPMENT OF TERTIARY EDUCATION IN GHANA CASE STUDY OF TAMALE POLYTECHNIC

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Abstract

This study was conducted to assess the challenges to the implementation of Total Quality management in tertiary Institutions in Ghana with Tamale Polytechnic as case study. Total quality management practices and the challenges to the implementation in Tamale polytechnic were examined. Purposive sampling technique was used to select certain key respondents from the Polytechnic for the collection of data. Data was collected using questionnaires and interviews. This study revealed the absence of total quality management practices even though a quality assurance unit was part of the administrative body of the polytechnic. The challenges to its implementation emanated from the attitude of staff among of the polytechnic. Furthermore, the polytechnic lacked a policy plan to manage quality related issues. More so, management was not committed to the implementation of quality management practices in the Polytechnic. The study recommended the introduction of a policy plan to introduce, monitor and control quality related issues in the polytechnic. The quality assurance unit should be empowered to execute their task effectively and efficiently. Finally, a more inclusive approach and appropriate education should be adopted to address some of the problems associated with the practice of Total quality management in Tamale Polytechnic.

Keywords: Challenges, implementation, total quality management.

INTRODUCTION

Higher educational institutions have been strategically seeking quality education, with external measurement such as achievement levels of graduating students and later graduate success as evidence of that quality. In some countries, external monitoring of final examination has provided a measuring rod for institutional success. In others, other performance indicators have been used (Newton, 2002).In more recent years, however significant focus have shifted internationally not just to evidence of institutional outcomes but the internal process by which quality is assured. Coupled with this has been an increased emphasis on the more formative elements of achieving quality not just in the academic areas but in all aspects of campus operations. Quality management in higher education emphasizes issues such as, institutional structures and environment conclusive to making quality procedures and processes effective. Quality demands also reflect on emphasis on education that focuses on the whole person (physical, mental, spiritual and emotional). This invites administrators to use quality management structures and improvement processes to enrich education and delight its customers in the academic as well as social, physical and emotional spheres. Quality assurance agency for higher education (QAAHE, 2001).

Quality assurance in higher educational institution has become an issue of major concern among higher institutions. In the postmodernism era, quality driven initiatives continue to remain high on the agenda of many educational institutions. This is associated with the rise in public accountability and demand for transparency in the way in which higher educational institutions are managed. A number of higher institutions have implemented several quality initiatives. The traditional academic approach to control and maintain quality in higher educational institutions appears to be less effective in the present era. The public demand for greater accountability in the utilization of public funds would require a more explicit assurance of quality in the delivery and management of higher education. The focus remains on quality assurance and quality enhancement. These issues have become a major cause of concern for most nations. They have been accrued priority as strategies have been a planned agenda for higher education to re-examine during the past decades (Elaine, 1998).

Concern about the quality of higher education is on the rise in Africa. It comes at a time of growing recognition of the potentially powerful role of tertiary education for growth, and it is a natural response to public perception that educational quality is being compromised in the effort to expand enrollments in recent years: growing complaints by employers that graduates are poorly prepared for the workplace and increasing competition in the higher education market place as numerous private and transnational providers enter the scene (Newton, 2002). Little is available in the literature on what African countries are doing to regulate and improve higher

education quality; what it takes to implement these initiatives, what has been the impact, and what are the priorities for capacity building? Numerous concerns have been raised regarding the quality of products turned out from most of the tertiary institutions in Ghana. This research therefore sought to unveil the challenges to the implementation of total quality management in the Tamale Polytechnic and its effects on the quality of products for growth. It is against these reasons this study sought to address the following objectives:

1. To assess total quality management practices in Tamale Polytechnic.
2. To examine the challenges to implementation of total quality management in Tamale Polytechnic

The following questions were addressed in a bid to uncover the challenges to the implementation of total quality management in Tamale Polytechnic:

1. What total quality management practices exist in Tamale Polytechnic?
2. What are the challenges of total quality management in Tamale Polytechnic?

Scope of the Study

The study was conducted in the Tamale Polytechnic. And its focus was on the challenges of the implementation of total quality management and the effects on successful human resource development in Tamale Polytechnic. The choice of Tamale Polytechnic is informed by the fact that its core responsibility is to train human resource for the middle manpower of the nation. There is therefore the need to assess how quality management is ensured in delivering that responsibility.

Delimitation

It is worthy to note that total quality management functions cut across several areas. But this study will not include quality control, effects of the role of management to implementing Total Quality Management and the general perception of quality in Tamale Polytechnic.

Limitations of the Study

This study considered a small sample size which may not be generalized beyond a specific population from which the sample was drawn. Some of the sampled respondents may not have answered the questions with honesty, and therefore the results of this study is based on the opinion of a sampled group which might not accurately reflect the opinion of all members within the population considered for the study. Finance was a major challenge to the researchers. This affected the size of the sample and the researcher's ability to access more literature in the area considered for the study.

LITERATURE REVIEW

A Conceptual Analysis of Total Quality Management

Total quality management (TQM) is defined as a management philosophy that seeks to integrate all organizational functions (marketing, finance, design, engineering, and production, customer service,) to focus on meeting customer needs and organizational objectives Terry (2010). Accordingly, Terry views an organization as a collection of processes. It maintains that organizations must strive to continuously improve these processes by incorporating the knowledge and experiences of workers. He further, reiterates that the simple objective of TQM is "Do the right things, right the first time, every time". TQM is infinitely variable and adaptable. Although originally applied to manufacturing operations, and for a number of years only used in that area, TQM is now becoming recognized as a generic management tool, just as applicable in service and public sector organizations.

There are a number of evolutionary strands, with different sectors creating their own versions from the common ancestor. TQM is the foundation for activities, which include commitment by senior management and all employees, meeting customer requirements, reducing development cycle times, Just- in- time or demand flow manufacturing, improvement teams, reducing product and service costs among others, Dale (2003).

The need for quality as a fundamental component in the formulation of strategies for institutions to implement Total Quality Management (TQM) is clearly outlined by Neto (2000) who state that quality, as a macro function of institutions, must be present in the day-to-day running of an institution, in aspects such as establishment of policies, the decision process, selection of personnel, allocation of resources, definition of priorities and service delivery to satisfy customer requirements. Neto (2000) further stated that, the quality approach, as a strategic element, has brought to institutions a new manner of conceiving quality, as it engages the top decision-makers of the institution in the effort for better performance in service delivery.

According to Djerdjour and Patel (2000), quality is no longer an optional extra; it is an essential strategy to survive. TQM is, therefore, a solution for improving the quality of products and services. Before one can discuss the concept of TQM, one first need to discuss, understand and analyze the concept of 'quality' itself. According to Dale (2003) and Evans and Dean (2003) quality, reliability, delivery and price build the reputation enjoyed by an institution. Quality is the most important of these competitive weapons and is an extremely difficult concept to define in a few words in order to agree on a consensus definition; a trait it shares with many phenomena in business and social sciences (Hoyer &Hoyer 2001). Quality does not only refer to goods and

services but includes quality of time, place, equipment and tools, processes, people, the environment and safety, information and measurement. Quality is an ongoing process that has to be so persuasive throughout the institution, that it becomes the philosophy and culture of the whole institution. All institutions and each department within the institution need to adopt the same strategy, to serve the customer with even better quality, lower cost, quicker response and greater flexibility (Schonberger, 1990).

Total Quality Management is one of the most durable management innovations of the past two decades. Total Quality Management has been globally recognized by the Japanese approach toward quality improvement (Mani, Murugan & Rajendran 2003). Yet, in spite of thousands of articles in the business and trade press from 1984 to 2002, Total Quality Management remains a hazy, ambiguous concept. Total Quality Management is arguably the most significant concept that has swept across institutions over the last few years. Total Quality Management encompasses a vast spectrum of topics and perspectives. While Total Quality Management is widely practiced, there is little agreement on what it actually means, despite assertions that "clear definitions are important.In addition, it has been argued by Douglas and Judge (2001) that for an institution to realize the value of a Total Quality Management implementation, it must have an internal conceptual understanding of Total Quality Management in order to be capable of fully supporting Total Quality Management implementation.

According to Douglas and Judge (2001), the emphasis placed on various aspects of TQM varies among the authorities. Some of the emphasis includes the following:

- Competence: This implies possession of the required skills and knowledge to perform the required service such as qualifications and training of service.
- Communication: This involves keeping customers informed in a language that they can understand and listening to customers. Language should not be too technical for the customer to understand and sufficiently technical for those customers who have the required knowledge.
- Credibility: This includes trustworthiness and honesty. Contributing factors are the name and reputation of the service enterprise.
- Security: This involves freedom from danger, risk and doubt. Physical safety in obtaining service at the facilities of the service provider and safety of products use, after repair, is implied.

Factors that Influence Total Quality Management in Institutions

The transformation to a Total Quality Management programme depends on the extent to which institutions successfully implement certain quality management practices. Fewer defects, reduced lead times, higher flexibility and increased employee satisfaction are reportedly among the benefits of a successful Total Quality Management programme (Sirota, 1994).

Barriers to Quality Transformation

There is ample evidence that quality management systems improve institutional performance if properly implemented. Why institutions fail in their endeavours to implement a quality management system. However, two common problems appear to be a lack of strategic planning and a lack of an appropriate culture supportive of Total Quality Management programme. In order to analyze Total Quality Management, it is important to understand the reasons why Total Quality Management programme fail which may provide insight into the importance to understand the meaning of Total Quality Management. Institutions and authors have identified a variety of reasons why Total Quality Management programmes fail and many surveys have been done on this subject (Greb, 1993). The following is a list of obstacles, barriers, reasons and pitfalls institutions have reported when implementing Total Quality Management (Claus 1991). Even though this is not an exhaustive list, it does include the obstacles that are frequently cited in today's literature, namely: lack of management commitment, communication thereof and participation; lack of established guiding framework for TQM; Inadequate knowledge or understanding of TQM; lack of an institution-wide definition of quality; quick fix approach, emphasis on short-term results; lack of a formalized strategic plan for change; inability to change institutional culture; lack of customer focuses (internal and external customers); poor inter-institutional communication; lack of real employee empowerment and teamwork; lack of employee trust in senior management; drive for short-term financial results and the traditional belief that TQM costs money (Djerdjour& Patel 2000).

Customer Expectations in Implementing Total Quality Management

Satisfying customers and creating customer enthusiasm through understanding their needs and future requirements is to crux of TQM and all institutions are dependent on having satisfied customers (Dale, 2003). According to the latter, research has shown that institutions that do not meet their customers' expectations, have lost market shares to competitors who are customer-orientated. Stamatas (1996) developed a generic model for the implementation of customer service, for the very reason of complying with the expectations of the customer. The generic model of six Sigma follows a six-step approach:

Step 1: Identify the added value of service that is to be rendered to the customer.

Step 2: Identify the customer and clearly determine his or her expectations.

Step 3:   Identity the institution's critical needs that are required for customer satisfaction.

Step 4:   Define the process required to perform the work in order to ensure quality customer service.

Step 5:   Zero-defect the process and eliminate wasted efforts.

Step 6:   Ensure continuous improvement by obtaining continuous feedback from the customer, in order to produce continuous total quality results as output. Stamatis (1996:56)

Principles of Total Quality Management in Practice

Despite diverse views on what constitutes Total Quality Management, there are a number of principles that will now be summarized. According to Dean and Bowen (1994:394), Total Quality Management as a philosophy or an approach to management can be characterized by its principles. They continued and indicated that Total Quality Management implementation can only be accomplished through a set of principles that supports the Total Quality Management philosophy. What differentiates Total Quality Management from other management processes is the emphasis on continuous improvement. Total Quality Management is about continuous improvement of individuals, of groups and of institutions. To improve performance, people need to know what to do, how to do it, have the right tools to do it, to be able to measure performance and to receive feedback on current levels of achievement. (Dean & Bowen 1994). The following key principles underpin the Total Quality Management concept, which are common to all manifestations.

Total Quality Management Starts at Top Management

Top management should demonstrate understanding, commitment and be involved in the total quality improvement process from day one in order to improve quality in all areas of the institution.(Hoyer & Hoyer (2001)

Total Quality Management Requires Total Employee Involvement

People at all levels are the essence of an institution and their full involvement enables their abilities to be used to the benefit of the institution. The involvement of every individual in an institution is necessary for successful Total Quality Management implementation (Burr, 1993).

Total Quality Management Needs Strategic Planning

Strategic planning is necessary to align and integrate all the efforts of the institution with the Total Quality Management concept. The link between Total Quality Management and strategic planning should provide an integrated management system for an institution (Adinolfi, 2003)

Total Quality Management Focus on Teamwork

Institutions should understand that employees need to participate in vertical, horizontal and cross-functional teams to be most effective. Teams should be used through collaboration/participation, to provide an opportunity for employees to work together in their pursuit of total quality in ways that they have not worked together before (Dale et al., 2001).

Total Quality Management focus on continuous improvement

Continuous improvement should be a permanent objective of the institution. Continuous improvement means a commitment to constant examination of technical and administrative processes in search of better methods. Underlying this principle are the concept of institutions as systems of interlinked processes and the belied that by improving these processes, institutions can continue to meet the increasingly stringent expectations of their customers (Ghobadian et al., 1996).

RESEARCH METHODOLOGY

Research Design

The cross-sectional research design was adopted for the study. This method was adopted because there was the need for the examination of definite units with specific characteristics within a particular time frame. This was to give a general picture of the challenges to the implementation of total quality management to the development of tertiary education in Ghana.

Targeted Population and Sample Size

The polytechnic community comprises the target population of the study. They include administrative staff, academic staff, the support staff and the students. A purposive sampling was used to draw the sample elements from the target population. The sample size for this study was one hundred and twenty (120) respondents which was made up of 30 teaching staff, 30 administrative staff and 60 students. The sample size was determined by considering the total number of each unit of the target population by a percentage. That is:

Teaching staff = $14/100 \times 215 = 30$

Administrative staff = $26/100 \times 115 = 30$

Students = $1.7/100 \times 3500 = 60$

This is illustrated in Table 1 on next page.

Table.1 Sample Size

Composition	Frequency	Percentage%
Administrative Staff	30	25
Teaching Staff	30	25
Students	60	50
Total	**120**	**100**

Data collection

Out of the 120 questionnaires administered, all the questionnaires were retrieved and analysed in this presentation for discussion.

Socio biographic profile of respondents

Out of the 120 respondents studied, 76% of respondents were males. The female respondents were 24%. The male respondents dominated among the staff of the Polytechnic. The ages of the respondents indicated that, those within the ages of 18-23 years were 19%, 24-29 years were 34%, the ages of 30-35 years were 35% and the ages of 36 years were 12%. This indicates that, the modal age range of the respondents were between the ages 30 to 35 years.

FINDINGS & DISCUSSION

Practice of TQM in Tamale Polytechnic

Table.2 shows that of the 120 respondents, 83% of the respondents said the Polytechnic practiced total quality management. This means that Tamale Polytechnic having recognized the role of TQM has made it a strategic competitive tool.

Table 2: Practice of Total Quality Management in Tamale Polytechnic

General Response	Respondents	Percentage%
Yes	100	83
No	8	7
No response	12	10
Total	**120**	**100**

Areas of Practicing TQM in Tamale Polytechnic

Of the 12 respondents, 33.3% said teaching and learning through qualified teaching staff recruited enhances Total Quality Management in Tamale Polytechnic. And of the 10 respondents, 40% responded that some degree of strict supervision and invigilation of examination influences Total Quality Management while 20% agreed that Total Quality Management in Tamale Polytechnic is being influenced by sanity in admission of students and

examination. Also, 2 respondents representing 100% responded that Total Quality Management is not limited to any of the above but all and including others like nature of infrastructure. Data on this is illustrated on Table 3.

Table 3: Cross Tabulation of Area of Practicing TQM in Tamale Polytechnic with Reasons

Area of Practicing TQM		Reasons						
		No Response	TQM is not limited to any of the above but all and including others like Nature of Infrastructure	Sanity in Admission of Students and examination would result in about 80% quality	There is some degree of strict supervision and invigilation of examination	Qualified Teaching Staff are Recruited	Total	(%)
	Teaching and Learning	8 (66.7)	0	0	0	4 (33.3)	12	40
	Examination	4 (40)	0	2 (20)	4 (40)	0	10	33
	Quality of Staff	4 (100)	0	0	0	0	4	13
	Others	0	2 (100)	0	0	0	2	7
	No Response	2 (100)	0	0	0	0	2	7
Total		18	2	2	4	4	30	100

Presence of Quality Assurance Unit

Figure 1 shows that 30 of respondents from Management answered in the positive that the Polytechnic had a quality assurance unit, 26 of teaching staff accepted that the Polytechnic had a quality assurance unit, 44 of students respondents also indicated positive response to the question. This means that a total of one hundred (100) respondents from the one hundred and twenty respondents chosen for the study affirmed that the Polytechnic has a Quality Assurance Unit. This is relevant because the implementation of TQM relies on the availability of supporting units, of which the quality assurance unit is significant.

Figure 1: Presence of Quality Assurance Unit
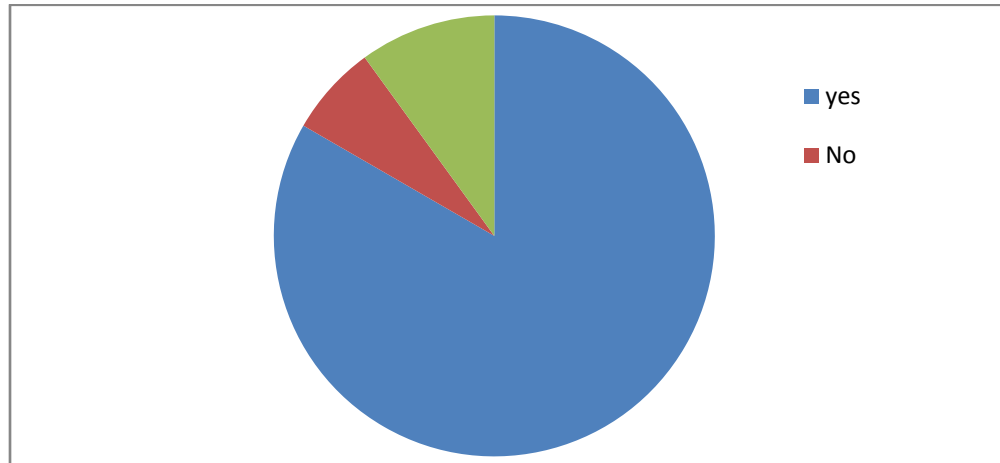
The issue of how Total Quality Management operates in Tamale Polytechnic, 39% of the respondents indicated that supervision of students work was an area where TQM was practiced, 46% indicated that, total quality management was practiced under the management of the quality assurance unit, 8% indicated that teaching and learning was the area where TQM was practiced and 7% did not know where it was practiced. Even though majority of the respondents indicated management through the quality assurance unit as an area where TQM was practiced, they explained that there was no laid down guide for the operation of TQM in the Polytechnic and that, the head of the unit did not communicate any issue of TQM to staff, but took it as "one man's show".Even though the respondents had the view that TQM was in operation, their explanations contradicted with the actual principles of TQM. This could account for serious challenges to the success of its operation. This is illustrated in Table 4.

Table 4: Areas where TQM Operate in Tamale Polytechnic

RESPONSE	FREQUENCY	PERCENTAGES
Supervision of work	47	39
Management (Q.A)	55	46
Teaching/ learning	9	8
Don't know	8	7
Total	**120**	**100**

Challenges to Total Quality Management in Tamale Polytechnic

From Table 5, of the 30 respondents, 60% from management indicated that the attitude of staff was a serious challenge to managing total quality management with 13% explaining that conflict

of interest among staff mostly led to indiscipline leading to difficulties associated with the implementation of total quality management, 13% stated that infrastructure was a constraint to total quality management, 7%said that management was not committed to managing total quality. Financial Constraints recorded 7% of the respondents with an explanation that Total Quality Management might not be achieved because all units were not functioning properly in the polytechnic.

Table 5: Cross Tabulation of Challenges to TQM in T. Poly with respondents' reasons.

Challenges of TQM	Response	Explain			Total	Percentages (%)
		No Response	TQM might not be achieved because all units not are functioning properly	Conflict of interest among staff mostly lead to indiscipline		
	Attitude of Staff	8 (44.4)	0	10 (55.6)	18	60
	Infrastructural Constraints	4 (100)	0	0	4	13
	Management commitment	2 (100)	0	0	2	7
	Financial Constraints	0	4 (100)	0	4	13
	No Response	2(100)	0	0	2	7
	Total	16	2	12	30	100

Majority of the teaching staff represented by 60% also indicated that the attitude of staff was a big challenge to managing TQM. This implies that the basic challenge to managing total quality in Tamale Polytechnic is attitude of staff. This poses a serious threat to the achievement of TQM because staff commitment is critical to the success of TQM implementation.

Relationship between Participatory management and TQM

The issue of how participatory management could affect the success of TQM, management had eighteen (18) respondents, teaching staff had 16 respondents and students 39 respondents all indicating that it was positive as all will have the obligation to the success of the implementation of TQM. This indicated a cumulative percentage of 61% affirming that participatory management is a way of dealing with some of the challenges of TQM. The Polytechnic could leverage the benefits of TQM through this approach of management. This is illustrated in Figure 2:

Figure 2: Relationship between Participatory Management and TQM
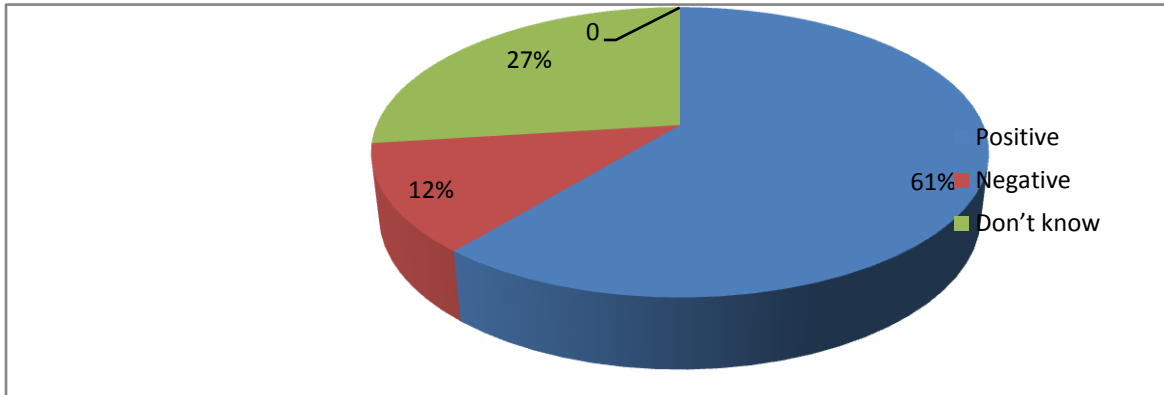
Relationship between Centralized Management and TQM

On the issue of centralized management, a cumulative percentage of 73% indicated that it would have negative consequence on the management of total quality. They explained that decision making at that level would be too rigid and would lack the flexibility to manage quality at all levels of management in the polytechnic. This is very critical especially in areas where decision making is expected to be decentralized for the smooth flow of activities in the Institution. This is manifested in Figure 3:

Figure 3: Relationship between Centralized Management and TQM
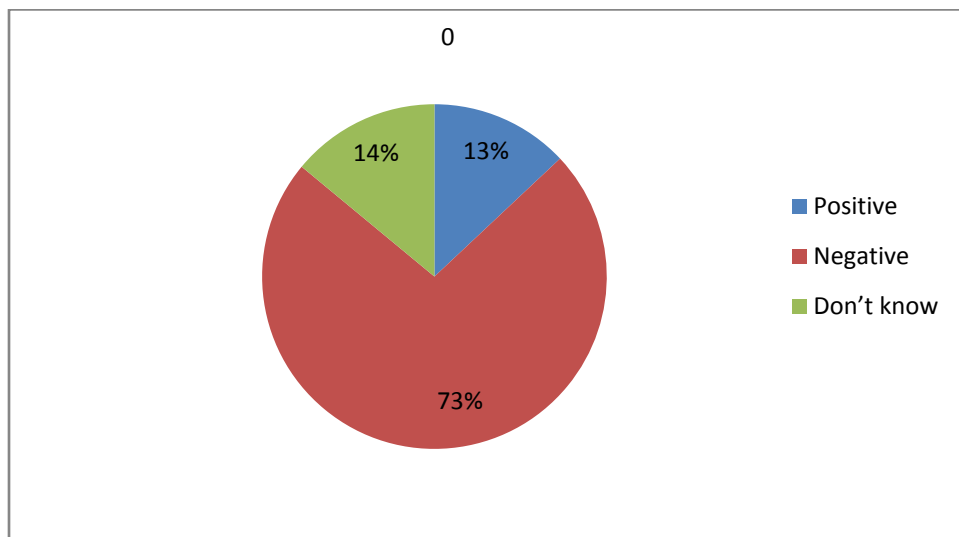
An Assessment of the Performance of the Teaching staff to the success of TQM

To effectively gather accurate data on the issue above, interview was conducted across the administrative and the teaching staff. The academic registry indicated that the Q.A unit has been in contact with them regarding issues bothering on academic performance of the students.

In terms of the general performance of lecturers; the unit indicated that they were putting up their best even though a lot of challenges usually stand their way. Some of these challenges were: the teaching staff handling large classes without public address system and the difficulty in supervising students' works due to lack of offices and other logistical constraints.

The performance of the students was the biggest problem. The unit lamented that in recent past, they were bedeviled with a lot of faked and unqualified results being used by students to secure admission. This trend has affected the total number of graduating students from 85% five years ago to 45% two years ago. Most of such students find it difficult to cope resulting in very poor performance which invariably affect the total number of graduating students.

The academic unit indicated that the Unit through the central admission board is now bringing sanity into the admission process. This means that, the collective efforts of all staff to ensure sanity and improvement in quality must not only rely on the offices responsible for a particular task but the collective efforts of all.

Response from Teaching Staff

Through the discussion the researcher had with the teaching staff, the revelation was that the human resource component to managing quality in the Polytechnic had been neglected even though the backbone of the success to TQM was the human resource. This could account for the behavior of staff towards achieving quality. The issue of staff development according to the teaching staff seems to be the biggest challenge for the Polytechnic since the Polytechnic did not have any policy on developing staff .This has corroborated the initial revelation. This could be a serious threat to the success of TQM in any institution that seek to adopt TQM as a concept.

According to the teaching staff, the quality assurance unit should be able organize workshops and seminars at least once or twice every academic year to review the performance of the previous year and to formulate plans for the subsequent years if the Polytechnic want to have the fruit of TQM.Response from both Registry personnel / Academic and teaching staff on the role of staff development to the implementation of TQM in the polytechnic placed 100% each among the group of respondents indicating that there was a positive correlation between TQM and staff development. Discussions with these respondents further revealed that, motivation of staff among others constituted a major tool to the successful implementation of Total quality management. Motivation is a major component in managing TQM; its absence could be a setback for the Institution.

CONCLUSION

In spite of widespread interest and massive investment in Polytechnic education, there are reports of only isolated successes. By and large, quality is not yet integral to almost all department or most activities in the tertiary Institutions in Ghana. The progress is only in terms of how many people are trained rather than how many inherent quality problems have been recognized and resolved. The concepts of Total Quality Management have been widely discussed, but the challenges of implementation have received little attention especially within the service sector in Ghana. This Philosophy must facilitate a long term change for tertiary institutions; top management commitment as well as the substantial inflow of resources; adequate training and workforce participation is very essential to the success of Total Quality Management.

RECOMMENDATIONS

Total Quality Management in the Polytechnic should be an all-inclusive strategy that must be taken seriously at all level. This can be done through vigorous training and education on specific performance targets guided by strategic plans. When this is done total quality management will not be seen as any strange concept in the polytechnic.

Furthermore, Skill training through workshops and seminars should also be organized for all units and departments about the revolution in management of quality and the role of all. This when introduced and carefully managed will enhance smooth and effective practiced of Total Quality Management in the polytechnic. The polytechnic should develop its own policy on managing total quality. This policy should have inputs from all units and departments in the polytechnic which must be related to quality improvement, quality assurance and general improvements in process and practices. This policy must be integrated into the entire policy plan of the polytechnic.

The system and structures of TQM depends on the facilities of the institution. All the structures and facilities of the institution must reflect tertiary status and must also facilitate easy and better delivery of services devoid of breakdowns and inaccuracies. Relevant stakeholders should be contacted for support especially government and organizations. Managing quality depends on the state of satisfaction achieved by the workforce on the job. Better service conditions and programs must be designed to motivate staff in general. These programs must be challenging to require best practiced and quality achievement by all staff. This will compel most of the workforce to give out their best and also work towards the general success of the implementation of TQM. This could be done by empowering the Personnel manager and the quality assurance manager to design such program and also to manage its implementation. The

broader scope of quality commitment must be understood by all staff. This is very important to the collective gains associated with the success of the practice of TQM. This can be achieved by setting targets for staff and giving them the opportunity to assess their performance.

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