

Forces That Influence Change in the Operational Areas of Technical Universities/ Polytechnics

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ABSTRACT

The study intended to identify the forces that influence change in the operational areas of the Technical Universities/Polytechnics. The population comprised management and staff. Purposive, stratified, simple and convenience sampling methods were used to select the sample size of 120. Questionnaires and interview were the main instruments used. Analysis was carried out using Microsoft Excel. The study revealed that, the most dominant factors of significant change in the operations of the Technical Universities\ Polytechnics were the adoption of new technology in teaching, learning and general administration, improvement in the skills, knowledge and the abilities of employees, elimination of bureaucratic leadership, and sensitivity to the needs and aspirations of the clients. The study also revealed that, overhead projectors are important in instructional delivery.

Keywords: influence change, overhead projectors

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Introduction

In recent years, much is been done within and beyond the borders of Ghana through research on change. Change management industrialists or professionals seek to empower change management executives, front-line-supervisors all over the world with the newest and most current approaches in dealing with change management results. The relevance of change management to individual, corporate bodies and society as a whole in this competitive and technological dispensation could not be under estimated. Organisational change according to Lunenburg (2010) is the transformation of an organisation from its present state and towards some desired future state in order to promote its effectiveness. Prosci (2014) contends that 'change management is the application of a structured process and set of tools for leading the people side of change to achieve desired outcome'. The people side of change focuses on leadership at all levels of an organisation as well as those members whose participation contributes to the change process in fulfilling the goals and aspirations of the organisation. Rajput, Singh and Singh (2012) viewed change management as a structured approach to shifting / transitioning individuals, team, and organization from a current state to a desired future state. The Concept of change is usually clouded by the stronger perception that it is often initiated by top management team. However, Yukl (2008) argues that any member of an organisation at any level can initiate change or contribute to its success. Organisational change according to Lunenburg (2010), is the transformation of an organisation from its present state and towards some desired future state in order to promote its effectiveness. In Ghana, tertiary education is provided by Universities, Polytechnics, Specialised Colleges and others, under the supervision of the National Council for Tertiary Education (NCTE). The NCTE advises Government through the Minister responsible for education on policies relating to tertiary education in Ghana. Reporting from the Ghana Legal (2014), the Executive Secretary of the NCTE, Prof. Mahama Duwiejua said, Ghana currently has the following Public and Private Tertiary Institutions under the NCTE. These comprise of Eight (8) Universities, Ten (10) Polytechnics, Thirty-eight (38) Colleges of Education, Three (3) Specialised Institutions, Three (3) Regulatory bodies, Fifty-five (55) accredited Private Tertiary Institutions as at December, 2011.

This typical example therefore calls for change in policy direction to adequately expand the tertiary facilities to provide quality education. Another critical area of concern was funding. Writing on the topic 'Funding tertiary education in Ghana' an Article that appeared in the March 20, 2005 edition of Modern Ghana, by the "GyeNyame" Concord, catalogued a number of funding issues confronting tertiary education in Ghana. It was revealed that Government's expenditure on tertiary education recorded a deficit of 38.5% in 1997. This resulted in the abolition of Government's subventions and grants to tertiary Institutions and that led to payments in respect of usage of residential and academic facilities fees in 1998. By the year, 1999, the deficit rose to 40%. In a paper presented by the then Hon. Deputy Minister of Education, Science and Sports, Hon. Mrs. Angelina Baiden-Amissah in 2006, at the study Tour of Asia by African Ministers of Education, the story was the same. In a report published by Justlanded (2014), two third of university applicants were denied admissions due to limited

space in 2008. The report also described the issue of fee paying among tertiary institution in Ghana as discriminatory in terms of wealth distribution thereby favouring those who had the opportunity to afford.

Another area that needs redress is the disparity between choices of programmes in Tertiary institutions. Writing on issues related to Academic challenges, The Education Sector Performance (ESP) Report (2013) reveals that there exist high rates of imbalance between students offering humanities and those of engineering and applied sciences. Students' enrolment into science and technical programmes for both Public and Private Institutions stood at 39.1%. This was a disincentive to the country in helping it cope with technological and globalised pressures. On the part of quality teaching staff, the report had it that, Public Universities had the highest proportion of 38% full-teaching Staff possessing PhD qualifications. In Polytechnics and Private Institutions offering degree programmes, more than 60% of full-time teaching Staff had Masters Degrees. In the Colleges of Education, the largest portion (49%) of Staff had Bachelor's Degrees, followed by Masters (35%).

The above literature reveals the reality of issues affecting tertiary education in Ghana which includes funding, infrastructure, Staff development and academic challenges. These were indication that change was urgently needed among all tertiary institutions to make their impact relevant. Polytechnics in Ghana were upgraded to tertiary institution in 1992 under the Polytechnic Law (PNDCL 32), Ghana Legal (2014). However, the Polytechnic Act, 2007 (Act 745) which repealed the polytechnic Law, 1992, mandates Polytechnics to provide Tertiary Programmes in the fields of Manufacturing, Commerce, Science, Technology, Applied Social Science, Applied Arts and any other fields approved by the Minister and to provide opportunities for skills development, Allied research and Publication research findings. This led to the award of Higher National Diploma (HND), other Diplomas and Certificates accredited by National Accreditation Board (NAB) and award Degrees subject to the conditions that the Council of that Polytechnic may determine. The environments of most tertiary institutions are becoming increasingly dynamic and competitive. Competition is becoming more intense, stakeholder expectations are rising and less time is available to develop and market new programmes and services to stand the competition. This attitude is one of the main causes for programmes in Tertiary institutions becoming obsolete.

To succeed in this turbulent environment, tertiary institutions need to have proactive change management systems to ensure constant evaluation of programmes, policies and practices to meet the changing market demands and for continuous improvement and productivity. Thus, for effective operations of every tertiary institution such as Bolgatanga Polytechnic, change is very necessary and so requires pragmatic as well as urgent steps to turn around the fortunes of the Polytechnic. Over the years, several training and infrastructural development programmes have been instituted to build capacity of Staff and to embark on rigorous infrastructural development with full-scale state of art technology to enhance teaching, learning and general administration of Bolgatanga Polytechnic. However, these laudable efforts have always proved futile. The current inadequate state of physical modern infrastructure including the use of ICT in teaching, learning and general administration and the low staff development level does not fit its status as a modern Polytechnic. It is against this back drop that a study into the forces that influence change in the operational areas of tertiary institutions becomes imperative.

Methodology

The descriptive type of research design was adopted to survey and assess the forces influencing the operational areas and its effect on productivity in Tertiary institutions in Ghana, using Tamale Technical University, Bolgatanga Polytechnic and Wa Polytechnic. Both qualitative and quantitative methods were used to collect data. The questionnaires were self-administered and in some cases interviews were conducted using the questionnaire. The population of the study were all members of the Polytechnics/Technical Universities management and staff. This comprised 31 Management members and 261 Staff members. The sample size included 20 members of management and 100 members of Staff. The total number of respondents who were investigated is presented in Table 1.1.

Table 1.1 Sample size of Respondents

Types of respondents	No. of Respondents
Management	20
Staff	100
Total	120

SOURCE: field study, August, 2018

The researchers used the combination of sampling techniques to select the sample size for the study. Convenience sampling technique was used to select Management. Besides, stratified random sampling and Simple Random Sampling methods were employed to select members of staff. The staff were first grouped into teaching (academic) and non-teaching staff. The non-teaching staffs were further stratified into senior and junior

staff. Simple random sampling was then used to select respondents from each of the strata. The names of the members of each group were put into a container and mixed up. Respondent were then selected at random from the container without replacement until the required number of respondents from each group were selected. This was to ensure that each member of a stratum had equal chance of being selected for the study. The researchers used questionnaires and interviews to collect primary data. The primary sources involved the use of questionnaire and interviews to collect first-hand data for the research work. The secondary sources included textbooks, articles, publications, journals and internet search. The researchers used Microsoft Excel to identify, compare, describe and reach conclusions. Qualitative methods were employed with the help of descriptive statistics.

Discussion

4.3 Forces that influence change in the operational areas of Polytechnics/Technical Universities

The challenges confronting tertiary institutions today concerning the level of growth and development requires a critical look into identifying the forces that engender change to each of these institutions. It was against this backdrop that the researchers solicited views from management and staff on the subject under investigation. Management was interviewed whereas questionnaire was used for staff.

According to the field data gathered to assess the forces that cause change in the operational areas of Polytechnics/Technical Universities as indicated in Table 1.2, 53% and 43% respectively agreed and strongly agreed (*cumulatively 96%*) that change in organisational leadership triggers change in the operational areas of the Polytechnic/Technical Universities while 2% strongly disagreed and 2% were unsure.

Table 1.2: Forces that influence change in the Technical Universities/Polytechnics (staff perspective)

Variable	Strongly disagree		Disagree		Unsure		Agree		Strongly Agree		Total frequency
	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	
Leadership	2	2	0	0	2	2	53	53	43	43	100
Technology	0	0	0	0	0	0	29	29	71	71	100
Change in needs of clients	0	0	0	0	7	7	60	60	33	33	100
Change in Government laws and regulations	4	4	2	2	7	7	47	47	40	40	100
Modification of organisation	2	2	4	4	11	11	60	60	23	23	100
Improvement of skills, knowledge and abilities of employees	0	0	0	0	2	2	36	36	62	62	100

Source: Field Survey, August, 2018

f = frequency of responses

The interview conducted on management reveals that 45% and 40% respectively agreed and strongly agreed (*cumulatively 95%*) that leadership is a force that influence change in the Polytechnic, 10% disagreed while 5% were unsure as in Table 1.3. This implies that the views expressed by the respondents were in line with Lunenburg (2010) who says good leadership role is very essential in managing the forces of change of an organisation. This includes leadership communication and decision making process of the change. Lunenburg argues that ideal and appropriate leadership situation is where communication flow is effectively adequate with quality decision making process where staff motivation is high to support the change process.

Table 1.3: Forces that influence change in the Technical Universities\Polytechnics (management perspective)

Variable	Strongly disagree		Disagree		Unsure		Agree		Strongly Agree	
	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%	<i>f</i>	%
Leadership	2	10	0	0	1	5	9	45	8	40
Technology	0	0	0	0	0	0	6	30	14	70
Change in needs of clients	0	0	0	0	1	5	0	0	19	95
Change in Government laws and regulations	0	0	0	0	0	0	47	47	20	100
Modification of organisation	0	0	0	0	1	5	0	0	19	95
Improvement of skills, knowledge and abilities of employees	0	0	0	0	0	0	36	36	20	100

Source: Field Survey, August, 2018

On the part of Dutta et al. (2003) leadership control the organization's resources and directs where they feel they are needed. They can act as constraining forces by putting up values and beliefs that could preserve the status quo whereas in fact it is change that is urgently needed to salvage the institution. From the research, the majority argument with regards to change in leadership bringing change in the Polytechnics/Technical Universities stems from the fact that new leaders come with a new vision, focus and direction that makes the status quo to change.

Apart from leadership being considered as a force for change, there seems to be the general perception that the introduction of technology in any field of human endeavour be it science, education, the art, and industry stimulates change. With regards to new technology being one of the factors that bring change, the responses obtained from Table 1.2 and 1.3 respectively indicate that there was massive endorsement. All the respondents 100%, thus, both management and staff, strongly agreed or agreed that the introduction of new technology was a major causal factor of change. This was strongly supported by Guler (2012) who indicates that Technology is a driver that enables organisation to keep up with rapid and changing development in Business environment and any organisation that is willing to survive must adopt technology. On the basis of this, the researchers interviewed management on issues concerning technology in Polytechnics/Universities and their responses were presented in table 1.4

Table 1.4 Technological Needs

Variable	Frequency	Percentage %
The use of Overhead projectors	9	45
Telecommuting/Teleconferencing	1	5
Satellite radio/TV Technology	1	5
Public Address system	3	15
Internet/ Communication Technology	6	30
TOTAL	20	100

Source: Field survey, August, 2017

When management were interviewed about the key technological ideas that could introduce change in the Technical Universities/polytechnic, 45% respondents mentioned the use of overhead projectors in the delivery of lecture as it is the basic tool used by almost all tertiary institutions and even some 1st and 2nd Cycle institutions. 5% respondents also pointed out that, a new way to be part of globalisation is the introduction of telecommuting and teleconferencing. This technology is used to promote face to face interaction at distant locations. Also, 5% respondents talked about satellite radio and television technology. Fifteen percent (15%) of the respondents indicated that the use of public address system in the various lecture halls will reduce students rushing and struggling at lecture halls since Lecturers' inaudible voices during lecture will be clearly heard. Thirty percent (30%) respondents touched on internet and communication technology. This is to enhance research work and notes preparation for students.

The competitiveness and survival of an institution is largely depended on the client's acceptability of the products or services provided by the institution. Mitchell (2007) says that some of the evidence of the relevance of the organization's performance is the production of goods and services that meets the needs and aspirations of stakeholders or clients. Performance was considered relevant when clients patronised the goods and services provided, and there was increasing investor confidence in products. This therefore influenced the researchers to seek the views from respondents on whether change in needs of clients could cause a change in Technical Universities/Polytechnics. Table 1.2 also indicates that, 60% of the respondents agreed and 33% strongly agree (*that's 93% cumulative*) believed that changes in needs and aspirations of consumers or clients could cause a change in the Technical Universities/Polytechnic. No respondent disagreed or strongly disagreed except 7% who said they were unsure.

Also, the interview conducted on management to seek their view about clients' influence on change, the study revealed that 95% of them strongly supported the sentiment that clients' needs and aspirations can influence change while 5% said they were not sure. These responses obtained from the respondents were strongly supported by Lunenburg (2010) who argues that the Labour Market, which in this case, represents employers of the products of the polytechnic have much influences in determining the Course content of the polytechnic. This was not surprising for the researchers because in the Polytechnics/Technical Universities, client needs largely influence the content of the various programmes offered and this has largely been confirmed by both management and staff. An example is the study of shorthand and typewriting as part of secretarial courses in some Tertiary institutions. Since most employers no longer require shorthand as a pre-requisite for appointing Secretaries, some Tertiary institutions have scrapped them whilst there are many proposals to completely replace them with computer studies instead, according to what prevails in the labour market.

Also, the researchers sought to find out the views or respondents as regards to whether change in government laws and regulations cause organisational change. From Table 1.2, about 40% strongly agreed and 47% agreed (*cumulatively 87%*) that change in Government Laws and Regulations influence change in operational areas of Polytechnics/Technical Universities but 6% strongly disagreed or disagreed. Again, the interview with management indicates that all members (100%) strongly agreed to the fact that Government Laws and regulations greatly have impact on organisational change. This was also in line with Lunenburg (2010) and supported by Nikols (2010) who shared the same viewpoint that Government Laws and regulations influence change. As a matter of fact, organisational change can be influenced by the modifications of National policies, constitutional instruments (C.I) or Legislative Instruments (L.I). For example, currently, the upgrading of Polytechnics into Technical Universities is a well-come news to the Polytechnic Community since it will boost instructional as well as infrastructural advancement, uplifting the cooperate image of the Polytechnics. This will go a long way to eliminate outmoded programmes and substitute with relevant and demanding programmes. These developments precipitate innovations and advancements to the individual members of the Polytechnic Community.

Modernisation was seen as an important component of change in the Technical Universities/Polytechnics. The results obtained from Table 1.2 shows that, 60% of staff agreed and 23% (*cumulatively 83%*) strongly agreed that modification of an organisation brings change to the institution while 6% strongly disagreed and disagreed. Also, 11% of the staff was unsure about this sentiment. When management was interviewed, their opinion was not quite different from the staff. According to the management, modernisation is the only way an institution can retain competitive and unique talents since a traditional organisation may have its staff poached by a transformed organisation. As a result, 19 out of the 20 management representing 95% strongly agreed and agreed that modernisation influences change while 1 respondent was unsure, representing 5% as shown in Table 1.3. This is supported by Peters and Waterman 1982 that in a modernized institutions management creates broad, uplifting, shared culture and a coherent framework within which charged-up people search for appropriate adaptations. Their ability to extract extraordinary contributions from very large numbers of people turns on the ability to create a highly valued sense of purpose. Such purpose invariably emanates from love of product, providing top-quality services, and honouring innovation and contribution from all.

Finally, in an endeavour to ascertain the extent to which upgrading of skills, knowledge and abilities of employees could influence change in the Technical Universities/Polytechnics, 98% (*that is 36% agreed and 62% strongly agreed*) said training and development programmes are invaluable in assisting staff to overcome their weaknesses and strengthen their competencies on their jobs which can cause change at the individual, departmental and the entire Polytechnic level as indicated in Table 1.2

With regards to skills as a tool for organisational change, all the management members strongly agreed that, it was the only way of ensuring successful implementation of change. Thus, the training, seminars, workshops, and conferences sponsored or organised by the Technical Universities\ Polytechnics were evidence for promoting and upgrading the competencies, skills, knowledge and abilities of staff for efficiency and effectiveness of staff performance. This was in line with the International Labour Organisation 1997, which states that, the issue for employers (and for employees and economies) goes beyond the need to upgrade the skills of the current workforce. It is also necessary to equip future entrants to the workforce with the requisite education which makes them 'trainable' for emerging and constantly changing skills requirements. Improvements have to be equally qualitative as well. Employees need to be endowed with the capacity to move from one skill to another as each one becomes obsolete, and to develop the cognitive, analytical and inter-personal skills required to work in a modern organization and as the economy progresses from one level of development to another.

Conclusions and recommendations

Leadership change, introduction of new Technology, needs and aspirations of clients, improvement of skills and abilities of Personnel are dominant factors that management should apply to bring change in Technical Universities/Polytechnics. Overhead projectors are critical in instructional delivery since they are key variables that could promote change in the Technical Universities \Polytechnics and analogous institutions. The study recommend among others that, management of the Technical Universities/Polytechnics would need to reengineer the institutions through technological applications such as overhead projectors, internet connectivity, teleconferencing and satellite radio and television technologies in teaching, learning and general administration. Management of Technical Universities\Polytechnics would need to create an avenue for skills development in ICT and other academic pursuits to enable both academic and non-academic staff to make effective and efficient use of the ICT equipment and tools. The development should be extended to the students by impartation of the same knowledge and skills. The government of Ghana should endeavour to support the Technical Universities\Polytechnics by providing the needed resources, machines, equipment and infrastructure such as laboratories, workshops, lecture theatres, computers, CCT cameras, generators, books, internet connectivity and funds among others.

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