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Government Access-Policies on Polytechnic Education in Ghana:
The Relevance for Cape-Coast Polytechnic.

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List of abbreviations

DACF - District Assemblies Common Fund

E.R.R.C - Education Reform Review Committee

FCUBE - Free Compulsory Universal Basic Education

GDP – Gross Domestic Product

GET Fund – Ghana Education Trust Fund

HND - Higher National Diploma

MOEYS - Ministry of Education Youth and Sports

NAB – National Accreditation Board

NABPTEX - National Board for Professional and Technical Examinations

NCTE - National Commission for Tertiary Education

N.D.P.C. - National Development Planning Commission

NPT - Netherlands Programme for Institutional Strengthening of Post-secondary Education and Training Capacity

PNDC – Provisional National Defence Council

TEP - Tertiary Education Project

UNESCO – United Nations Educational Scientific and Cultural Organization.

URC - University Rationalization Committee

WCHE – World Conference on Higher Education

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Summary

The Concept of government access policies on polytechnic education in Ghana involves government use of several regulating mechanisms to control the number of students enrolled in all the polytechnics. These mechanisms include restrictive admission policies, structural reform both at the system level and within different sectors, and selection and quotas in the various polytechnics in the country. The Higher National Diploma programme is a three-year Diploma awarding programme which is designed to equip graduates work in middle level manpower positions in Ghana; it is also practical-oriented diploma programme which provides technical knowledge to graduates. Although the Cape Coast Polytechnic conducts its own admission, most of the criteria used in determining successful applicants to the various Higher National Diploma programmes are contained in government policy documents which spell out the various entry criteria. Ghana continue to witness increasing demand for polytechnic education and an important step to address this development is to identify the factors that contribute to the increasing demand for polytechnic education and the introduction of alternative solution to providing quality education to all citizens of Ghana as contained in the constitution of the country.

The study identifies student selectivity processes in Cape Coast Polytechnic and explores ways of increasing students' enrolment in the face of challenges from government access policies. The involvement of government in the management of polytechnic education in Ghana is very important not only in giving tertiary education a national identity but more importantly to ensure that graduates who pass out of polytechnics possess the needed knowledge and skills which the country needs to develop. Thus, without altering the quality standards of education in Ghana, the study looks at how best Cape Coast polytechnic could rise to the challenge of meeting the ever increasing demand for polytechnic education. Secondly, the study identifies the major reasons for demand for polytechnic education and the key factors that necessitate the increasing demand for polytechnic education in Ghana. The development of market model approach in Cape Coast Polytechnic is one way the study recognises as cannon for increasing students' enrolment rates in the institution without necessarily depending on government funding.

The study made use of empirical survey research methods which involved design and instrumentation needed to come out with findings based on factual results on the field. Interview schedule, questionnaire structures and document review were the three main instruments used in drawing up data from the research field for the study. An analysis of existing government access policies on tertiary participation was carried out and the results were used for study. Some management members of the Cape Coast polytechnic were interviewed while a sample of applicants to the polytechnic for the 2006/2007 academic year completed questionnaire structures for the study. Some business organizations in the Cape Coast Municipality were interviewed to identify how industry and the polytechnic could collaborate to train employees of the organizations in the polytechnic.

The strengthening of the market model approach of institutional governance within the Cape Coast Polytechnic and a concurrent development of internal structure to support the market model approach would enable a greater percentage of applicants to the polytechnic gain admission and enrol in courses of their choice. However, this would call for more financial commitment from the applicants towards funding their education. Aspects under the market model approach that would benefit the country, industry, applicants and the polytechnic are; the introduction of part-time tertiary programmes and collaboration between Cape Coast Polytechnic and industry within the Cape Coast Municipality. The increasing demand for polytechnic education stems from the fact that applicants consider the economic and social benefits of obtaining a Higher National Diploma Certificate in work place and prospective work place. An effective data base system run by the polytechnic would also ensure that planning students' enrolment is carried out with the use scientific process and methods.

CHAPTER ONE

1.0 Introduction

Countries all over the world are redefining the policies that govern tertiary education to ensure that all citizens get equal access to tertiary education. This has been necessitated by the increasing numbers in secondary school enrolment and the need for individual development and survival. The demand for higher education is continually increasing and is triggered off by the increasing number of secondary school leavers, mobility and the presence of other age groups looking for second opportunities.

The concept of access to tertiary education is not only seen as necessary for the development of the individual student but more importantly, for the socio-economic development of the country as a whole. Initiatives by individuals who desire to pursue further education are often met by greater challenges such as funding, choice of program of interest for the prospective student and the availability of job opportunity for the individual upon completion of the program. Several factors contribute to the selection of prospective students to tertiary institutions; these factors include the policies of the government in identifying the labour market needs for graduates while at the same time taking into consideration the financial aspects of training the students into professionals.

Changes in the tertiary education sector have in a way influenced the concept of access and government access-policies in the training of human resources needed to develop the economy of most countries. One underlying factor is the significant changes that have occurred in the tertiary sector over the years. In the 1960s and 1970s, tertiary education remained a small sector, even though at that time it was expanding primarily due to the support it received from the public authorities. This phase in the development of tertiary education changed in the 1980's when the economic crises crept in most of the countries. The economic slow-down reduced the efficacy of the state to support tertiary education, and consequently, the hitherto protected sector showed signs of decline, (UNESCO, 2004).

The trend was quite different in the developed and the developing countries, the developed countries after a shorter period of uncertainty responded to the situation by devising strategies to reduce financial reliance on public funding, thus, drifting away from state control on its operations and improving efficiency of their operations through reprioritizing the resource allocation based on more objective criteria. The developing countries on the other hand took some little more time to respond to the crises situation. Tertiary institutions in the developing countries were influenced by the policies advocated by the structural adjustment programs. One key feature of the public policy in most developing countries during the structural adjustment program period of the 1980's was the diversion of public investment from tertiary to primary education.

The most important characteristic of the entire process of shifting public investment from tertiary to primary education was the rate of 'returns analysis' which provided a theoretical support to the shift in policy. The argument put forward was that the return to primary education was higher than the other levels of education, hence, the diversion of the financial and other resources from tertiary to primary education was justified in terms of economic rationality and profitability, (World Bank, 1986). These policies led to the declining resource base and deteriorating service conditions of many of the institutions of higher education in developing countries and the depletion of their national capacities, (UNESCO, 2004).

The effects of this shift of focus from tertiary to primary education posed a great challenge to the various tertiary institutions which resulted in the shift from over-dependence on public resource to the engagement of activities to ensure self-support financing. The changes however were to greatly affect access and equity in tertiary education since there was the need for most students to self-finance their education with very little government support. Governments in the developing countries also adopted policies which were aimed at reducing the number of students they could support at the tertiary level. These changes also brought about privatization of public institutions and the promotion of private tertiary institutions which was self-financing and depended mostly on the fees paid by students. Thus,

most tertiary institutions in the developing countries remained public-sector organizations with diversified sources of funding and improved operational freedom and academic autonomy.

Growing public interest and accountability in the tertiary educational sector have placed considerable pressure on most institutions to seek ways of equipping their products by using the most effective and efficient ways of management which ensures that standards are not compromised. This has led to the ever increasing need for expansion in the tertiary education sector as a way of dealing with the ever-growing population of secondary school leavers seeking tertiary education. There are also pressures from the end users of the tertiary products who are the various employing organizations who seek the services of the trained graduates.

Public sector reforms all over the world have accounted for the changes that most tertiary institutions are undergoing and this could be explained through a number of factors such as;
- Expansion and diversification of enrolments, participation rates, and the number and types of institutions.
- Fiscal/financial pressure, which is measured in low and declining per-student expenditures that are being driven by considerably reduced public funding support by most governments in the developing countries.
- Another area of significant importance is the market orientation which most tertiary institutions have adopted and these include the payment of tuition fees, the research it provides to other organizations and the institutional autonomy it enjoys from the government.
- There is also the demand for greater public accountability on tertiary institutions by government, students, parents of the students and employers.
- Demand for greater quality and efficiency is compelling most tertiary institutions to identify the implementation of quality control systems which are aimed at providing quality education to all students.

These factors mentioned above are the main aspects of tertiary education challenges which are mostly general across most developing countries. It could also be found in the developed countries as well, although differences could occur at the magnitude of the problem and the mode of combating the challenges they face in the delivery of tertiary education. These problems could be seen in all tertiary institutions in Ghana, and Cape Coast polytechnic as an institution of higher learning is faced each year with the problem of not being able to give admission to all qualified applicants.

1.1 Back ground to the study

The concept of government access policies in polytechnic education is seen as the main tool in getting the needed skilled middle-level manpower to help in the development of Ghana as a developing country. The demand for tertiary education is increasing at an intense pace and the government is gradually shedding off its responsibility to take full cost of tertiary education. Further to this development is the introduction of the Free Compulsory Universal Basic Education (FCUBE) which has taken much of government resources to education, the FCUBE is seen as a shift of government priority from tertiary education to primary education. Secondly, government is faced with the daunting challenge of providing tertiary education to the ever-increasing secondary school leavers who are not only qualified to enrol in tertiary institutions but are determined to improve upon their living standards. There are students with the minimum qualification who do not gain admission into tertiary institution for lack of space or capacity to enrol them, this situation is a major set-back to the development of Ghana as a developing country wishing to produce the needed manpower to develop the country.

Polytechnic education all over the world is seen as another form of tertiary education which provides highly skilled manpower needed in the development of the country. Products from most polytechnics are found in industries and the service sectors of Ghana and they are usually identified by their excellent skills applied in their various professions. Some polytechnics offer basic and professional studies and other science disciplines. Most government policy documents identify polytechnics as institutions which provide non-university professional higher education in a multi-field environment.

The purpose of most polytechnic reforms is to provide young people with another high-level alternative education by creating a more practically and professionally oriented higher education system to exist side by side with the traditional university degrees.

Although the creation of polytechnic education has helped to reduce the number of secondary school leavers seeking tertiary education, there are still other students who do not have access to polytechnic education for several reasons. Some of the reasons include lack of funding to support their education, the distance between students' location to the institution of higher learning, the competitive nature of some programmes and the inability of workers during working hours to enrol. The last factor however relate mostly to workers of organizations who wish to pursue higher education outside their busy work schedule, this category of students are given a different type of education to help their needs and it usually depends on the institutions they wish to pursue these programmes. Strict government access-policies could be identified as another major source of challenge faced by the governments in providing mass tertiary access to prospective students who wish to improve upon their academic levels.

The major challenges to tertiary education in Ghana include the funding of education, improving existing facilities, increasing number of teachers in the various institutions and increasing access to tertiary education by qualified applicants. The topical issue of students' access to polytechnic education could be derived from the concepts of diversification and massification of tertiary institutions. The trend towards diversifying tertiary education all over the world was aimed at providing post-secondary education as a right to all citizens of countries irrespective of socio-economic background, sex, race, age, and physical disability. Limitation to access to polytechnic education in Ghana is a major challenge to government, polytechnic institutions and employers of organizations who are the end-users of products from the polytechnic. Students' access to tertiary education is a major problem because the development of every country depends on the skilled work-force of the country and is in part determined by the quality of education provided by institutions of higher learning.

1.2 Existing reforms aimed at improving polytechnic enrolment in Ghana
The tertiary education sector in Ghana is composed of 5 public and several private universities, several institutes of higher learning, and ten polytechnics. Between 1990 and 2000, total enrolment in universities and polytechnic institutions increased by 162 percent from 13,415 to 44,389 students. However, much of this growth was due to the dramatic increases in enrolments at the Polytechnics. Despite such expansion, the overall enrolment rate for the 18-21 age groups in tertiary education was about 3 percent in 2001.

The government white paper on the reforms to the tertiary education system in 1991 provided the basis for innovations in tertiary education in Ghana. One of the objectives of the reforms was to introduce programmes and courses for advanced technician training in appropriate tertiary institutions. Consequently, polytechnic institutions were elevated to tertiary status, to offer practical technician training programmes to develop middle-level manpower leading to the award of Higher National Diplomas. Following the submission of the University Rationalization Committee's report, the government issued a white paper in 1991 on the reforms to the Tertiary Education System. The white paper formed the basis of the recognition of the tertiary education system. Polytechnics were upgraded to tertiary status in 1993. Polytechnic institutions were created to provide career-focused education and skills training to students. The objectives of Polytechnic institutions as stated in PNDC Law 321 are;
- To provide full time courses in the field of manufacturing, commerce, science, technology, applied sciences; applied arts and such other areas as may be determined by the authority responsible for higher education.
- To encourage study in technical subjects at tertiary level and
- Provide opportunity for development, research and publication of research findings.

These objectives were reinforced by the white paper on the report of the Education Reform Review Committee, 2004 which indicates that, "Government will continue to equip the polytechnics to make

them offer tertiary education in their own right, to emphasis practical skills that are needed to run the productive economy and build a nation". Government further underscores the importance of hands-on experience and undertakes to resource polytechnics to enable them offer degree programmes.

The goals of the Tertiary Education Project could be summarized as follows.
- To reverse the system deterioration, falling standards, and declining quality of education.
- To expand access to tertiary education
- To establish a stable and sustainable basis for the financing of tertiary education
- To create institutional capacities for quality monitoring and policy evaluation in the tertiary education sector.

These points summarize the reform objectives of the tertiary education project (TEP), which was designed to reflect and further the policy objectives of the Ghanaian Government.

The university rationalization committee (URC) formulated the policy framework for the tertiary education sector between 1986 and 1988. One of the primary recommendations was that all post secondary education institutions should be brought into a single, unified and co-ordinated system characterised by greater public accountability. Specific recommendations included the regrouping, rationalization and upgrading of existing institutions, the establishment of new ones, and the transfer of the oversight of the polytechnics from the control of the Ghana Education Service to the tertiary education sector. It further recommended the establishment of various regulatory bodies to coordinate and provide policy oversight through the establishment of proposed Education Commission and the establishment of the planning, budgeting, monitoring and Evaluation unit in the Ministry of education. Secondly, the committee recommended the establishment of a Joint Admissions and Matriculation Board, an Accreditation Board and a Technical and Professional Examinations Board.

The URC acknowledged that the government could not itself finance the tertiary education system which the country required, and it recommended diversification of the funding base of the institutions. Ultimately, it urged that the government should as matters of urgency pursue the concepts of cost-sharing and cost-recovery with students, while tuition was to remain free as enshrined in the 1993 constitution of the fourth Republic of Ghana. However, the committee indicated that student loans were to be provided for all students, to meet the anticipated cost of food and boarding and other expenses, and bursaries were to be available for those studying in areas of national need and/or of exceptional merit.

The URC identified the inequity in access linked to gender and poverty. It further recommended that in keeping with the law on social justice, expansion of student numbers in order to meet regional and local needs (social, political and economic) was put forward as a key theme of the policy framework. Recommendations were based in part by the manpower requirements projected for middle-income countries. The URC further projected the percentage increase of tertiary enrolment to 30% per annum, in addition, to a considerable expansion in the number of institutions and overall increases in the efficiency of utilization of existing facilities. New measures such as double-shift teaching and work-study programme were recommended to enhance access.

The committee recommended that the six polytechnics that were in existent as at the time were to be upgraded and their number expanded, primarily by the upgrading of the existing technical institutes. Since Ghana has ten regions, and the polytechnics were intended to meet the needs of each regional constituency there was the need to establish polytechnics in the regions which did not have any. The URC further indicated that access was likely to become correspondingly difficult for those unable to afford additional/private tuition during their secondary school education. Groups nationally targeted by access policies had not been enabled to participate. The only exception of female applications to tertiary institutions that had benefited from reduced cut-off points on aggregate-school-scores. It identified that well-qualified students were increasingly denied entry to tertiary-level education. In addition, the Committee stated that despite initial emphasis on the need for credit transfer and mobility schemes and the desirability of life-long learning, only one scheme was in place to meet the needs of non-traditional entrants to the Pre-HND level.

The issue of government access-policies and regulations is contained in the government white paper passed in 1991. It indicated that the Ministry of Education shall work out criteria for the provision of admissions and scholarships on the basis of government's development priorities in consultation with the National Development Planning Commission, such challenges to institutional autonomy would always be likely to create tension whether in Ghana or else where.

The white paper recommended the 'upgrading of the courses offered by the polytechnics to tertiary level, in addition to an expansion in the number of institutions which would be undertaken on a regional basis. It was expected that this notional upgrading would in itself ensure that the country's need for higher-level technician training and practical research would be adequately met. However little attention was paid to the amount of polytechnic education which the country could afford and how it would be distributed, nor the choices which would have to be made given the resources likely to be available between political and geographical concerns, existing provisions and its quality, social demand and how these competing concerns might be prioritised. (World Bank, 1999)

1.3 Aims of the study
The study was aimed at identifying student selectivity processes in Cape Coast Polytechnic and seeking ways of increasing students' enrolment in the face of challenges from government access policies. The involvement of government in the management of polytechnic education in Ghana is very important not only in giving tertiary education a national identity but more importantly to ensure that graduates who pass of polytechnics possess the needed knowledge and skills which the country needs to develop. Thus, without altering the quality standards of education in Ghana, the study looks at how best the polytechnic could rise to the challenge of meeting the ever increasing demand for tertiary education. Secondly, the study was to identify the major reasons for demand for tertiary education and the key factors that necessitate the trend of increasing demand for polytechnic education in Ghana. With the increasing number of secondary school leavers seeking tertiary admission, there is the need for the Cape Coast Polytechnic to improve means of getting prospective students to enrol in the institution and provide them with quality education. There would be a review of the existing policy of up-grading students with aggregates above 24 for the Higher National Diploma programme and other existing bridging courses. The Higher National Diploma programme is a three-year Diploma awarding programme which is designed to equip graduates work in middle level manpower positions in Ghana; it is also practical-oriented diploma programme which provides technical knowledge to graduates.

1.4 Problem statement
The process involved in students' selectivity in Cape Coast Polytechnic is driven mainly by government access-policies and the institutional policies on admissions. Several factors influence the outcome of the selection process and these include the staff strength of the institution, facilities available, financial outlay of the various programmes and support from GET fund although it is government source. There are several stakeholders in polytechnic education and these include students, employers of organizations, the Polytechnic, professional bodies and the government.

The study identified limitations to the effective implementation of an institutional strategy aimed at increasing students' enrolment without necessarily depending on government subvention. An analysis of reasons for the limited admission system and the effect of the limitation on the various departments of study were carried out. A thorough review of the existing Pre-Higher National Diploma programme was taken to identify the impact of the programme on increased students' enrolment in the institution.

The research questions were;
- How does government restrictive access policies affect mass intake of qualified applicants into polytechnic?
- In what ways do institutional policy on selection and quotas limit the entry of qualified applicants into the Polytechnic?
- How effectively can the Polytechnic increase student enrolment by the use of the market model under institutional governance?

Sub-research questions,

- What alternatives are available to the polytechnic in overcoming the institutional challenges that hinder mass tertiary education in the Polytechnic?
- Are the various employers of organizations prepared to pay for the cost of educating their employees on part-time programmes in the polytechnic?
- What are the general demands for polytechnic education?

1.5 Study design, Instruments and methodology

The study methodology comprised of research design, instrumentation and data analysis that was carried out in the Cape Coast Polytechnic and some selected organization in the Municipality. Qualitative data analysis was used and it took the form of semi-structured interview and quantitative data analysis included semi-structured and structured questionnaires.

The research instrumentation involved the use of interviews, questionnaires and document analysis. Interviews were granted to the Polytechnic Secretary and the Assistant Secretary in charge of academic affairs. Secondly, questionnaires were administered to mature and direct applicants to Cape Coast Polytechnic.

Table 1: Research design and methodology

GROUP OF RESPONDENTS	INSTRUMENTATION	DATA COLLECTION PROCEDURE
Polytechnic Secretary	Interview schedule	Semi-structured Interview
Academic Secretary	Interview schedule	Semi-structured Interview
Employers	Interview schedule	Structured Questionnaire
Direct applicants	Questionnaire	Structured Questionnaire
Mature applicants	Questionnaire	Structured Questionnaire
	Document analysis	

For reasons of validity and reliability of the research design, the study adopted Kaiser and De Weert's conceptual model of factors that determine demand for higher education, (Kaiser & de Weert, 1994). The variables of the model used were; individual demand, demand for higher education and policy objectives. The study identified tertiary participation rate among workers and the alternative ways the polytechnic could use to increase enrolment rates among the working group. There was a broad assessment of the existing Pre-HND programme and its impact on increasing tertiary enrolment rates in the polytechnic; however other alternatives to increasing tertiary participation rate among secondary school leavers was also be assessed.

1.6 Educational structure of Ghana

Formal education in Ghana dates back to the mercantile era preceding colonization. The first schools were set up by European merchants and missionaries. A formal state education structure had been set up through series of reforms since Ghana gained independence in 1957.

The education reform program launched in 1987 changed the structure of the education system from the statutory seventeen (17) years of pre-university schooling to 12 years. Basic education is the barest minimum level of education and it is the legally mandated right of the Ghanaian child. The basic education program is designed to cover the first nine (9) years schooling for each child. Due to present and future national requirements, it is necessary for every Ghanaian to attend primary school and have some secondary education as well.

Under the 1987 educational reform structure of Ghana, the educational system was designed to constitute six years of primary education, three years of junior secondary school education followed by three years of senior secondary school education. This however constitutes twelve years of pre-

tertiary education. Tertiary education consists of four years university education or three years of training at the polytechnic, training colleges, or other health and agricultural institutions. The educational reform was designed towards the achievement of the overall national educational goals namely;
- To expand and make access to education more equitable at all levels of education.
- To change the structure of the school system, reducing the length of pre-university education from seventeen to twelve years.
- To improve pedagogic efficiency and effectiveness.
- To make education more relevant by increasing the attention paid to problem-solving, environment concerns, pre-vocational training, manual dexterity and general skills training.
- To contain and partially recover costs.
- To enhance sector management and budgeting procedures.

The age at which formal education begins is six (6) years. Currently, there is a 6-3-3-4/6-3-3-3 structure of education representing a six-year primary, three-year Junior secondary, three-year senior secondary and four-year university or three-year polytechnic education. The first nine (9) years namely; primary and junior secondary school form basic education and it is free and compulsory.

Table 2: Structure of education in Ghana

LEVEL OF EDUCATION	GRADE	AGE-GROUP
Primary	1-6	6-11
Junior secondary school	7-9	12-14
Secondary school	10-12	15-17
Tertiary Institutions	13-16	18-22

Source: Ministry of Education, Ghana, April 1996.

1.7 Financing of education in Ghana
Education in Ghana is mostly financed from public resources, even though the private sector is also playing an important role. Public sources of funding in Ghana include, the Ghana Education Trust fund, the District Assemblies Common fund (DACF), the Ministry of Education Youth and Sports (MOEYS), Student Loan Scheme, and the Scholarship Secretariat. The first two are part of the statutory expenditure while the other three are derived from the discretionary budget. The Ghana Education Trust Fund takes about 2.5% of Value Added Tax collection.
A consolidation of public expenditure reveals that Ghana spends about 4.2% of its GNP for public education. This allocation compares favorably to the share allocated by Africa and developing countries at about 3.5% and 3.9% respectively. The MOEYS budget was 24.2% of total domestic revenues in 2002. This however declined to 23.9% in 2003, 23.6% in 2004 and down to 23.2% in 2005 due to the available financial support from debt relief. The Ghana Education Trust Fund represents about 0.34% of GDP and it is anticipated that it would increase to 0.81% of GDP from 2003 to 2008, and then continue at the same level up to 2015. Other sources include the District Assemblies Common fund (0.1% of domestic revenues), Scholarship Secretariat (0.33% of domestic revenues). Total domestically financed public spending on education was 5.64% of GDP in 2002, projected to increase in 6.23% of GDP in 2005.

Total recurrent spending on education was 2,569,550 million Cedis or 221 million Euros (5.4% of GDP) in 2005, while total capital spending was 346,742 million Cedis in 2002 and projected to increase to 729,214 million Cedis or 62 million Euros, in 2005. The highest average annual increase is focused for primary education at an estimated annual average increase of 51.59%, followed by Junior Secondary Schools (16.93%), Senior Secondary Schools (14.78%), Tertiary Institutions (8.79%), and Pre-education (3.19%)

Table 3: Unit recurrent spending (in public institutions) by level of education for the fiscal year 2002

Educational Level	Total Recurrent spending (Million Cedis)	Number of students	Unit Cost (Cedis)	Unit cost as % of GDP per Capita
Pre-School	162,141	457,975	354,039	14.4
Primary	892,738	2,586,434	345,162	14.0
JSS	612,238	865,636	707,263	28.7
SSS	383,152	220,000	1,741,600	70.7
Tertiary	358,624	60,000	5,977,067	243

Source: Strategies for financing the Education Sector-Ghana Education Sector Development project, June, 2002

Table 2.2 shows the unit recurrent cost by level of education for the fiscal year 2002. The table shows a picture of the unit cost of each level of education relative to GDP per capita. It confirms that the unit cost increase with the level of education. The highest unit cost is that of higher education (243% of GDP per capita) compared to primary education (14% of GDP per capita), and SSS (70.7% of GDP per capita). This is mainly due to the smaller number of students and the high cost of education provision at higher levels. (African Development Fund, 2003)

1.8 The administrative structure of Cape Coast Polytechnic
Cape Coast Polytechnic was established in 1984, and became operative as such in 1986. Unlike some other institutions in Ghana which are transformed into polytechnics from technical institutes which were transformed into polytechnics from technical institutes, with benefits carried over physical infrastructure, the polytechnic had to contend with tackling most issues afresh.
The polytechnic is made up three (3) three schools namely; the school of applied arts and sciences, the school of engineering and the school of business studies. There are ten departments namely; Accountancy, Marketing and Secretaryship and management studies departments under the school of business and management studies. Tourism, statistics and Hotel Management and Catering departments, under the school of applied arts and sciences. Others are Electrical and electronic engineering, Mechanical engineering, civil engineering and building technology departments under the school of engineering. The highest authority is the governing council which is made up the Council Chairman, the Principal, government appointees, a representative of the students' council and a representative of the local workers union. However, the day to day running of the polytechnic is headed by the principal who is also the Chairman of the Academic Board. The Academic Board is the highest decision-making body of the polytechnic which takes decisions concerning Academic issues I the polytechnic. The decision of the Academic Board supersedes all other decision made within the polytechnic. Other offices within the polytechnic include office of the principal, office of the Vice Principal, office of the polytechnic secretary, office of the Dean of students and office of the various Dean of Schools. The Principal is also the Executive head of the school administration and had responsibility over all the other offices in the polytechnic, the various department heads also report to the principal.

1.9 Student access in Cape Coast Polytechnic
Students' access to Cape Coast Polytechnic is competitive and usually not all students who apply for programmes into the polytechnic are admitted, there are several students who are rejected based on non-qualification to their choice of programmes. Selection for programmes into the polytechnic is done by the Joint Admission's Board which is chaired by the Principal of the Polytechnic. The Board takes into consideration, the various qualification criteria from the National Accreditation Board and select applicants for the various programmes into the Polytechnic. Selection is however based on the

entry criteria usually contained in the admissions brochure which is sold out together with the admission forms of the polytechnic, the admission brochure cover all levels of applicants namely; direct and mature applicants.

The selection of students is however done based on the general entry criteria provided by the National Accreditation Board; it states that an applicant should obtain an aggregate score of 24 or better in six (6) subjects, including English, Mathematics and Integrated Science/Social studies at the SSSCE level or (3) A-level passes with a total aggregate of 14 plus general paper are minimum requirements for admission into the public universities and polytechnics. The grading of Senior Secondary School Examination in Ghana is based on a six-point grading scale from grade 'A' which is 'excellent', to grade 'F' which is failure. Some institutions also have schemes through which mature applicants, who may otherwise not have been admitted, could avail themselves for tertiary education. Applicants from technical and vocational institutions also have their entry qualification requirements which are spelt out in the admission brochure; one very important issue is that the polytechnic was set up to train middle-level human resources and to further train graduates from the technical and vocational institutes.

The National Accreditation Board was established by the government in 1993 with the enactment of PNDCL 317, to among others accredit both public and private (tertiary) institutions with regard to the contents and standards of their programmes; determine, in consultation with the appropriate institution or body, the programme and requirements for the proper operation of that institution and the maintenance of acceptable levels of academic or professional standards. However, admission policies of all tertiary institutions fall under the broad guidelines of the National Accreditation Board which also has several criteria in accrediting institutions in the running of programmes. These criteria include the availability of well qualified staff in adequate numbers, a well-equipped and well-stocked library, adequate number of classrooms, lecture theatres, laboratories, workshops with the requisite equipment, and adequate and reliable sources of funding.

Every year, direct and mature applicants who wish to enrol in the polytechnic obtain forms from the institution to pursue various programmes. However most applicants who do not meet the minimum entry criteria are often left with no option than to pick up non-tertiary programmes offered by the polytechnic and these are usually not their preferred courses. The study would review the existing alternatives used by polytechnic in upgrading applicants who do not meet the minimum entry criteria and further come out with detailed proposals on ways to improve the student enrolment in the polytechnic.

In the 2004/2005 academic year, 1,961 applicants applied for various HND programmes in the Cape Coast Polytechnic and out of the number, 1,078 applicants representing 55% qualified for admission into the various HND programmes. 963 applicants representing 49% were offered admission into the various HND programmes due to limited facilities in the institution and inadequate entry grade of applicants. Application for part-time programme for the year was 546 representing 27% of total application received.

In the 2005/2006 academic year, 1,726 applicants applied for various HND programmes in the Cape Coast Polytechnic and out of that number, 1,188 applicants representing 68.8% qualified for admission into the various HND programmes. However, only 856 applicants representing 49.6% were offered admission into the various HND programmes due to limited facilities in the institution and inadequate entry grade of applicants. These figures and statistics however raises the question of how best the polytechnic can improve upon admission and provide the needed education to all prospective applicants who wish to further their education. Increasing enrolment in Cape Coast Polytechnic would help in the provision of quality education for all groups of applicants (the working group and those from secondary schools and technical institutions) to the polytechnic. This would however lead to the economic development of Ghana and provide the needed middle-level manpower to work in all sectors of the economy.

1.10 Organization of chapters

Chapter two covers the literature review of the various access-policies used by most governments and how they affect student selectivity process and influence demand for tertiary education. The chapter would also identify massification and diversification of tertiary education as a tool that could be applied to reduce the burden on governments in the provision of tertiary education. It would also focus on the structures in polytechnics and how these structures could support increased students enrolment in polytechnics and ensuring that there are improved provisions for qualified applicants into polytechnic institutions.

Chapter three details the presentation of research design which include the instruments and data collection plan. It involves the explanation of the instruments research design and methodology to be used in the research. It would involve an analysis of the research questions based on the various concepts in the thesis and detailed data collection methods and the population covered in the research work.

Chapter four discusses the research questions of the thesis. It first details the outcome of the data collection procedure applied and the findings on the field of study, it also discusses the results of the research findings based on the issues discussed with respondents.

Chapter five provides the conclusion of the findings from the study and the recommendations for the improvement of students' enrolment and access to Cape Coast polytechnic with the support of all the stakeholders in tertiary education.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION.

Access to higher education all over the world is one of the important factors which affect the development of human manpower of every country. Governments pass laws mostly to regulate the operations of tertiary institutions to give it a national identity and further provide access to education to every citizen of the country. Access to tertiary education determines in considerable part the enrolment of tertiary education. Access is a matter of more than the allocation or availability of particular colleges and universities. Access depends upon standards of admission, standards of expected performance, individual motivation for higher education, and the cost of enrolment to the student, (Perkins, 1972)

The demand for higher education is a fundamental issue because the degrees of access into tertiary institutions determine the size, shape and character which involve the nature of tertiary education, the courses available and the number people who can enrol in a particular programme.

Several factors influence the policies that govern tertiary institutions all over the world and these include students' choice, financial availability and market demand in the wake of competition. Employers are also stakeholders in the whole process since they are identified as customers or end users of the education programme run by the tertiary institutions. However, because of several factors among those mentioned, many countries show different approach to the issue of tertiary access and most governments differ in the way they exert power to influence participation in higher education. All these are influenced partly by the call on governments to release decision-making power to tertiary institutions and educational institutions in general. This system is however backed by the process of effective decentralization which see government play very little role in the decision making process of tertiary institutions.

The issue of access in tertiary education is very complex because it is usually an inter-play of market demand, students' choice, institutional requirements and finally government policies on tertiary education including its position on funding. However Goedegebuure et al (1994), indicate that despite these differences, access-policies as it appears in many national higher education policy-statements is based on the principle of general access. Other policies include equal distribution of educational opportunity with particular emphasis on social class, gender and ethnic minorities in most developed countries.

Besides the objective of reducing social inequalities, access-policy aims to mobilize the productive power of nations given the presumed role of higher education as contributor to economic growth. Although these objectives are not related they are stressed differently in national contexts and political climates, (Goedegebuure et al, 1994)

2.0.1 Tertiary access through diversification of enrolments and institutions.

Increasing numbers in secondary school graduates seeking admission into tertiary institutions have called for the redirection of focus from universities to other tertiary institutions capable of providing the needed manpower requirement for the development of every country. This has also led to the introduction of several courses which are tailored to meet the requirement of the various job markets and the growing complex demands of the modern world; the provision of quality education is seen as the bedrock for the development of every country in the world. The increase in student numbers and the ensuing movement towards diversification is attributable to State policies on equity in education which positively equate the welfare of society to the level of education of its members. The benefits of diversity are seen in an increase of the range of choices available to learners, and in matching education to the needs and abilities of individual students, (Veld et. al. 1996)

Diversification in tertiary education has come about as a result of the emerging knowledge in society which requires a response to differentiated needs and to growing diverse demands for quality and

relevance. It also entails differences between institutions and diversification within institutions. Competence and performance are increasingly based on knowledge and sophisticated skills regardless of where they are and how they are acquired. Thus, anticipating and responding to new education needs under financial constraints is determining and defining the quality and relevance of higher education institutions, (WCHE, 1998).

The diversification of tertiary education is determined by several factors some of which are industrialization, urbanization, new economic and social demands, state development strategies, access funding policies, neo-liberal policy and global competitiveness. Paradoxically, higher education systems are entering prolonged financial crises at a time when industry, business leaders, and government officials are increasingly demanding that the higher education institutions expand and diversify their roles in new workforce skills, the commercialization of research, (economic value of different types of knowledge) applied social policy, (market value of social and cultural knowledge) the internationalization of the curriculum and other activities related to the economic restructuring towards post industrialism, regional integration, and global competition, (WCHE, 1998). This process has led to the increasing trend towards regional or municipal institutions such as colleges and polytechnics which have strengthened the institutions to function effectively.

As countries adapt new ways of meeting the needs of the market and sharpening the skills of students to meet the human resource needed to develop a country, most tertiary institutions are focusing on specialized areas of institutional strength. Areas of high student demands are also considered by most tertiary institutions designing their course programmes. However, most of the tertiary institutions depend on specialization and differentiation in their core objectives and their mission which usually emphasise specialized differences. These institutions are now focusing on development of programs that enhance quality and competitiveness which meet both students' demand and the market which would absorb the students upon completion of their programs. Another aspect of the diversification of higher education is the rapid increase of the number of students which has provoked the demand for greater diversification of the levels and forms of higher education, reflecting the diversification of educational goals and talents of larger population of students.

2.0.2 Massification of Tertiary Education

The development of mass higher education in modern industrial societies after World War II exhibited a rapid growth of enrolments, both in absolute numbers and in the proportion of the traditional age cohort, this was preceded by a very large increase in the numbers of young people. First from middle and then from lower middle and working class origins who were enabled or encouraged to stay on in secondary school beyond school leaving age to the age of transfer. Behind the great increase in participation in formal secondary and higher education were a number of more or less independent forces: the democratization of politics and society that followed World War II; the growth of the public sector that required white collar jobs; an expanding industrial economy that required more highly skilled and educated workers; the widespread belief that further economic development depended on a supply of educated manpower and finally the attractiveness of education as a major element of the new welfare states, sustaining and legitimating democratic societies, (World Bank, 1998).

One major element of tertiary education expansion is the massification of the tertiary education sector which is aimed at increasing the enrolment level of secondary school leavers seeking further education. Massification of tertiary education is the result of increasing demand for and access to higher education which is shaping government policies on tertiary education. The degree of access determines the overall size and character of the system, how much higher education is there and how much is needed, what type and structure of higher education institutions are appropriate in an era of mass participation, (Goedegebuure et al, 1994). Different countries however show various approaches to the issue of access to tertiary education and access-policies in many countries are based on the principle of general access which is an officially stated policy goal in most countries.

Expansion of the tertiary education system, diversification of the services and resource base, and changes in economic rationality of investing are factors that continue to influence change in the tertiary education system. The massification of the tertiary education system has led to pressure on most governments to adopt measures to support tertiary education sector while ensuring that the provision of education does not put pressure on the limited government resources. However, growth in the numbers of students seeking university-type education had series of consequences for the systems of tertiary education. The first stage was the growth in the old elite universities. This was followed by the creation of new universities, then the expansion of non-university forms of post-secondary education offering different or no degrees, and finally, the assimilation of the new sectors into the degree granting system of education.

2.1.0 TERTIARY EDUCATION AND EQUAL OPPORTUNITY FOR ENROLMENT.

The concept of access-policies in tertiary education hinges on equal opportunity for all citizens in a country to get access to institutions of higher learning without any constraints. Most constitutions all over the world identify equity in the distribution of resources for education up to the higher level and this is usually specified as individual right to knowledge needed in the development of a country and for the survival of the individual as a person. Several factors hinder the fair distribution of resources to citizens of countries in receiving support for tertiary education and some of these factors are detailed in government educational access policies which include restrictive admission policies such as numerous clauses, selection quotas and structural reforms which make most tertiary institution self-financing.

Access to tertiary education all over the world is one of the important factors which affect the development of human manpower of every country. Government all over the world pass laws mostly to regulate the operations of most tertiary institutions, to give it a national identity and further provide access to education for every citizen of the county. The demand for higher education is a fundamental issue because the degrees of access to tertiary institutions determine the size, shape and character of the educational sector which involve the nature of tertiary education, the courses available and the number of people who can enrol in a particular programme.

Several factors come into play in deciding the policies that govern tertiary institutions all over the world and these include students' choice, financial availability and market demand in the wake of competition. The employers are also stakeholders in the whole process since they are identified as customers or end users of the education programme run by the tertiary institutions. However, because of several factors among those mentioned, many countries show different approaches to the issue of tertiary institution access and most governments differ in the way they exert power to influence participation in higher education. These are influenced partly by the call on governments to release decision-making power to tertiary institutions and educational institutions in general. However, this system is supported by the process of effective decentralization which involve minimal government involvement in the decision making process of tertiary institutions.

The issue of access in tertiary education is very complex because it is usually an inter-play of market demand, students' choice, institutional requirements and finally government policies on tertiary education including its position on funding. However Goedegebuure et al (1994), indicate that despite these differences, access-policies as it appears in many national higher education policy-statements is based on the principle of general access. One form of explanation is that ideas developed in one context have been copied in another. To some extent, neo-liberal policies have been actively fostered by international organizations; for example by the International Monetary Fund (IMF) and the World Bank, (Whitty, 1998). Other policies include equal distribution of educational opportunity with particular emphasis on social class, gender and ethnic minorities in most developed countries.

Besides the objective of reducing social inequalities, access-policy aims to mobilize the productive power of nations given the presumed role of higher education as contributor to economic growth. Although these objectives are not related they are stressed differently in national contexts and political climates, (Goedegebuure et al, 1994)

2.1.1 Changing trends in tertiary education and its effect on access to tertiary education

There are many changes going on in the tertiary education sector and the massification of tertiary education is gradually giving way to the concept of cost sharing and full cost recovery. Expansion of the tertiary education and the diversification of provision of services and enrolment are also affecting the old trend of access to tertiary education. Five factors could be identified as major sources of change in the organization and management of higher education. They are; pressure to expand the system, pressure due to globalization of the economy, increasing individual interest in investing in higher education, emergence of private higher education and pressures due to reduced funding, (UNESCO, 2004)

The first change factor is the pressure to manage the expansion of the system. Increasing number of secondary school leavers have led to the pressure on most governments to improve and expand the existing facilities within tertiary institution while at the same time finding alternative means to providing access to qualified students. Existing facilities in most countries cannot support the increasing number of students who wish to gain entry into tertiary institutions; there are also demands for different courses and programs of study that governments would have to support. These have led to the diversification of education such as the establishment of private institutions, distance learning institutions and polytechnics which provide highly skilled middle manpower for the development of the country. Statistics from UNESCO (UIS 2004) indicate that total student population increased from 608 million in 1970 to 1,199.8 million in 2000. The number of students in tertiary institutions in 1970 was 20,064,000 million representing 3.3% of total world population while in 2000 the number of tertiary students was 100,783,200. The enrolment in higher education during the same period increased from 28.1 million in 1970 to 101.2 million in 2000. The sharp increases in the number of students' enrolment call for increased resource allocation to meet the demands.

Second is the change due to globalization of the economy and development. The concept of access in tertiary education could be viewed as a global phenomenon where every country places high priority on getting the needed manpower to help production sector of the economy. The knowledge driven production of goods and services increases the demand for highly educated manpower, the shift in employment prospects from manufacturing to services sector is also associated with increasing qualification levels of employees. Higher education graduates have a premium in the labour market. In other words, with the increase in the intensity of knowledge, the demand for persons with higher education background is increasing, (UNESCO, 2004).

Changes in the tertiary education system could be seen as a global link which is spreading fast and often drawing competition among countries that tend to develop their human manpower to help build their economies. The almost simultaneous emergence of similar reforms across continents has led some to suggest that the current restructuring of education needs to be understood as a global phenomenon. Indeed, it has been argued that trend is part of a broader economic, political and cultural process of globalization in which national differences are eroded, state bureaucracies fragment and the notion of mass systems of public welfare, including education disappears. There are also theories of globalization and post modernism where the traditional role of the nation state is overridden by multifaceted international restructuring, (Whitty, 1998).

There is the growing pressure to change due to reduced public funding of the higher education sector. One of the features of the growing pressure to change in the 1990's was the expansion of tertiary education in the developed and in many developing countries, despite unfavourable funding condition. This was possibly due to the efficacy of the sector of the sector to move away from reliance on the state for its operation by devising strategies of privatization in higher education, (UNESCO, 2004). Four factors contribute to the pervasive condition of austerity. The first is enrolment pressure especially in countries combining growing populations of secondary school leavers with low current tertiary educational participation rates and inadequate higher educational capacity to meet the growing demand. Another cause is the is the tendency of unit cost in tertiary education to rise faster than unit cost in the overall economy, a tendency accelerated by the rapid increasing cost of technology and by the rapid change in the fields of study in the greatest need and/or demand. The increasing scarcity of public revenue is another cause of the pressure on tertiary education funding. This is as a result of the

competition it faces from other public needs such as basic education, public infrastructure, health, the maintenance of public order, environmental stabilization and restoration, and addressing the needs of the poor. There is also the issue of the inability of many countries to rely on former methods of raising public revenues, such as turnover taxes on state-owned enterprises. The last factor is the growing public sector austerity in many countries, (World Bank, 1998).

2.2.0 RELATIONSHIP BETWEEN STATE AND TERTIARY INSTITUTION

The relationship between state and institution influence the conduct of all institutions of higher learning and it is the relationship that shapes the direction of the tertiary institutions. The relationship between the state and tertiary institutions is usually seen as a dominance of the former over the latter in the provision of quality education. The standardization of knowledge and skills, and demands by regulations on degrees and diplomas on a national basis has not only furthered economic progress and division of labour in a certain stage of economic growth but has also consolidated the authority of the state within each national society. The expansion of public financial support for education has not only enabled the poor to receive adequate training, but also strengthened the legitimacy of the state to collect taxes. Nation states and educational systems are in many ways intertwined; their destinies are mutually interdependent, (Veld et. al., 1996). Most institutions of higher learning in the nineteenth and early part of the twentieth century were completely funded by government and they had the full support of the government in the provision of both financial and human resource support in the provision of education. The motives were both of paternalistic and "distributive justice" character the public authorities held and their opinion was that the population at large would underestimate the benefits of education, and moreover they wished to enable everyone, irrespective of individual purchasing power, to enjoy education, (Veld et. al., 1996). Thus the period witnessed education for all citizens which was seen as priority for every individual which was provided by the nation.

Public policies are mostly implemented in very complicated and interrelated combinations of rules, procedures and measures. Policy systems are usually characterised by three dimensions namely; the level of decision making, the points of reference for steering and finally, policy instruments. The first dimension has to do with degree of centralization or decentralization; the second has to do with the orientation on either inputs, throughputs or outputs of the system under steering and the third aspect is the choice between the three main categories of policy instruments namely, enforcement, money and persuasion, (Veld et. al., 1996).

Figure 1: The relationship between the state and institution under policy systems in Education.
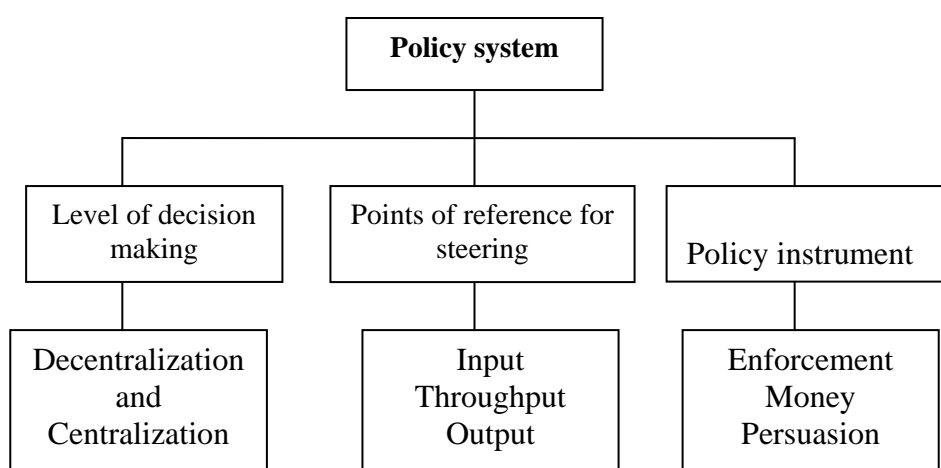
Source: Veld et. al., (1996)

From the figure (1) above, the policy system of every country is characterised by a well structured process which aims at providing detailed directives in the setting up of tasks and objectives and the way these tasks are achieved by all key stakeholders. An effective system of higher education relies on

active oversight of the state. The government must ensure that the system serves the public interest, promotes equity and supports those areas of basic research relevant to the country's needs, (World Bank, 2000).

2.3.0 DETERMINANTS OF EDUCATIONAL DEMAND

There are several reasons for which individuals enrol in tertiary institutions and especially polytechnics. However, the most sought question is; what are the determinants of demand for higher education all over the world? Kaiser and de Weert (1994) identify three main determinants of demand for higher education. These factors however affect the process of student selectivity and student choice of enrolment in tertiary institutions all over the world. To Kaiser and de Weert (1994), these determinants control the entire access to tertiary institution and underpin the structure in student selectivity and choice system in the educational environment of every country. Thus, if an individual is willing to enrol in a higher educational institution, several factors influence his eventual decision which ultimately determines his future career. However, if these determinants are not favourable then the educational prospect of the individual is abruptly ended. These determinants cut across all countries and are made up of demographic factors, individual demand, and finally the use of government policy objectives.

2.3.1 Demographic factors

Demographic factor is a very important issue in the demand for polytechnic education all over the world. Students selectivity to a very large extent is influenced in part by factors such as age, sex and geographical location. Most governments all over the world are calling for a balance in the education of both males and females and this issue is however not different in Ghana. The population of males in the polytechnic far out number that of the females, (World Bank, 2005). The statistics provided by the World Bank report as of February 2005 indicates an enrolment percentage of 27% for females whilst the male percentage is 73%. This figure however shows that polytechnic education is highly skewed towards the male sex in Ghana. The reason for the seemingly sharp contrast in the figures is as a result of the social system in Ghana which is in part influenced by culture which places little emphasis on the tertiary education of females for the productive economic development of the country.

The distribution of students according to their ethnicity in polytechnic education in Ghana can be seen as dominance of students from the region over other students who come from other regions. Although this aspect has not been researched into, the purpose of regionalization of polytechnic education was to allow individuals from the region in which the polytechnic is situated to receive tertiary education needed for the development of the region and the nation as a whole. Although the socio-economic status of students to some extent determines how students cope with the financial demands of tertiary education, very little is considered on this aspect in tertiary education in Ghana.

The difference between developed and developing countries in sex balance in education is that developed countries establish policies that ensure that females are supported in obtaining tertiary education while developing countries on the other hand have social and cultural factors that impinge on female tertiary participation rates. Example of this situation is found in Finland where female participation in tertiary education outnumbers the male participation rates. Another reason is the cultural differences that exist between developed and developing countries. In Ghana the government is presently educating the public on the need to educate females to the tertiary level, hither-to, most localities believed that education was predominantly a male task since they were being shaped for the 'future responsibility' of taking care of their families.

In Ghana, the percentage of female enrolment in polytechnic education is very low and sees more male participation over females. However one cannot rule out student selectivity under demographic factor when considering factors determining the demand for higher education. Most polytechnics in Ghana however do not consider the issue of sex balance as the main priority of institutions is to meet the minimum entry criteria set out by the National Accreditation Board.

2.3.2 Individual demand

The second factor to consider is individual demand for polytechnic education all over the world. Education is one of the priority areas for most governments and it also seen as the cannon for development. The demand for higher education by (potential) students is driven by various motives. Some of these motives are, social background of the individual, personal interest, Economic and the role of peers often drive individuals into enrolling in polytechnics all over the world. According to Kaiser & de Weert, (1994), Economic motives can be broken down into consumption and investment motives. Consumption motives refer to education conceived as an ordinary 'good' that can be purchased. Under the standard consumption explanation, the level of demand is a function the price of the good, which is, in the case of higher education, determined by the direct costs (tuition and costs for board and transportation) and the individual opportunities to meet these direct costs (the availability of grants and loan schemes and the disposable income). The investment motives on the other hand are described in the human capital approach in the economics of education. Within this approach, education is seen as an investment of current time and money for future pay. Thus in deciding on getting enrolled or not, individuals weigh the forgone earnings by following tertiary education against their gain in future income due to education. Accordingly, a large number of studies have documented the economic benefits of higher education as a crucial factor which affects participation patterns. Thus, the general argument is that a relationship exists between the economic rates of return, the time and financial efforts students are prepared to commit and the relationship varies with the state of the economy.

Figure 2: Factors determining the demand for higher education.
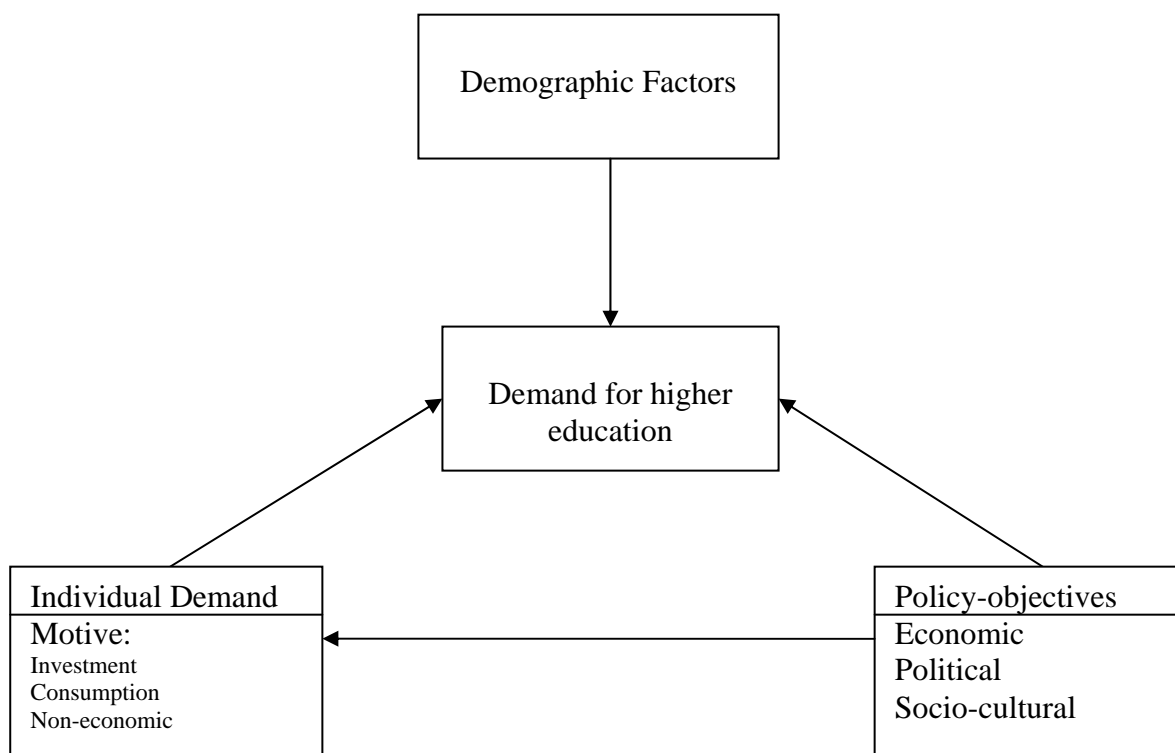
Source: Goedegebuure et.al, comparative policy studies in higher education.

Social theorists emphasis 'emancipatory' developments and the impact these have on individual decisions or refer to a process of status competition in which individuals are aspiring to the highest possible social status by attaining the highest educational level. These reasons are synonymous with Ghana, where educational level of an individual to a larger extent determines his social status. The variable of returns to higher education could be understood as reflecting a "premium" to education and training which encompasses not only higher education but also education and training. Another

factor that could be identified is the difference in unemployment rates between secondary education and tertiary education graduates.

2.3.3 Policy objectives
At the national level, public policies have significant impacts on the actual patterns of participation in tertiary education. These impact concern access-policy, general economic factors and welfare policies. Budget restrictions may constrain the growth of participation and the use of the educational capacity, (Kaiser and de Weert, 1994)

However, Wilensky, (1975) argues that industrial development is a more important predictor of welfare expenditure than political beliefs. However, this group of writers believe that GNP per capita and school enrolment have strong relationship with enrolment. The reason for this assertion is that economic development is an important predictor of enrolment rates. The findings could not be far fetched when assessing polytechnic education in Ghana which has tertiary enrolment rate of less that 6% and GNP of $400. The percentage of financial outlay of the total budget also determines the Government's priority on education needed for the development of the country. The involvement of governments in supporting tertiary education is justified by a mixture of arguments which include economic and technology grounds as well as social and cultural considerations.

First, from the economic view point, it is argued that tertiary education provides positive external effects that are important to the economic well being of a country. According to the human capital theory, higher education increases the productive characteristics of the workforce that may enhance the national output, economic development and growth. Thus, in this view, the future prosperity of countries depends on a pool of highly skilled people.
The second reason given by Kaiser and de Weert (1994) is that of equal opportunity which is of a socio-political nature. Most government adhere to the principle that access is open for all those who qualify, although in most countries, this does not guarantee a place in any particular programme at any particular institution. The objective of realizing more equal educational opportunities can be found in most countries. The less privileged social class, females, and to some extent ethnic minority groups in the developed countries are offered education regardless of their status. The 1992 constitution of Ghana states among others that, the state shall subject to the availability of resources provide;
  -   Equal and balanced access to secondary and other appropriate pre-university or equivalent education with emphasis on science and technology.
  -   Life-long education
The major challenge to equal access to life long education in Ghana is that the various policy document aimed at giving her citizens the needed access to education without any hindrance is greatly un-achieved. The author strongly believes that the economic background of the country and the policies available go a long way to create equitable access for the education for all citizens to the tertiary level.

The third reason refers to socio-cultural functions attributed to higher education such as the preservation and dissemination of the cultural heritage, discovery and advancement of new knowledge and thought, discovery of talent, and the advancement of social welfare, including progress in human equality, freedom and justice. The performance of these functions is considered an important argument for government involvement and support. Although these reasons appear in several national and international policy documents, on participation, the economic view point turns out to be increasingly dominant in national policy settings.

Education is seen as the cannon for development in every society all over the world and in third world countries, it is the priority of the countries to develop the needed manpower to help in development of the country. The concept of education for all citizens of most countries is embodied in the constitution of the country and it is also seen as a means of bridging the inequality that exist between the rich and the poor in accessing tertiary education. There is also the issue of government involvement in the process aimed at meeting the human manpower needs of the country that is aimed at promoting the

needed skills in developing the country. This has raised concerns among most secondary school leavers who do not only seek further education but more importantly get the needed training in areas where their interests lie.

Education serve many purposes both in the economic and social aspects of life and this is often the driving force behind secondary school leavers who seek further education to enhance their lives and fend for their families. The immediate benefit is also a form of investment, building people's career and developing peoples' capacity to be more productive, earn more and live a quality life. The human capital theory propounded in the 1960's and its widespread acceptance has provided conceptual support and statistical evidence for the economic and social benefits for education. This framework considers education as an investment process, thus the value added by education is considered as a capital good. Veld et al (1996) indicates that the rate of return on investment in education should be calculated in terms of income differentials, furthermore, the cost of education should be calculated in terms of future incomes of the educated or more importantly, in terms of income differentials. Estimates by Nobel-laureate economists have shown that education is one of the best investments, outstripping the returns from many investments in physical capital. All countries need educated and skilled citizens who can operate in a democratic society, workers who can meet changing labour market needs and compete in global markets, learners capable of benefiting from the technology revolution, (World Bank, 1999). The international goals for education include targets for increasing access to educational opportunities, as well as for raising learning achievements to the tertiary level of education. Thus, access to education must be of good quality in order to provide the needed skills to work successfully in economies with changing labour market need.

Educational institutions are closely linked to more general features of national culture. They have emerged from internal emancipation processes in earlier centuries. They may have served as symbols of specific developments, of civil wars and of liberation movements. Generation after generation may have made considerable emotional and moral investment in those institutions. They may also have been designed in more recent eras as expressions of influential political configurations, such as polytechnics in Great Britain. So the creation of institutions may not be the consequence of an evolutionary process of many centuries, but may be part of contemporary policy-making. Education contributes in many ways to improving people and reducing poverty. It helps people to be more productive and earn more because education is an investment which also strengthens individual skills and abilities. Education also promotes social development through strengthening social cohesion and giving more people better opportunities.

2.4.0 STUDENT SELECTIVITY AND GOVERNMENT USE OF POLICY-INSTRUMENTS

There are many categories of policy instruments that government has at its disposal in regulating participation in higher education. However, Maassen and Van Vught, (1994), categorize these policy instruments according to the level of restraint they impose on the behaviour of actors.
These instruments are;
-   Restrictive admission policies such as numerus clausus and selection.
-   Structural reforms, both at the system level and within different sectors
-   Non-restrictive measures focusing on the behaviour of students or institutions, e.g. through financial incentives and information.

2.4.1 Restrictive admission policies

Restrictive admission policies fit into the model of state control as it restrains the behavioural options of all actors. In effect government restrict the number of entrants into tertiary institutions through numerus clausus or a fixed number of applicants who should be enrolled. The numerus clausus is thus a procedure that restricts the number of entrants into higher education or into specific studies where limited capacity of the system does not allow further growth or where there is excess supply of graduates on the labour market. In most countries, numerus clausus is used to tune student demand to the capacity available.

In Ghana, the government indirectly determines the number of students it can offer financial assistance within a particular year; this is usually done by the approved recurrent budgets for a particular period. This however is the reason for the seemingly low tertiary enrolment in Ghana. In the year 2000, the approved recurrent budget for polytechnics was 50 percent of what they required, and thus compelling the polytechnics to reduce the number of qualified applicants. Available statistics however indicates that 33 percent of qualified applicants to polytechnics do not gain admission because of inadequate resources and support from government.

The level of decentralization of decision power to sub-local government units to a large extent determines the active participation of the region in supporting the funding of education while at the same time limiting the effects of restrictive government policies. This is the missing link in Ghanaian polytechnics as government is the sole provider of polytechnic education and its provision is dependent of government support each year.

In the Netherlands the government can legally establish a numerus clausus if the supply of graduate from particular courses exceeds the demand for these graduates to a considerable extent and which will likely continue during subsequent years. This is however only possible under tightly defined circumstances and political procedures. In Ireland and Germany the Numerus clausus has been used to a rather limited extent, but not on direct labour market consideration. In these countries, as in Belgium, the (constitutional) right to access has prevailed over the manpower planning argument.

2.4.2 Selection and quotas in tertiary institutions

In most countries a qualifying diploma of secondary education forms the basic requirement for entry to higher education, although for certain subjects, selective entry requirements are required. Meeting the admission requirement does not guarantee a place in any particular programme or institution.

In Ghana, the National Accreditation Board has placed the minimum grade needed to be admitted into any of the tertiary institutions. Admissions are however carried out by the institutions based on their own selection criteria but with the government minimum entry criteria as their limit. However at the Institution level there arise conflicts between the central administration and the departments when admission processes are centralized. This is because most departments always prefer being at the fore front of admission, they tend to indicate that they should be allowed to select students based on the needs of the department.

The mode of selection into polytechnics is much decentralized and the various institutions advertise for prospective applicants to purchase forms for enrolment upon which the selection is done based on the resources and space available for new entrants in the school. The polytechnics in Ghana are very competitive and entrance into the polytechnic is dependent on the excellent performance of prospective applicant and not upon the passing of matriculation examination conducted by a central body. However, all polytechnics follow the laid down procedure in admitting applicants into the institution but may set different cut-off points based on the intake capacity and the number of applicants in the academic year.

Competition for students and the availability of resources go a long way in determining an institution's ability to select qualified prospective applicants into tertiary programmes in the polytechnic. The situation pertaining in Ghana however is that certain programmes are tagged as very intensive and although applicants may qualify, there is usually a quota set by the institution to prevent many students from enrolling in those programmes. However these polytechnics tend to control the market in collaboration with the professional bodies in the country. There is also the issue of excess qualified applicants who are rejected each year in Ghana due to lack of resources to enrol the increasing number of high school leavers who seek tertiary education.

2.4.3 Structural reform and student selectivity in polytechnic education

Structural reforms of higher education system all over the world is one prime concern of most governments, these reforms are usually done to shape the educational system to meet the demands of

modern trends while at the same time focusing on the market and economic demands of the society respectively.

One important reason for the creation of the non-university sector is also a move from elite towards mass higher education (Goedegebuure et. al. 1994). However, most governments adopt these policies to abolish the artificial boundary between the universities and the polytechnics. The biggest reform in the Finish education structure was the establishment of Polytechnics, which was aimed at providing non-university professional higher education in a multi-field environment. Until the 1990s the concept of higher education was defined narrowly in Finland: the university system was based on a combination of science and instruction which was synonymous with higher education. The universities could offer a study place to only a fifth of the age group, which was not enough to meet the changing needs of the society and labour market. The purpose of the polytechnic reform was to provide young people with another high-level alternative by creating a more practically and professionally oriented higher education degree system to exist side by side with the traditional university degrees.

In Ghana, the issue of polytechnic education as regards government policy dates back to 1993 when the various polytechnics were upgraded to the level of tertiary institutions. Hither-to, they were functioning as technical institution offering both vocational and business programmes. The policy objective of the government of Ghana in establishing the polytechnics as stated in PNDC Law 321 are:
- To provide full time courses in the field of manufacturing, commerce, science, technology, applied science, applied arts and such other areas as may be determined by the authority responsible for education
- To encourage study in technical subjects at the tertiary level
- To provide opportunity for development, research and publication of research find.

These objectives are reinforced by the government white paper on the report of the Education Review Committee, 2004 which indicates that, "Government will continue to equip the polytechnics to make them offer tertiary education in their own right, to emphasis practical skills that are needed to run the productive economy and build a nation"

These policies however affect the entire process of student selectivity because students would have to shape their needs and aspirations in line with broad government policy objectives. What makes the situation very difficult is the fact that financial support for the programmes offered by the polytechnics are inadequate and these affect students' choices in selecting programmes.

In Ghana, the entire admission process and the relevant entry examinations needed to enrol in polytechnics are conducted by the polytechnics and the institutions have more autonomy in deciding the particular number of applicants they wish to select based on the resources made available to it by government and the internally generated funds which are very small.

Student selectivity at the institutional level to a far extent is dependent on government policy issues regarding selection quotas and numerus clausus. However if there could be a free play of market determinants and competition among polytechnics and the needed financial support from government, then most polytechnics all over the world would be able to admit all qualified applicants to pursue various programs of their choice. In South-Africa, the growing shortage of skilled high-level personnel to meet the needs of commerce and industry led to the adoption of the Advanced Technical Education Act of 1967 and these developed later to the status of polytechnics. The higher education sector falls under the auspices of national government, private schools and higher education institutions have a fair amount of autonomy, but are expected to fall in line with certain government non-negotiable(s). Technikons (polytechnics) in South-Africa offer more vocation-oriented education than the universities and their entry requirements are less stringent. The Technikons offer a three-year National Diploma courses and a four-year B'tech diploma, although there are opportunities at lower levels which students can pursue other careers and their studies simultaneously.

2.5.0 TERTIARY INSTITUTIONAL STRUCTURES AND SCHOOL AUTONOMY

The concept of school autonomy in tertiary institutions is one aspect of educational reform which most countries are gradually introducing into their management systems. School autonomy imply the redistribution of power within a school system in ways which enhance the importance of the individual school vis-à-vis the wider school system, national and local. (Fidler et al, 1997)

Institutional autonomy implies that tertiary institutions enjoy freedom from government regulation in respect of the internal organization of the institution, its governance, the internal distribution of financial resources in the generation of income from non-public sources, the recruitment of staff, conditions of study and finally the freedom to conduct teaching and research, (De Groof et al, 1996).

One important aspect of school autonomy is the relationship that exists between devolving decision making to schools and the promotion of institutional effectiveness, (Whitty et al, 1998). The promotion of school based management is one driving force of school autonomy which is also seen as an aspect of devolving decision-making to schools. Thus school autonomy could be linked to school self managing institution. Fidler et al, identify three main areas of concern in considering school autonomy in a wider context. These are;
- Who is empowered and who is disempowered by the reforms?
- In respect to what are their powers increased or decreased?
- Under what forms of control and constraints these powers must be exercised?

Although the term autonomy is placed or attached to certain tertiary institutions, in practice, they are not wholly free from government regulation in respect of the internal organization of the institution. Put succinctly, institutional autonomy is that condition which permits an institution of higher education to govern itself without external interference, (De Groof et al, 1996).

Different writers see the concept as different from complete government control which involves bureaucratization of the educational system. Rather, it is a boundary condition between tertiary institutions, government and society which is capable of being modified, redefined and having new conditions re-enforced as a price of its continuation, (Tapper & Salter, 1995).

Many developed countries have transformed their educational system since the end of 1980. The reforms have often involved the devolution of financial and staff management direct to schools and colleges, leading to institutional self management, (Bush & Bell, 2005). Certain aspects of school autonomy could be compared to those of the secondary the primary schools. Examples could be cited in England and Wales, where governing bodies receive their own budgets and Charter schools in the United States, where parents are empowered to establish their own schools within public funding, (Yancey, P. 2000).

2.5.1 Autonomy and power in the school system

School autonomy could be seen in relation to the power systems that exist between the central government level and the institutional level. Scott, (2003) identifies power structures in informal and formal systems. He describes power in informal groups as personal qualities and social relations that differ among members within a group which become the basis for differences in sanctioning ability. Thus, as stated by Blau (1964), "A person who commands services others need and who is independent of any at their command, attains power over others by making the satisfaction of their need contingent on their compliance." Power in informal groups is based on the characteristics of individual differences that can function as resources allowing some to reward and punish others.

Scott however identifies the second power as that in formal organizations. This type of power is determined at least in part by design: Sanctioning powers are attached to positions available to any individual who occupies it regardless of his or her personal qualities. The rational system theorists emphasises the importance of formal power structures in the functioning of organizations. They argue that it is possible to design power structures in such a manner that sanctioning power may be made commensurate with responsibilities and distributed so as to facilitate the organization's requirement for coordination and control of participants' contribution, (Scott, 2003).

The natural system theorists on the other hand insist that no organization succeeds in completely controlling all sources of power or in rationally allocating power among its positions. Scott (2003) identifies two reasons for this.

First, positions are filled by persons who possess diverse attributes and enter into various relations. Such differences can serve as resources that sometimes supplement and sometimes contradict and erode the formal distribution of power.

Second, in the organization's allocation of resources, to positions, some participants inevitably obtain access to resources that can be used in ways not intended by the organization designers.

Winstanley et al (1995) however distinguishes between 'criteria power' and 'operational power'.

He identifies criteria power as the ability of stakeholders to define the aims and purposes of the service, design the overall system within which it is provided, set or influence the performance criteria which providers must satisfy and evaluate their performance in relation to these criteria.

Operational power on the other hand refers to the ability of stakeholders to provide the service itself or to decide how it is provided and to change the way in which it is delivered through the allocation of limited resources or by using relevant knowledge and skills.

In other words criteria power is concerned with determining purposes and framework relative to the 'what' and 'why' of service provision while operational power is concerned with the 'how' of service delivery.

In relation to the concepts of centralization and decentralization in the educational system, most central governments have considerably increased their criteria power and they are key actors in the determination of broad policy objectives nationally and the establishment of operational frameworks through which these policies are carried out. An example is the student selectivity process in the tertiary education system. Thus, while a number of parties may have had their operational power increased-particularly, governors and heads, criteria power has been drawn much more firmly into the centre. In other words, school autonomy is exercised within a much firmer framework of central control. Central government defines the aims and purposes of the service through the process of school inspection, it also determines the broad basis on which schools would be funded through the approval of funding formulae; it also set performance indicators and inspection reports. Viewed in this context, increased school autonomy is severely constrained, (Fidler, 1997).

2.6.0 DIMENSIONS TO AUTONOMY AND GOVERNANCE IN TERTIARY INSTITUTION
There are basically three dimensions to autonomy in governance and these are external autonomy, organic autonomy and administrative autonomy, (De Groof et al, 1998).

2.6.1 External autonomy
External autonomy is a criterion permanently formal. If the decision to found a tertiary institution was taken by a private individual or group of private individuals, then the tertiary institution would stand as an independent legal personality as it may also be if the status of an 'organizing' power is either conferred upon it or transferred to it by law. In several countries however, the institution stands on 'administrative service' of the state.

This criterion is not hard and fast. ('Free') – that is non state universities may become subject to general university legislation once they accept government subsidies or once their diplomas are recognized officially. In contrast to this, the recent change in French higher education which extends the right of a public service to enter into contractual agreement with partners in the private sectors.

2.6.2 Organic autonomy
Organic autonomy confers upon the institution the capacity to determine its own internal forms of academic organization. State universities, for most part have an identical arrangement across al establishments within the sector of public institutions. Free non-state universities follow the provisions laid down in their Act of foundation or deed of incorporation. In this latter instance, organic autonomy derives from the constitutional right to found educational establishments outside the public sector.

One very important aspect which needs to be identified is that public sector institutions are under obligation to conform to the laws, decrees, governmental circulars and statutes which touch upon their internal academic organizations.

However, provided the institution remains within the general guidelines, the thrust of this legislation is increasingly to allow the possibility of individual variations between establishments. Yet it can be argued that both administrative and academic organizations should become more uniform irrespective of the legal status public or private, of the establishment. The specific identity of an institution of higher education is set down in its charter or founding statutes. Neither the specific identity nor the degree of administrative autonomy a tertiary institution enjoys prevents government from requiring that it implement certain procedures. An example is, setting down internal regulations governing disciplinary proceedings and disputes over examination.

2.6.3 Administrative autonomy

Administrative autonomy or autonomy grounded in institutional self-coordination is the pivot of an institutional independence. Under this autonomy come freedom to choose priorities and to decide vis-à-vis duties and opportunities. It also embraces the power to set complementary detailed procedures for institutional administration, budgetary control and personnel policy. Such discretionary powers are limited on a first level by the charter or government legislation and at a second level by the regulations issued by administrative instances in the execution of their powers. The exercise of this particular dimension with institutional autonomy is clearest when applied to staffing policy, the organization of teaching and research and in finance, budget and management.

2.7.0 MODELS OF SCHOOL GOVERNANCE IN TERTIARY INSTITUTIONS

The concept of school governance and decentralization are off–shoots of reform policies that have gained considerable grounds all over the world. However one very important factor that needs to be added is the system of governance that would ensure that the rationale for decentralizing decision-making is not left in the vacuum. Different theorists have developed several models of effective school governance which all describe the various key elements which help most decentralized unit operate in an efficient and most effective way which ensures the growth of the institution.

De Groof et al, (2003) discuss four basic models of school governance namely, the collegial, the managerial, the market and the social utility models.

The collegial model is based on the assumption that governance rests on the presumption that it is legitimate for academia to insist on the individual freedom to teach, and to research in accordance with values, expectations and rigor set within the various academic disciplines which, in turn, constitute the institution's reason for existence.

The managerial model defines the general conditions of 'academic work', and set forth the division of labour. The essence of the managerial model of governance is a functional division between those who define, plan and oversee the task carried out and those whose duties are so defined that theirs is the responsibility to execute the task assigned.

The Social utility model in higher education identify education at the tertiary level it is not simply an outpost of the private sector but sees its responsibilities as far more reaching than the provision of quality education and administration. Under the social utility model, the responsibilities that lie before the tertiary institution is between economic efficiency and individual enterprise and its moral obligation to contribute to upholding the living standards and quality life of communities, defined spatially by its origin or by its age.

The main difference between the market model and the social utility model is that while the market model lays stress on revitalizing governance structures as means to improving the quality of output, qualification and abilities appropriate to economic demands, the social utility model directs the newly released efficiency in the institution towards expanding access and extending equity in society.

2.7.1 Market model

The market model places a lot of challenge to schools to develop their institutions with the goal of increasing access to education while at the same time satisfying the various stakeholders within the educational setting. Can the market model in effect help improve on access to tertiary education? This is the crux of the modern system of education where institutions go out to source for staff in organizations to develop their human resource capacity at a cost borne by the organization.

Widening participation is in essence a marketing issue for education managers, for the challenge is to raise participation and achievement amongst socio-economic and community groups hitherto under-represented in the sector. The drive to widen participation is partly driven by the pursuit of increased economic competitiveness which is also based on a concern for equity and facilitating individual achievement, (Bush & Bell, 2005). Where devolution has gone furthest, head teachers and principals increasingly stand at the interface between government and the local stakeholders, especially consumers. Such a position requires that they engage both with the demands of the evaluative state in terms of meeting centrally determined objectives and with the day-to-day 'business' of running their school and ensuring its survival within the education market, (Whitty et al, 1998)

Arguably, the underpinning intention of education legislation in the last decade has been to establish a market in education in England and Wales. Although the market remains partial and imperfect, one consequence of the legislation has been the increased priority given to the marketing of educational organizations. Education marketing has become an important aspect of educational management, (Fidler et al, 1997)

> Existing market features in education are significantly extended as governments encourage diversification in a broader environment of market-led change. This is fuelled by dissatisfaction by "strategic consumers" in cultures where schooling is commonly viewed as a private as well as a public good. Many new providers are stimulated to come into the learning market, encouraged thorough going reforms of funding structures, incentives and regulation. Flourishing indicators, measures and accreditation arrangements start to displace direct public monitoring and curriculum regulation. Innovation abounds as do painful transitions and inequalities, (OECD, 2006).

Miliband (1991) considers that two types of argument can be advanced for the market as a distributive mechanism. Firstly, there is the moral argument based on the notion that the exercise of choice and not be constrained in that choice are fundamental rights. Thus, widening participation has two distinct components. First, facilitating choice involves the removal of systematic barriers to participation for those who wish to engage in learning but are prevented from doing so. Simplifying admission procedures, providing alternative modes of programme delivery and tailoring pastoral support systems to meet individual needs are some of the 'marketing' approaches that can facilitate choice. Increasing demand for education and training requires the personal benefits of learning to be emphasised, (Bush and Bell, 2005).

Secondly, the market produces the most optimal outcome and generates an overall increase in the quality of goods and services. It is argued that the market environment presses producers to make improvements which in turn raise educational performance. However, increasing demand does not simply imply selling education but requires a wide range of strategies which take education to potential new participants, tailoring programmes and systems to meet the needs of the students and not the needs of the institutions. A marketing orientation places customer need anticipation, identification and satisfaction at the centre of the organization's activities and in education, marketing sits more comfortably with educational values than does a product orientation. In education, anticipation and identification of needs (which includes scanning and interpretation of the market) and responsiveness to those needs in competitive arenas are 'areas of varying sizes and natures within which schools draw from a largely drawn population, (Fidler et al, 1997). The market mode thus identifies the various values that are placed at the centre of education which ensures that students who are recipients of education select the institutions which they see to serve their 'interest' best.

2.7.2 The market model and competition in tertiary institution

The market model of governance arises from the shift of higher education's major outlets from the public to the private sector of 'free economies'. Likewise many of the instruments and techniques of administration-quality assessment, total quality management, criteria of performance, notions of accounting and techniques for ascertaining financial viability derive are taken over from private sector industry. The prime feature of a 'free market' is competition and the insertion of this value into higher education is the prime lever in moving governance structures over to the 'market model'.

Competition between institutions for money, reputation and status places a further premium on the managerial rationalization of tasks and responsibilities and most particularly so now that the survival of a tertiary institution becomes dependent on the strength of its ties with external society. This is reflected in the nature of basic tasks of governance, (De Groof et al, 1998). Competition is the heart of market theory. For perfect competition, there must be buyers and sellers who have perfect knowledge of market events. Buyers and sellers operate independently and sellers are free to enter or leave production. Also for perfect competition, sellers must be able to supply whatever is needed to meet demand and the product or service is the same everywhere, (Bash and Coulby, 1989)

There are several variables that influence educational institutions as organizations with market orientations. These are categorized as the marketing mix and activities within these variables enable the organization to move from 'where it is to' 'where it wants to be' in terms of responding to client need. However Cowell, 1984, developed a model of service marketing which is often referred to as the 'seven Ps'. The 'seven Ps' offer the most detailed framework for considering the choices that educational managers can make in their responses to the market. The 'seven Ps' are made up of product, place, price, promotion, people, processes and proof. These variables according to Cowell when combined give the educational institution a framework upon which effective marketing could be made to achieve the needed results.

A greater reliance on market signals also brings shift in decision-making power not just from the government but also from tertiary institutions to the consumer. Tertiary education was mostly borne by government and the state ensured that all qualified applicant received the needed education. However, the trends are changing and this is greatly affecting the support the state is giving to tertiary institutions, and to many economists, shifting some of the cost burden from the taxpayer to students and parents also reflects a reform in the direction of greater equity and a more reasonable alignment of those who pay with those who benefit.

The OECD schooling scenario in brief report of 2006 indicate a four-point level of growing market models in institutions, they include;
- Learning and organization: The most valued learning is importantly determined by choices and demands; whether those of buying educational services or of those such as employers, giving market value to different forms of learning routes. A strong focus on non-cognitive outcomes and values might be expected to emerge. Thus, wide organizational diversity.
- Management and governance: There is a substantially reduced role for public education authorities. This involves overseeing market regulations but less involvement through organising or "steering" and "monitoring" and entrepreneurial management modes are prominent. Important roles for information and guidance services and for indicators and competence assessment that provide market "currency".
- Resources and infrastructure: Funding arrangement and incentives are critical in shaping learning markets and determining absolute levels of resources. A wide range of market-driven changes would be introduced into the ownership and running of the learning infrastructure, some highly innovative and with the extensive use of ICT. Problems might be the diseconomies of scale and the inequalities associated with market failures.
- Teachers: New learning professionals, public, private, full-time, part-time are created in the learning markets, and new training and accreditation opportunities would emerge for them. Market forces might see these professionals in much readier supply in areas of residential desirability and/or learning market opportunity than else where.

The market model is thus a complete system of education which requires the involvement of all spheres of the institution in realising that the money paid for education is realised by the student who expects to get the full benefit of the money paid. There is also the need to provide the needed teachers, infrastructure, conducive environment for learning and management and governance needed in the provision of quality education.

2.7.3 The market model and part-time education in polytechnics
Would part-time education in effect help increase access to polytechnic education? The issue of part-time education continues to gain attention in most tertiary institutions all over the world; most of the students who enrol in part-time programmes are usually workers in organizations who are not able to enrol in the full-time programmes because of their job schedules. The polytechnic education in Ghana however does not have much of the part-time courses run in all the institutions and cape coast polytechnic also does not run part-time courses for workers in this category. Several factors come to play when considering the running of part-time programmes, these include; financing of the programmes, facilities available for the programme and the teaching staff who would teach the various courses.

The concepts of diversification and massification of tertiary education involve different modes of providing tertiary education for individuals who do not get the needed tertiary enrolment for several reasons. The introduction of part-time programmes into tertiary education is to enable workers and other individuals who wish to progress through the academic ladder to enhance their knowledge and skills in their job or profession. Most governments support the idea of part-time studies because it provides a conducive avenue for improving upon the knowledge base of workers in the various sectors of the economy who desire to further their education to help contribute to the development of the country. In Scotland, following the Education Act of 1992, further education colleges were removed from local authority control and incorporated as independent institutions. This has allowed them to pursue different markets, or to pursue different markets but in different ways without formal reference to local government policy, (Schuller, et. al., 1999).

Access to higher education tends to be assessed in public debate according to three criteria. These three criteria are characterised by the quality of the selection process in terms of a fair selection of the best students (the key criterion is the predictive validity of selection); the role it plays in providing precluding opportunities to enhance education and a career; the impact access and admission has on the content and on the processes of learning both prior to and after the moment of access to higher education, (Teichler, 1997). Some countries however identify adult students or what is usually identified as mature applicants and some form of procedure is followed which is aimed at giving them the opportunity to obtain tertiary education. Teichler (1997) indicates that the term is used in the context of special measures for persons who were not awarded the education credentials required for access to higher education when they were young. Those who could not gain tertiary in their youth for various reasons are offered the opportunity for some reasons and these include; Vocational education and working experience might be a more valuable asset to higher education and graduate careers than traditional access and admission systems provide for, thus, eased opportunities for adults without typical educational credentials thus might have an enriching impact; It is generally assumed that educational aspirations and activities are not necessarily constant and consistent. A crises experienced during a certain period of ones life should not constrain opportunities forever.

The concept of admitting mature applicants into tertiary institutions and especially in the polytechnics could be very beneficial to the country as a whole. Several options are used in admitting the 'mature applicants' into tertiary institutions all over the world.
The first approach is the introduction of courses and examinations prior to admission which do not merely emphasise the same areas of knowledge and competence which are usually addressed in secondary schools but also try to examine competence acquired on the job which could be considered equivalent to academic competence. The second approach involves identifying out-of-school experience to schooling without measuring that experience through examinations. Thus, mature applicants who are at least thirty-years of age with some specified years of occupational or other

corresponding experience may be admitted to tertiary institutions if they have passed secondary education level courses. In this system, a certain number of points are counted for such experience in a complex weighting model. Another method that is applied is the admission of mature students in tertiary institutions and then allowed to go through a gradual transition from non-tertiary studies to tertiary programmes. The final approach involves the admission of mature applicants not on the basis of any typical secondary education credentials or equivalents but on an open admission policy in which students would have to prove their capability of going through the programme. This is usually based on some form of intermittent assessment and end of semester examinations. This example could be found in some open universities in Germany and the Netherlands.

2.7.4 Funding polytechnic education and government access-policies
The global tertiary education sector continues to experience rapid growth and this has however called for increased financial commitment to the tertiary education system. It is estimated that global spending on tertiary education is approximately three hundred billion dollars or one percent of global GDP, and it is growing at a faster pace than the world economy. Nearly one-third of this expenditure is in developing countries, and with developing countries' systems heavily dominated by public tertiary institutions that tend to have low tuition fees, there is the need for more financial spending, (World Bank, 2000). Thus, financial dependence on state means that funding levels fluctuate with the ups and downs of government resources. In many Central American countries, tertiary education budgets are constitutionally fixed as a percentage of government spending and this is usually done to de-politicize funding, (World Bank, 2000).

The funding of tertiary education does not need to be limited to the public purse alone, tertiary education can be provided and financed either entirely public or private (including non-governmental organizations) or by some combination of the two. Private financing is often attractive because it reduces the burden on government budgets, and helps ensure that the costs of tertiary education are borne by those to whom the benefit accrues. Private financing can however be achieved in the context of public provision through tuition fees, grants, contracts from foundations and industry, (World Bank, 2000). One major disadvantage of private financing is that it precludes the enrolment of deserving students who do not have the ability to pay for their education. However, scholarships and loan programmes are possible approaches to addressing the problem they have been very difficult to administer due to the difficulty in assessing individuals' ability to repay such loans, it is also due to high administrative costs and high rates of default.

The issue of polytechnic education and funding is a very vital aspect in the provision of quality education all over the world. Most governments face challenges that come as a result of increasing secondary school graduates who mostly apply to institutions of higher learning including polytechnics. Tertiary education funding is characterised by several factors including competing demands from other aspects of the economy such as health, defence, labour issues and foreign services. In the education sector, there is also competition from other levels of education such as primary and secondary schools. The major factor hindering equity in tertiary education is funding, most developing countries are seeking alternative means of supporting institutions and students to get the needed quality education to improve upon the quality of graduates on the labour market.

In Africa the introduction of tuition fees and cost of accommodation is also seriously affecting tertiary education and especially polytechnic education. Countries such as Kenya and Zambia are also gradually getting into the system of full cost-recovery for students in the tertiary education sector. An adverse practice is seen in Tunisia where public institution of higher learning charge nominal fees and users contribute less than 1% to the cost of their education, creating a regressive pattern in which the highest income population groups benefit the most from contribution of the taxpayers. In 2002, Ghana increased her recurrent expenditure on tertiary education by 8.79% with a unit cost of approximately €5,500.

The traditional welfare state model of school provision consists of state funding together with provision. At the other extreme end is private funding and provision of schooling, where the market

alone determines the quantity, quality and distribution of schooling. In between there are different blend of private/public funding and provision. Thus the models could be explained as;
- Model 1: Traditional state bureaucracy with all funding and provision of schooling within the public sector.
- Model 2: State funding and private sector provision.
- Model 3: Private sector funding and state provision.
- Model 4: Pure market: Private sector funding and provision.

Figure 3: Combination of public and private funding and provision of schooling

PROVISION

FUNDING	Public	Private
Public	Traditional Welfare State: Bureaucratic Provision	State Subsidised Private sector provision.
Private	User charges and sponsorship	Pure Market Provision
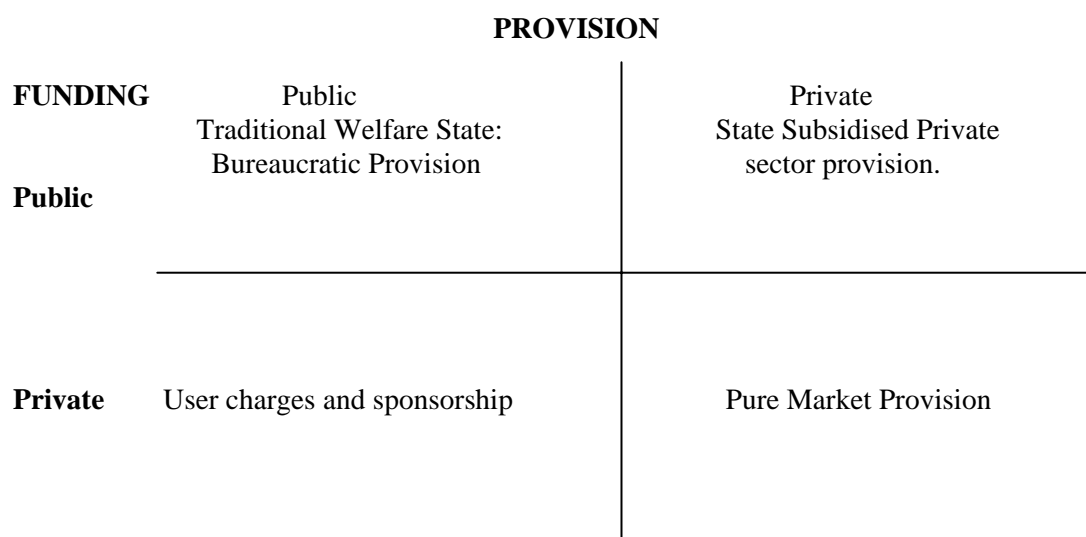
Source: The principles and practice of educational management, (Bush and Bell, 2005)

The changing trends in tertiary education have necessitated most government to shift cost of education to students. Most government all over the world have introduced a parallel system of financial assistance in order to maintain accessibility and provide equity tertiary education. There are five primary vehicles of this supplementation, or shift in cost sharing, or cost incidence; first is the introduction of, or substantial increases in tuition and full or more nearly full-cost fees into higher education sectors hitherto supported primarily or wholly by public revenues; the introduction of means tested grants and loans; the encouragement of private higher education supported mainly through tuition fees; the encouragement of entrepreneurial activities on the part of the faculty and/or institution and the encouragement of philanthropy for endowment, for direct operations, and for scholarship to students, (World Bank, 2000).

CHAPTER THREE

RESEARCH METHODOLOGY.

3.0 Introduction

The third chapter covers the research methodology used in the empirical survey research and it make use of the various instrumentation needed to come out with findings based on factual results on the field. This chapter details the research design and methodology, the interview and questionnaire structures, validity and reliability of the data collection method, target population and sampling and instruments used. The purpose of the study was to examine the effect of government access-policies on student enrolment in the Cape Coast Polytechnic with a focus on increasing students' enrolment rate in the Polytechnic. The study also aimed at identifying the institutional structures in the polytechnic and the various options available to the institution through which it could improve ways of increasing students' enrolment without necessarily depending on government restrictive access policies. The study took into consideration the response of prospective applicants and questionnaires were administered to both direct applicants and part-time/mature applicants. The questionnaires were administered to address the issue of students demand for tertiary education and factors that influence students' choice for polytechnic education.

3.1 RESEARCH DESIGN

The research instrumentation involved the use of interviews, questionnaires and document analysis. Interviews were granted to the Polytechnic Secretary and the Assistant Secretary in charge of academic affairs. Secondly, questionnaires were administered to selected secondary school leavers in the Cape Coast Municipality seeking admission to the Polytechnic. Some selected workers of some organizations in the Cape Coast municipality who wished to pursue programmes at the polytechnic responded to semi-structured questionnaires. Interviewing and document analysis were the qualitative methods used in the research. Because of the complexity of the issue of government access-policies and students selectivity, multiple methods of data generation were used. Multiple methods are particularly useful for examining communicative events from different perspectives, (Lindlof, 1995). This however calls for an effective distribution of questions to all the needed respondents to elicit the right feedback. Thus using multiple methods as a form of triangulation increases the reliability and validity of the study, (Marshall & Rossman, 1989). Interviewing were the primary source of data for the study among the management of Cape Coast Polytechnic and a sample of heads of organizations in the Cape Coast Municipality. The purpose of interviewing the selected respondents was to find out what their opinion were and what they felt about the concept of government access policies and students enrolment in the Polytechnic.

Interviews are conducted to find out from people those things we cannot directly observe, we cannot observe how people have organized the world and the meanings they attach to what goes on in the world. We have to ask people questions about those things, (Fraenkel et al, 2006). Structured interviews were administered to a sample of organizations in the Cape Coast Municipality while semi-structured interviews were used to collect information from management of Cape Coast Polytechnic. The research identified limitations to the effective implementation of an institutional strategy aimed at increasing student enrolment without necessarily depending on government budget allocation. These limitations included the centralized internal structure of the Cape Coast Polytechnic which makes it difficult for departments to reach out to organizations to run courses for their staff members. There was also an analysis of reasons for the centralized admission system and the effect on the various departments of study. For reasons of validity and reliability of the research design, the research adopted Kaiser and de Weert's, (1994) conceptual model of factors determining the demand for higher education. The variables of the model used were, individual demand, demand for higher education and policy objectives.

The research design involved the use interviews, questionnaires and document analysis. The questionnaire design involved respondents from, prospective students, and some staff of organizations who were interested to enrol in the polytechnic or improve upon their academic level/professional.

Table 4: Structure of problem in the research

MAJOR RESEARCH QUESTIONS	GROUP OF RESPONDENTS	DATA COLLECTION PROCEDURE
How does government restrictive access policies affect mass intake of qualified applicants into the polytechnic?	Management of the Cape Coast Polytechnic.	Semi-structured Interview/ Interview questions 1-7
In what ways do institutional policy on selection and quotas limit the entry of qualified applicants into the polytechnic?	Management of the Cape Coast Polytechnic.	Semi-structured Interview/Interview question 8-10
How can the polytechnic increase students' enrolment by the use of the market model under institutional governance?	Management of the Cape Coast Polytechnic.	Semi-structured Interview/ Interview question 17-18
What are the financial implications of increased enrolment of students in Cape Coast Polytechnic?	Management of the Cape Coast Polytechnic.	Structured Interview/ Interview question 23-25.
What alternatives are available to the polytechnic in overcoming the institutional challenges that hinder mass tertiary education in the polytechnic?	Management of the Cape Coast Polytechnic.	Semi-structured Questionnaire/interview question 24
How can the polytechnic increase student enrolment by the use of the market model under institutional governance?	Management of the Cape Coast Polytechnic.	Structured Questionnaire/ Interview question 17-21
Do demographic factors affect students' access to the Cape Coast Polytechnic?	Prospective applicants	Applicants' questionnaires/ question 1-4
Are the various employers of organizations prepared to pay for the cost of educating their employees on part-time programmes in the polytechnic?	Management of the various organizations selected for the study	Structured questionnaire/ Interview question 4.
a) Are there job markets for the various programmes run by the polytechnic? b) How important are the programmes offered by the Polytechnic to national development?	Management of the polytechnic and management of the organization	Structured and semi-structured Interviews/ Interview question 17 for management of the polytechnic.
What general factors influence demands for polytechnic education?	Prospective applicants	Applicants' questionnaires on factors that influence demand for tertiary education.

Please refer to the appendix for the questionnaire and the interview structure used for the research. The research study made use of cross-sectional surveys which drew sample of the target population for the study since it was not possible to use the census approach which involves the use of all the sample population. However, the major purpose of the survey was to describe the characteristics of the population and identify how the concepts of students' access into Cape Coast Polytechnic are affected by the various target groups.

In identifying the target population, the people involved in the research namely; prospective students, the school management and some Heads of organizations in the Cape Coast Municipality were selected. The survey included the following groups of people who were selected to give information on the topic of the research.

- A sample of prospective students who wish to enrol in the Cape Coast Polytechnic and submit their application for admission forms to the academic office between Aril 20th to May 20th, 2006
- A sample of workers who wish to improve upon their professional and academic level or standard and have applied to the polytechnic for further education.
- A sample of organizations in the Cape Coast Municipality whose staff apply to enrol in the polytechnic.
- A sample of management of the Cape Coast Polytechnic.

3.2 INTERVIEW STRUCTURE AND RESPONDENTS.

The respondents from the Polytechnic were chosen on the basis of their position and influence on the general students selectivity process and setting up of admission criteria to admit students into the polytechnic. The Polytechnic Secretary as the head of the Polytechnic registry was selected because of his direct involvement in liaising with government on the various modalities set for the admission of students into the polytechnic. The Academic Secretary as the head of the unit responsible for the selection of applicants into the polytechnic was also included to provide direct information on the criteria for selecting applicants and the limitations involved in the admission process.

3.3 SAMPLE SIZE OF RESPONDENTS

The key respondents for the purpose of government access policy issues were the management of Cape Coast Polytechnic namely; the polytechnic secretary, the assistant academic secretary in charge of academics and the vice principal. The target population for this group were direct applicants to Cape Coast Polytechnic with SSSCE certificates, O and A levels and those with technical education background. The assessable population was defined as applicants who submitted their admission forms directly to the academic office. For the purpose of the study and the time frame, sample of applicants who submitted their forms between April 20th and May 20th, 2006. 64 direct applicants were targeted for study because they constituted about 96.8% of the total number of applicants for the 2005/2006 academic year. Forty (40) mature applicants were targeted because they formed 3.2% of the total number of applicants for the 2005/2006 academic year. Purposive sampling was also used in the study of organizations within and around the Cape Coast Municipality whose staff usually apply to the polytechnic for tertiary education. Twenty-five (25) organizations were contacted for the study and nine (9) out of the total sample population fully responded to the interview schedule. Purposive sampling uses judgement and expertise in selecting sample members. Judgement and not chance determines the composition of the sample, (Putt, et al, 1987).

The sample size was limited in order to meet the budget for the study and get the desired results as expected within the scheduled period. Purposive sampling was used for the qualitative research because of the nature of information required of the management of the Cape Coast Polytechnic and the information based on the knowledge of the respondents and their disposition to facts available on the ground. Purposive sampling was used for obtaining the sample of respondents who applied for admission in the Cape Coast Polytechnic for the 2006/2006 academic year.

3.4 SURVEY QUESTIONNAIRES FOR DIRECT AND MATURE APPLICANTS

For the purpose of the research work, non-random selection procedures were employed to solicit views from the two groups of applicants seeking admission into the Cape Coast Polytechnic. The basic characteristic of a non-random sample is that it is representative of the working population; it is representative in the sense that all units of the observation have a probability of being selected for the sample which is usually from a diverse or large population, (Putt, et al, 1987). The non-random sampling method was used because its basic feature ensures that every individual within a diverse population of the observation group in the working population had a chance of being included in the sampling frame. Thus, the process of obtaining a non-random sampling for respondents for the research was done on direct criteria with which prospective applicants who wished to enrol in the polytechnic were selected to complete the questionnaires. Each member in the sampling frame who was picked was assigned a unique identifying number that made it possible to identify the questionnaire. Due to time limitation, only one month was used in administering the questionnaire and

only applicants who came to the polytechnic to obtain forms were selected for the research. However some known applicants within the municipality were also contacted to complete the questionnaire, the research was also conducted at a time that the polytechnic had began the sale of forms for the 2006/2007 academic year.

3.5.0 INSTRUMENT FOR DATA COLLECTION AMONG MANAGEMENT OF CAPE COAST POLYTECHNIC

The process of collecting data from a sample of management of the Cape Coast Polytechnic consisted of interviewing selected individuals namely; the Polytechnic Secretary and the Assistant Secretary in charge of academic affairs. The issues covered in the interview included the following: The first section of the interview covered the effect of government access policies on mass student enrolment in the polytechnic. The aspect of government access policies that was delved into was mainly on the issue of government restrictive access policies on tertiary education. The second part of the interview covered the issue of student selectivity and selection quotas by the polytechnic. It sought to identify factors that caused limitation of students' entry to the polytechnic and the rationale for setting up selection procedures and selection quotas. The issue of structural reform and influence by the National Accreditation Board on student selectivity criteria was also posed to the respondents. The third part of the interview detailed the effect of institutional structures and school autonomy on the process of student selectivity vis-à-vis the increase in student enrolment in the polytechnic. One important aspect of school autonomy is the relationship that exists between devolving decision-making to schools and the promotion of institutional effectiveness, (Whitty et al, 1998). The issue of institutional autonomy and structures was considered in the interview item because, institutional autonomy implies that tertiary institutions enjoy freedom from government regulation in respect of the internal organization of the institution, its governance and condition of study among others, (De Groof et al, 1996). The aim of this section was to identify the extent to which the polytechnic could increase students intake based on the institutional arrangement aimed at providing quality education for all category of applicants namely; direct applicant, mature applicants and Pre-HND applicants.

School governance and market model in education that aims at providing quality education to students in educational setting was set in the interview to solicit the school managements' view on ways of providing education for workers in organizations within the Central Region. Widening participation is in essence a marketing issue for education managers, for the challenge is to raise participation and achievement amongst socio-economic and community groups hither-to under represented in the sector. This situation has called for the involvement of the polytechnic in designing programmes aimed at providing education for individuals within the working environment who do not have the requisite qualification to enrol in tertiary programmes. The drive to widen participation is partly driven by the pursuit of increased economic competitiveness, but is also based on a concern for equity and facilitating individual achievement, (Bush and Bell, 2005).

The final part of the interview was on the mode of funding polytechnic education and the institutional arrangement aimed at increasing students' intake and making students who do not meet the requisite qualification pay for the cost of their fees. The interview also detailed the alternative source of students funding especially among applicants coming in through the mature entry mode. The aspect of organising courses for employees of various organizations with the aim of upgrading their educational level was also considered in the interview, this was to identify the feasibility of such initiative in the polytechnic.

3.5.1 Instrument for collecting data among direct applicants to the Cape Coast Polytechnic.

The main instrument that was used in collecting data from prospective applicants to the polytechnic was questionnaire designed to answer questions on their rationale for choosing polytechnic education and the courses they intended to enrol in. It was also meant to identify their perception about their reasons for taking up tertiary education looking at the various theoretical explanations given. The theoretical explanations given for individual demand for tertiary enrolment include socio-economic reasons, economic reasons and personal interest. The questionnaire was grouped into four (4) different categories under the following issues.

- Identify why students were interested to study in the polytechnic. This category of questions answered the theory on demand for tertiary education.
- Identify whether students who did not meet the minimum entry criteria were prepared to pay for the cost of enrolling in Pre-HND programmes.
- Whether demographic factors such as age and location limit students' interest to enrol in the polytechnic.
- How the prospective applicants intended to finance the cost of their education in the polytechnic.

3.5.2 Data collection for mature applicants to the Cape Coast Polytechnic.

The mature applicants' data collection procedure involved questionnaire which demanded information on the various descriptive information on the status of the individual prospective students and their career path on the job. The main reason for identifying this group of individuals was to access how the polytechnic could offer the needed assistance to them as they searched for ways of preparing themselves for further education. Their motives for prospecting for further studies was also a key factor in designing the questionnaire; the process of tertiary education and the time involved also meant that their employers needed to be informed of their quest for further studies. The mode of financing the education of workers was considered in the design of the questionnaire and it aimed at bringing to the fore the best ways which could be used for them to enrol in the polytechnic.

Another issue also placed for respondents' views was their preparedness to study during their working hours or whether they were prepared to attend evening lectures if organised by the polytechnic and how they could cope with combining their work activities with studies. Another group under this category that was identified were workers who did not meet the minimum entry criteria for enrolling in the polytechnic and how prepared they were to undertake top up access courses to enable them enrol in the polytechnic. The questionnaire was grouped into different categories under the following issues.

- Identify why workers were interested to study in the polytechnic. This category of questions answered the theory on demand for tertiary education.
- Identify whether workers who did not meet the minimum entry criteria were prepared to take up access courses in the polytechnic before they were admitted into the HND programmes.
- Whether demographic factors such as age and location limit workers' interest to enrol in the Cape Coast Polytechnic.
- How the workers intended to finance the cost of their education in the polytechnic.
- Finally how they considered the courses they wished to enrol in would impact on their areas of specialization on the job field.

3.5.3 Data collection Instrument for Management of some selected organizations in the Cape Coast Municipality.

Structured interview was used in collecting data from the heads of some selected organizations in the Cape Coast Municipal; the heads were asked questions pertaining to how the Cape Coast Polytechnic could help their staff to upgrade their level of education through part-time programmes. Secondly the issue of educational financing for this group of people were considered and also the various alternatives brought forth. It was designed to bring out the preparedness of the various organizations to make use of the existence of the polytechnic to help develop the human resource capacity of their organization which also has long-term positive effect on the productivity of the organization. The Interview was divided into three main sections;

- The first category covered the preparedness of the organization to take the opportunity of enrolling their staff with low educational level at the Cape Coast Polytechnic.
- The second category was meant to identify the effects of releasing their staff members for training at the polytechnic and the positive and negative effects of the programme on production levels of the organization.
- The final category involved the issue of financing and how best the organization could assist workers who qualified for studies at the polytechnic to get the needed assistance to improve

upon their academic levels. The effect of such engagement on the organization was also factored into the interview design.

3.6 Validity and reliability of the Instrument.
Patton, (1990) identifies six basic types of questions that can be asked of people in an interview schedule. Thus any or all of these questions might be asked during an interview. The six types are background (demographic) questions which cover background characteristics of respondents and their occupation; knowledge questions which pertain to the factual information respondents possess as opposed to their personal beliefs or attitudes. Others include experience (behaviour) questions, opinion or value questions which seek to gather information about respondents' goals and beliefs on certain issues; feelings questions and sensory questions. For the purpose of this research, background questions, knowledge questions, opinion questions and feeling questions were applied in designing the questions posed to school management and heads of the various organizations sampled within the Cape Coast Municipality.

The concepts of validity and reliability are very important in qualitative research, they however apply to the observations researchers make and to the responses they receive to interview questions. A fundamental concern in qualitative research revolves around the degree of confidence researchers can place in what they have heard.
Validity refers to the appropriateness, meaningfulness and usefulness of the inferences researchers make based on the data they collect, while reliability refers to the consistency of these inferences over time, location and circumstances. In other to reduce the event of likely biases, the study adopted a number of techniques to check the perception of research respondents to ensure that there were no misinformation about the issues raised in the interview questions. In collecting the interview data, the study also used the vocabulary of the education field which made it easier for study respondents from the polytechnic to follow the interview effectively; this was to prevent misinterpretation of certain words or key statements. Secondly, the author wrote down the questions asked and made a picturesque view of their submission in relation to the issue at stake and this was meant to reduce distortions in the flow of information. The study applied 'member checking' by asking Academic Secretary to identify the accuracy of the research report that detailed the concepts of government access policies and students selectivity in the Cape Coast Polytechnic.
In order to maintain content validity in the research work, colleagues of the researcher from two polytechnics in Ghana evaluated the whole interview structure and answered the questions posed to the various respondents and this concluded the external audit application aimed at making the design structure valid. The researcher conducted series of interviews with the Polytechnic Secretary and the Assistant Secretary in charge of academic affairs to check for possible inconsistencies in the various responses they gave in their submission. This was because they were the key respondents in the interview of management of the polytechnic. Pilot testing was conducted on a sampled population of students who were assumed to have similar characteristics of the population under study. For details on the questionnaire structure, please refer to the appendix.

CHAPTER FOUR

ANALYSIS AND DISCUSSION OF THESIS WORK.

4.0 INTRODUCTION

This chapter details the analysis of the study undertaken to identify the effect of government access policies on polytechnic education in Ghana with emphasis on the students' intake to Cape Coast Polytechnic and ways to improve upon participation among individuals who seek tertiary education. The chapter is divided into two parts, the first part deals with interviews granted to a section of management of the Cape Coast Polytechnic and some selected heads of organizations in the Cape Coast Municipality. The second part deals with the survey questionnaires administered to direct and mature applicants to Cape Coast Polytechnic.

4.1.0 THE EFFECT OF GOVERNMENT ACCESS POLICIES ON STUDENTS' SELECTIVITY IN CAPE COAST POLYTECHNIC.

The Polytechnic Secretary and Assistant Secretary in charge of academic affairs were the two main respondents who provided information on the effect of government access policies on mass student enrolment in the Cape Coast Polytechnic. The first aspect of the interview dealt with the issue of the effect of government access policies on tertiary education with emphasis on the Cape Coast Polytechnic. The second aspect of the interview covered the issues of student selectivity and selection quotas used by the polytechnic in the process of admission of students into the polytechnic. Finally, the third aspect of the interview was on the effect of institutional structures and school autonomy on the process of students' selectivity in the Cape Coast Polytechnic.

4.1.1 Government restrictive access policies and its effect on student enrolment in Cape Coast Polytechnic.

Restrictive admission policies fit into the model of state control and it restrains the behavioural options of all actors (thus, restrictive government access policies define the numbers, type of programmes and the financial resources made available by the state to the Polytechnic). The interview with key respondents who were made up of management of the Cape Coast Polytechnic brought out the main issues concerning students' enrolment and how government restrictive access policies influence students' selectivity in the cape coast polytechnic. On the issue of how restrictive government access policies affect tertiary enrolment in the Cape Coast Polytechnic, the respondents indicated that the polytechnic is guided by the policies of the government in the process of admission. They however indicated that the 6 SSSCE (Senior Secondary School Certificate Examination) passes required as the minimum entry point for applicants seeking admission into the polytechnic was a major factor in deciding who enrols in the polytechnic. Students who did not have passes in either Mathematics or English language could not be given admission into the polytechnic because the criteria set out by the National Accreditation Board specifies Aggregate 24 (twenty four) with 6 (six) passes (three in core subjects including mathematics and English and three in elective subjects) as the minimum entry point. This rigid entry criterion for applicants applying through the Senior Secondary School system usually reduces the number of qualified applicants seeking admission to the polytechnic. Applicants who apply with the Advance Level Certificate are usually very few in number because the system has been faced out and the minimum criterion of Aggregate 15 (fifteen) is the minimum entry point. Mature applicants who apply into the polytechnic in addition to having a minimum of five passes including mathematics and English language should have a minimum of three (3) three years working experience. The criteria set out by the National Accreditation Board influence students' selectivity rates in the Cape Coast Polytechnic.

A respondent representing management of the polytechnic was of the opinion that the introduction of the Pre-Higher National Diploma programme which is also a bridging programme was an initiative of the Academic Board of the Cape Coast Polytechnic which was aimed at upgrading the level of students with aggregates between 24 (twenty four) and 30 (thirty). Such students were given the opportunity to take a one-year preparatory programme and then followed by the three-year Higher National Diploma programme. This initiative although was not made to only increase the number of

students admitted into the polytechnic but was also aimed at providing opportunity to applicants who were unable to attain the minimum aggregate set by the National Accreditation Board for applicants to tertiary programmes. It was also initiated to provide the needed assistance to students who could not meet the minimum of aggregate of 24 (twenty-four) to be able to effectively take on the Higher National Diploma programme.

The two respondents representing the management of the polytechnic were of the opinion that some courses offered by the polytechnic were very competitive and the institution had to adopt a more rigid approach to reducing the number of students who are admitted into the programme. The courses included Accountancy studies which required applicants to have a pass in core science in addition to the requisite passes. One unique programme run by the polytechnic is the tourism programme which is run by only Cape Coast Polytechnic; the programme has been designed to meet the human resource needs of the tourism industry which include hotels and tour companies.

4.1.2 Student selectivity and quota in the Cape Coast Polytechnic.

The admission process in every tertiary institution in Ghana is usually guided by the criteria set by the National Accreditation Board which usually specify the minimum entry qualification to enrol in any tertiary institution. Although admissions are usually carried out by the Cape Coast Polytechnic, the institution is often led by the criteria set out by the National Accreditation Board. The rationale for setting up institutional quota system in the Cape Coast Polytechnic was explained by the respondents as mainly due to the limited facilities and infrastructure available to the institution. One respondent indicated that the students' quota for each programme was usually revised to meet the existing resources and infrastructure in the institution, thus, factors such as staff strength, lecture rooms, laboratories and the government policy on admission were often considered in setting up admission quota. A respondent however stated that students usually faced problems with job placement upon completion of their programmes and this often was a problem of Industry and Polytechnic collaboration. He further lamented over the absence of adequate planning at the various sectors of the economy that dealt with manpower issues, he gave an example as the absence of existing information on the number of professional needed within certain industries. Another respondent was of the opinion that the institutional quotas were set in polytechnic to maintain the numbers that the existing facilities could take.

Institutional quotas are often designed to meet the available infrastructure in the institution and in Cape Coast Polytechnic; the polytechnic is often faced with challenges. One respondent representing management of the polytechnic indicated that the quota for each programme in the polytechnic is usually agreed upon by the Academic Board in consultation with the Heads of Department after the various factors which influence students enrolment in the polytechnic has been taken into consideration. The polytechnic however does not meet its entire quota in the various courses except the HND Accountancy programme where the intake is usually above the quota and this greatly affects the institution since other means are adopted to reduce the number of qualified applicants to a much smaller number. This development however calls for other alternatives to be applied in order to ensure that the various programmes run by the polytechnic get the needed number of students to enrol in the polytechnic. Programmes which usually do not meet the quota include; Hotel Catering and Institutional Management, Tourism, Statistics, Secretaryship and Management Studies, and Marketing. Others are, Electrical/Electronic Engineering, Civil Engineering, Building Technology and Mechanical Engineering.

Although the government white paper on the report of the education review committee of 2004 indicated that, "government would continue to equip the polytechnics to make them offer tertiary education in their own right to emphasis practical skills that are needed to run the economy and build a nation", one respondent representing management of the polytechnic stated that government access policy influence students selectivity in the Cape Coast Polytechnic especially, the directives of the National Accreditation Board and the National Board for Professional and Technician Examination (NABPTEX). Another respondent indicated that the government had not started implementing the white paper on the review committee of 2004; he further elaborated the main problem as the absence

of effective planning and implementation of the various documents on vocational and technical education which laid much emphasis on practical skills of trainees. He however stated that the Netherlands Programme for the Institutional Strengthening of Post-Secondary Education and Training Capacity (NPT) workshop on "Building Managerial and Leadership Capacity in Polytechnics in Ghana" had organized some programmes aimed at developing the polytechnic education in Ghana to meet the manpower needs of most industries in the country and also foster close collaboration between polytechnics and industries.

4.1.3 School Autonomy and student selectivity in Cape Coast Polytechnic

The two respondents representing management of the polytechnic were of the view that students' selectivity at the institutional level was dependent on government access policies as regards selection quotas because several factors determined by the government are considered during admission of students into the polytechnic. Some of these factors according to one respondent include the resource provided by the Ghana Education Trust Fund and the government through the subvention to the polytechnic. In addition to the level of support from the government, there are also government oversight committees who visit the polytechnic to find out the extent to which the rules spelt out by the National Accreditation Board and the National Board for Professional and Technician Examinations are duly followed by the polytechnic.

The extent to which Cape Coast Polytechnic is empowered to set up its own admission criteria to meet the needs of the increasing rates of applicants are often determined by the level of institutional autonomy the Polytechnic wields in determining who gets tertiary education within a period of time. The concept of institutional autonomy implies that tertiary institutions enjoy freedom from government regulation in respect of the internal organization of the institution, its governance, internal distribution of financial resources among others. According to a management member of the polytechnic, the level of autonomy in the polytechnic could be described as a continuum with different scale of autonomy at the various sectors of the administration, an example given is the National Accreditation Board rule which indicates that applicants to tertiary institutions with Senior Secondary School Certificate Examination should at least have a minimum of aggregate twenty-four (24) or better. Although the National Accreditation Board rules specifies the minimum aggregate needed to enrol for any tertiary programme in the polytechnic, the Academic Board of the Polytechnic is empowered by her statutes to some extent to take certain decisions which although does not contravene the rules stipulated by the government, promotes increased participation in tertiary education. Other aspects of autonomy the polytechnic enjoys include; determining the calendar of the polytechnic for each year and determining the use of the Internally Generated Fund each year. Another management member was of the opinion that autonomy in the polytechnic was very minimal and that the polytechnic had to comply with every detailed rule provided by the government through the various bodies responsible for polytechnic education. He was also of the opinion that the Pre-HND programme offered by the polytechnic was an initiative of the polytechnic aimed at increasing students enrolment and also providing access to students with weak grades in some subjects written at the secondary school examinations level.

On the major hindrances to increased students' enrolment rates in the Cape Coast Polytechnic, the two management respondents were of the view that inadequate lecture halls, insufficient lecturers to handle the various courses (which is the result of poor working conditions and salaries), and the few hostel facilities available were some of the issues to be considered and improved upon. However, on the options available to the polytechnic to increase students' enrolment rates without necessarily relying on government funding, one respondent indicated that the institution usually sort funds from some NGOs. He stressed that the greatest part of revenue that is generated by the polytechnic is from the sale of admission forms which are usually sold out each year. Another source of finance to the polytechnic was money generated from the Pre-HND programmes organized by the polytechnic and the Ghana Education Trust Fund that usually provide funding for some projects in the polytechnic. The GET Fund usually covers area such as provision of classrooms, libraries, students and Lecturers Hostels and Flats respectively, Scholarship for students and Laboratories.

4.1.4 Market model and part-time education in Cape Coast Polytechnic

The market model in polytechnic education places a lot of challenge to many institutions with the goal of increasing access to tertiary education and satisfying the various stakeholders within the educational setting. One goal of the market model in tertiary education is to widen students' participation and achievement among socio-economic and community groups hither-to under represented in the country or society. Market model however defines the various alternatives which are aimed at giving opportunity to different people to get the needed tertiary education through marketing orientation that places customer need anticipation, identification and satisfaction at the centre of the organization's activities.

The Cape Coast polytechnic has adopted several approaches that are aimed at increasing students' enrolment and these approaches are driven by market orientation which includes payment of fees by Pre-HND students, entrepreneurial training and the collaboration between the polytechnic and some organizations to provide hostel facilities for the institution. These factors were spelt out by a management member of the polytechnic when he was asked the whether the polytechnic had any plans to develop a market model approach aimed at increasing students enrolment in the polytechnic. Another management member stated that the Pre-HND programme run by the polytechnic was not funded by the government so students were paying the full fees for the programmes in which they enrolled, he however indicated that although the polytechnic had charged students taking the Pre-HND programme for the full fees of their programme, government indirectly regulated the percentage increase in the payment of fees. According to one respondent, the polytechnic was in close contact with the various employers association to foster close collaboration with them which would allow Cape Coast Polytechnic to train staff of those organizations within the association and also let students from the polytechnic take attachment programmes in those organizations.

Business organizations are usually the targeted of most tertiary institutions all over the world as avenues of increasing participation of the older working population and also providing training for the staff of those business organizations. The Cape Coast Polytechnic has plans of targeting business organizations in the Municipality to offer the needed assistance in the area of specialised training for the various sectors of the organization. These training would help upgrade the skills of workers of the various organizations to help them meet the growing human resource needs of industries and organization in the Cape Coast Municipality. The returns would however be in the form of financial rewards to the polytechnic which could be used in developing structures in the institution and also providing incentive package for lecturers to get them motivated to work. One respondent indicated that there were plans afoot to get more organizations to take up short courses in the polytechnic and when this plan is implemented it would enhance increased tertiary education participation amongst workers of the various organizations in the Municipality. Other benefits from such initiative stated by the respondents included, training people to fit properly in their job, training people to meet the demands of industry and commerce and finally cutting down on unemployment and retrenchment which usually targets employees of organizations who do not fit into the increasing job demands.

4.1.5 Part-time education in Cape Coast Polytechnic.

Part-time programmes in tertiary institutions all over the world are usually organized for individuals who work in organizations and could not get the needed training as a result of their busy work schedules. The introduction of part-time programmes into tertiary education is to enable workers and other individuals who wish to progress through the academic ladder to enhance their knowledge and skills in their job or profession. The Cape Coast Polytechnic runs part-time programmes in non-tertiary courses and most of these programmes are gradually being scrapped off because most technical institutions run those programmes, another reason for scrapping off most of the non-tertiary part-time programmes is to allow the polytechnic to focus on its major aim of training middle level skilled professional for industry in Ghana.

One respondent representing management of the polytechnic indicated that the Institution has plans to mount part-time programmes which are targeted at the working population in the Cape Coast Municipality and the towns close to it. He stated that some organizations had begun enrolling their staff in the polytechnic on full-time courses and in the future, the polytechnic would begin with the

part-time programmes to meet the needs of individuals who would be prepared to take courses offered by the polytechnic in the evening. On the issue of availability of lecturers needed to teach part-time programmes in the polytechnic, both respondents indicated that although the polytechnic was presently faced with the problem of teaching staff, part-time Lecturers could be appointed to help in the teaching of the various programmes. They were however optimistic that if government increased her support for improved condition of service for lecturers in the polytechnic, more lecturers would come to teach in the institution.

4.1.6 Funding of tertiary education in Cape Coast Polytechnic

Funding in Cape Coast Polytechnic is a serious problem to the institution and students. Most of the projects undertaken by the polytechnic are funded by the government through the Ghana Education Trust Fund and the subvention given to the polytechnic by government. One respondent indicated that problems of funding in the polytechnic had negatively affected the intake of students to the polytechnic because the available lecture halls, laboratories and hostels are not enough to support increasing students' intake. Students in the polytechnic also have problems of funding their education and most students rely on government loans to support their education in the institution. Some students also receive support from their organization in funding their education in the polytechnic.

4.1.7 Problems faced by the Cape Coast Polytechnic in increasing students' enrolment.

Though the polytechnic is faced with several problems which do not allow her to increase students' enrolment rate to reflect the growing demand for tertiary education, the institution has devised means to raise internally generated funds. These measures include entering into partnership agreement with some organizations in the Cape Coast Polytechnic and other organizations in Ghana, seeking the assistance of some organization to build hostels and operate on the land of the polytechnic and increasing the students' enrolment through part-time programmes. One major initiative taken by the Cape Coast Polytechnic is the introduction of the Pre-HND programme and has been adopted by other polytechnics in Ghana; a respondent indicated that the Pre-HND programme has been very successful because many students have been admitted to take various courses run by the polytechnic.

The Cape Coast Polytechnic is faced with the problem of inadequate lecturers for the Institution and most lecturers in the polytechnic often have more hours to teach than the maximum teaching hours required of them. One respondent indicated that the polytechnic has plans of recruiting part-time lecturers to augment the existing lectures in order to mount up the part-time programmes to be offered by the Cape Coast Polytechnic.

4.2.0 THE ESTABLISHMENT OF PRE-HND PROGRAMMES IN CAPE COAST POLYTECHNIC

The Pre-HND programme was started in Cape Coast Polytechnic in 1994 and it was meant to admit students with technical education certificate to pursue HND programmes and also allow students with Senior Secondary School Certificate Examination with aggregates between twenty-four and thirty to pursue HND programmes. The programme was faced out for sometime and later re-introduced in the 2003/2004 academic year with the aim of providing opportunity for students with aggregates between twenty-four and thirty to pursue the access programme which would enable them to enter the HND programme upon completion of the course. Although selection of students is based on the general entry criteria spelt out by the National Accreditation Board (it states that admission requirements, usually demand an applicant obtaining an aggregate score of 24 or better in six (6) subjects, including English, Mathematics and Integrated Science/Social studies at the SSSCE level or (3) A-level passes with a total aggregate of 14 plus general paper) the Academic Board of the Cape Coast Polytechnic runs the Pre-HND programme as an access course.

4.2.1 Enrolment statistics in Pre-HND programme

Available statistics in the Pre-HND programme for the 2004/2005 and 2005/2006 academic year indicate an increase in the enrolment rate of students into the Pre-HND programme. The statistics below indicates the enrolment rates for Pre-HND programmes for 2004/2005 and 2005/2006 academic year. The three schools in the Cape Coast Polytechnic namely; the school of business studies, the school of applied arts and sciences and the school of engineering all run Pre-HND programmes which

are aimed at increasing students' enrolment rates and providing opportunity to students without the minimum aggregate needed to enter the HND programme.

Table 5: Enrolment statistics for Pre-HND programme, 2004/2005 and 2005/2006 academic year.

	2004/2005			2005/2006		
	M	F	T	M	F	T
SCHOOL OF BUSINESS STUDIES						
Pre-HND Marketing	44	36	80	66	31	97
Pre-HND Secretary ship and Management Studies	6	34	40	3	31	34
Sub-Total	**50**	**70**	**120**	**69**	**62**	**131**
SCHOOL OF APPLIED SCIENCES AND ARTS						
Pre-HND Hotel Catering and Institutional Management	1	11	12	0	19	19
Pre-HND Statistics	14	1	15	4	1	5
Pre-HND Tourism	27	17	44	18	26	44
Sub-Total	**42**	**29**	**71**	**22**	**46**	**68**
SCHOOL OF ENGINEERING						
Pre-HND Mechanical Engineering	20	1	21	9	0	9
Pre-HND Electrical/Electronic Engineering	13	2	15	7	0	7
Pre-HND Civil Engineering	10	1	11	12	0	12
Pre-HND Building Technology	11	1	12	27	1	28
Sub-Total	**54**	**5**	**59**	**55**	**1**	**56**
TOTAL	**146**	**104**	**250**	**146**	**109**	**255**

Interpretation of Abbreviated words.
M- Male
F- Female
T- Total

The table above indicates the enrolment statistics for Pre-HND programme for the 2004/2005 and 2005/2006 academic year of the Cape Coast Polytechnic. It also shows the grouping of the various programmes according to the schools which they represent. The first category shows the school of Business studies which had the largest number of applications and students admitted into programmes offered by the school. The school of business records the largest number of applicants each year because of the assumption that programmes offered by the school has high market demands and the training given to students also equip them to establish their own businesses. Majority of the applicants

are also students who took subjects in business programmes at the secondary school level, their interest usually lie in the programmes they identify as having the best opportunity for better salary and conditions of service and the availability of ready jobs upon completion of their various programmes. The school of business does not admit students to the Pre-HND Accountancy course because prospective and qualified applicants to the programme are usually more than the Institution can take. The Marketing and Secretaryship & Management programmes run by the Cape Coast polytechnic are often offered at Pre-HND because the enrolment figures in the two programmes are usually below the institutional quotas for admission of students into HND programmes. In the 2004/2005 academic year 120 (one hundred and twenty) students were admitted into the school of business to pursue Pre-HND programmes in marketing and Secretaryship & Management studies, out of the total number offered admission, 80 (eighty) students were offered admission to pursue Pre-HND marketing programme while 40 (forty) students were offered admission to pursue Pre-HND programme in Secretaryship and Management studies. The figure however increased for the marketing programme in the 2005/2006 academic year while it decreased in the same year for applicants admitted to the Pre-HND programme. The decrease often reflects increasing demand for certain programmes within a period of time which is in-part influenced by factors such as jobs often advertised in the newspapers, opportunity available to individuals to secure jobs upon completion of the programme and finally, the existing competition of the programme in the academic year. Most applicants tend to believe that the programme is meant to train individuals to perform the job of graduate Secretaries but the reality is that the programme is not only designed for secretaries but also for administrators of organizations and the institution is gradually redirecting the focus from perception given by people applying for the programme to the current trends in the job market. However, the Pre-HND programmes offered by the school of management studies increased because of the increased interest shown by applicants to the programmes as a result of the demands on the job market and the opportunity for one to be employed upon completion of the programme. Finally, most applicants see the Pre-HND programme as a very important opportunity to enrol in a programme which could help them gain access into the HND programme which their entry-point grades does not qualify them to enter.

The school of applied arts and sciences also runs Pre-HND programmes in all of its programmes namely; Hotel, Catering and Institutional Management, Statistics and Tourism. The Pre-HND programme was targeted at the school because of the low enrolment figures recorded over the previous years. The Statistics programme is usually very low in enrolment figures because of the nature of programmes which is usually applied for by individuals in organization were the expertise of statisticians are mostly required and the seemingly difficult nature of getting readily available jobs for products of the programme. The Polytechnic however has created the opportunity for applicants with good mathematics background to enrol in the programme and also expose them to the existing opportunities available for graduates from the department. There was however a sharp fall in the number of applicants to the Pre-HND statistics programme between 2004/2005 and 2005/2006 academic year, the fall was unexpected but could be explained by the nature of the course which suits applicants who have secured jobs in relative disciplines and need the tertiary diploma for promotion and increased knowledge in the field. Another explanation for the sharp decline in the enrolment figures is that most industries do not use the services of statisticians but prefer using people with other qualification to do the work of statisticians. Example could be given in hospitals were the record entry officers are sometimes people trained on the job to take up the role of data entry clerks instead of the trained statisticians.

The Pre-HND Tourism programme was also established to increase the enrolment rate of applicants into the programme, although enrolment figures at the tourism department are greater than the other programmes run by the school of applied arts and sciences, the figures do not meet the department's institutional quota. The enrolment figures for the 2004/2005 and 2005/2006 academic year remained the same without any increase or decrease in the figures; however, the major difference was with the sex percentage which recorded an increase in female participation over the previous year's. The Tourism programme is offered by only Cape Coast Polytechnic amongst the various polytechnics in Ghana and it trains well equipped graduates each year to work in various tourism sectors in the Country.

The Hotel, Catering and Institutional Management programme is greatly under represented and it was one of the main reasons for establishing the Pre-HND programme in the Cape Coast Polytechnic. The department begun running the HND programme in the 2003/2004 academic year with an initial student enrolment figure of six and that was low as compared to other departments. One option the Management of the Polytechnic took was to introduce the Pre-HND programme which would give students with catering background the opportunity to enrol in the HND programme, however, the entry criteria for the Pre-HND programme was made to include Non-Senior Secondary School Certificate Examination holders the opportunity to enrol in the Pre-HND programme. Applicants to the programme for the 2004/2005 academic year were requested to have only Senior Secondary School Certificate Examination with passes between aggregates 24 (twenty-four) and 28 (twenty-eight). The entry criteria was however changed in the 2005/2006 to include non-SSSCE applicants or applicants with Catering 812/1 and 812/2 certificates and this recorded an increase in participation rates from 12 (twelve) to 19 (nineteen).

The school of engineering is one of the schools with low students' enrolment figure and is faced with problems of getting the needed number of applicants to some programmes, especially with the Mechanical Engineering programme which has very low enrolment rate. The numbers of applicants to the various Pre-HND Engineering programmes keep decreasing because of the minimal rate of students who pursue science related courses at the secondary school level. Most applicants to the Pre-HND programme for the 2004/2005 academic year were SSSCE applicants but this was however revised by the Academic Board of the Cape Coast Polytechnic to include applicants with technical education background with five passes and above in their various course components. The change in the entry qualification however resulted in an increase in the enrolment figures for two of four programmes namely; the Civil Engineering and Building Technology programmes. The enrolment figures for Mechanical and Electrical/Electronic Engineering decreased in the 2005/2006 academic year, the reasons for the decrease in the enrolments rates often reflects the trend of performance by students who take technical examinations within a particular year. Thus, in a year which records increased passes by students in the technical examination results, it reflects in increased number of admission by the polytechnic of applicants seeking admission to the Pre-HND/ HND Engineering programmes.

The Pre-HND programme has helped the polytechnic to increase her enrolment rates and also provided opportunity for students who were faced with the difficult task of getting the required aggregate to pursue HND programmes get the needed access programme to enable them enrol in the HND programme upon completion of the Pre-HND programme. Admissions of applicants to the Pre-HND programme offered by the Cape Coast Polytechnic does not necessarily secure students' entry to the HND programme. However, the Cape Coast Polytechnic conduct examinations to assess the ability of Pre-HND students to take the HND programmes and the results are used in determining who qualifies to enter the HND programme.

4.3.0   COLLABORATION   BETWEEN   CAPE   COAST   POLYTECHNIC   AND ORGANISATIONS IN THE CAPE COAST MUNICIPALITY.

The concept of market model involves effective collaboration between industry and tertiary institutions which are aimed at providing training for staff and employees of the various organizations and the benefits available to the tertiary institution. There is firstly, the financial rewards that come to the tertiary institution and secondly the increase in students enrolment rate. An effective collaboration between Cape Coast Polytechnic and the various organizations in the Cape Coast Municipality could increase students' enrolment rate in the Polytechnic and also provide the opportunity for tertiary education participation among the workers who do not have tertiary education. The research identified organizations in the Cape Coast Municipality as an important target group which the polytechnic could use to increase students' enrolment rates and have financial rewards in return. These financial rewards could help augment the existing Internally Generated Funds which helps the polytechnic to take up developmental projects and support other projects instituted be the polytechnic. 40 (forty) organization in and around the Cape Coast Municipality were contacted for the research, the organizations were made up of government institutions, Banks, Hotels, Timber firms and some Small scale industries.

Nine organizations responded to the interview schedule and four organizations failed to return their response although they promised providing feedback. After several contacts with these organizations proved futile, the organizations which responded to the interview schedule were used for the research.

4.3.1.0 Interview with organizations in and around Cape Coast Municipality.
The interview with heads of some selected organizations in the Cape Coast Municipality was meant to identify the readiness of the various organizations to liaise with Cape Coast Polytechnic to develop the skills of staff members of those organizations. The nine organizations that responded to the interview schedule were made up of; One major utility organization with a total staff strength of 248 (two hundred and forty eight), One road construction and maintenance organization with a total staff strength of 40 (forty), one private financial institution with a total staff strength of 30 (thirty), Four manufacturing organization with staff strength of 406 (four hundred and six), 100 (Hundred), 75 (seventy five) and 50 (Fifty) respectively. Others were, one major revenue collection agency with a total staff strength of 30 (thirty) and finally a commercial trading organization with a total staff strength of 20 (Twenty).

4.3.1.1 How often does the organization organize training programmes to upgrade the level of skills of your employees?
Training programmes are often organised by employers of organizations for their staff, the purpose of the training programmes are to develop their skills and make them more adept in the discharge of their work. Some organizations indicated that training programmes are often organized for employees of their organization since there was the need to get the staff acquainted with the global trends in performing tasks on the job. Interview respondent from the road construction and maintenance organization indicated that training programmes are organized periodically (local and overseas) to prepare employees for higher management responsibilities and to upgrade their skills, he further stated that when training assessment needs of employees require a particular training to be done, the organization makes the necessary arrangement to let the individuals involved get the needed training. The respondent from the revenue collection organization also indicated that his outfit had specific and periodical training programmes organized by the Organization's head office which were aimed at providing the needed skills to the employees of the organization. A respondent from one of the manufacturing organizations stated that training programmes were organised very often and it involved seminars for middle-level managers by organizations such as Association of Ghana Industries (AGI), Ghana Standards Board and the Environmental protection agencies. The only commercial trading organization with her headquarters in Kumasi indicated that training programmes for staff members of their organization were usually done at the organization's headquarters because of the delicate nature of the work. A respondent from a major Banking Institution also indicated that most training programmes of the Bank were organised yearly based on specific needs of the organization.

4.3.1.2 In which areas/courses would your organization need assistance in developing the skills of your staff?
Training programmes organized by organizations and companies in the Cape Coast Municipality are usually done by the head office of the organization and sponsorship also comes from the head office of these organizations. The question was meant to identify specific areas in which training programmes were usually organised by the organizations for their employees based on intermittent needs assessment carried out.
All the respondents to the interview schedule had different areas in which they would be prepared to allow their employees get the needed training, most of the areas brought up were marketing, Engineering and Accountancy programmes. Another major manufacturing organization interviewed indicated that the organization usually had her training programmes from abroad were the organization had her headquarters. The interview respondent stated that training programmes organised by the organization were often targeted at management training positions and key departments in the organization. A respondent from a major Banking Institution also indicated that most training programmes of the Bank were the areas of management training and computer training programmes. The major road construction and maintenance organization indicated that the organization often

organized training programmes in the areas of managerial training, practical training at road construction site, courses in soil mechanics and material laboratory training. Respondent from the utility organization stated that training programmes were organized when the need arose for them to get the needed staff to embark on the training programme. One interview respondent stated that the organization would be very pleased if it could have specific areas in which the various programmes could be listed and explained for the management to make a well informed choice of areas to select for their employees to get the needed training. The respondent from the major utility organization stated that training needs for the organization would be in the areas of finance, water quality assurance, commercial technical and Management training programmes. The various organizations however had different areas of need for training.

4.3.1.3 How would your organization adopt the idea of liaising with the Cape Coast Polytechnic to provide training for members of staff of your organization who do not have tertiary education?

The question posed to interview respondents was to assess their readiness to liaise with Cape Coast Polytechnic to provide training programmes for employees of their organization. Specific areas of training had been however answered in the previous questions and most of the respondents had given their specific need areas for training programmes to be organized.

A respondent from a manufacturing organization stated that since training programmes were organised by their overseas office, the organization was not in a position to liaise with Cape Coast Polytechnic now for training programmes to be organized for them. All the other organizations expressed their willingness to liaise with the polytechnic to provide their employees with the needed training programme. They however expressed concern about the human and technological resource available to the polytechnic and how effective those training programmes could be organized. They expressed great interest in working with the polytechnic in areas of need by the organization in which the polytechnic could offer assistance, a special area of particular interest was in the computer training programmes and other middle-level managerial short courses.

4.3.1.4 Do you think the idea of training staff at the polytechnic would help improve the technical skills of staff and thereby increase productivity in your organization?

Training programmes are usually organized to develop the skills and expertise of employees in organizations to make them more efficient and help the organization increase her productivity. The question was meant to elicit the views of the various respondents on the importance of training programmes that could be offered by the Cape Coast Polytechnic and how important these training programmes could be to the organization. All the respondents indicated that such training programmes had the long term effect of increasing productivity through the application of the acquired knowledge from the training programme. The respondent from a major banking institution was of the opinion that not only would such programmes Improve the technical skills of employees but would help the job market with skilled manpower. The interview respondent from one of the manufacturing organization indicated that since the organization had her training programme from her overseas offices any benefits from such programme could not be easily assessed now. A respondent from the major utility organization was of the view that special short courses as well regular courses offered by the polytechnic could be specially arranged.

4.3.1.5 How would you assess the importance of such a training programme to the employees of your organization?

The question was posed to the various respondents to elicit their opinion on the importance of training programmes to the employees of their organizations. The respondent from the financial institution indicated that such training programmes would help the organization and the staff because the organization would not have to send their employees far away from the region for training programmes. A respondent from the manufacturing organizations indicated that the organization would eventually benefit from any training programme provided by the Cape Coast Polytechnic. The respondent from the major road construction and maintenance organization stated that the organization would identify such a programme as very important because many of their employees seek admission

to the Cape Coast Polytechnic every year and such collaboration would help improve upon the skills of the staff members.

4.3.1.6 What are the major challenges to comprehensive staff development in your organization?

The question about the major challenges facing the various organizations in adopting a comprehensive staff development programme was aimed at identifying the likely hindrances to effective collaboration between the various organizations and Cape Coast Polytechnic. All the organizations stated that funding was a major problem in the training of employees in developing their skills. The respondent from the major utility organization stated that the problem facing their organizations in the establishment of a comprehensive staff development was funding, changes in technology and suitable relievers for staff embarking on training programmes from the organization. The respondent from the major road construction and maintenance organization stated that the major challenges faced by the organization in establishing a comprehensive staff development programme in their organization was funding, lack of data on staff and comprehensive needs assessment. All the respondents from the various organizations indicated that funding was a major problem to all staff development programmes in the organization.

4.3.1.7 What is the policy of the organization as regards the taking of part-time programmes by staff of your organization in tertiary institutions?

Part-time programmes are often taken by workers who do not get the opportunity to enrol in programmes during the normal lecture periods of educational institutions. Most employees of various organizations in the Cape Coast Municipality who do not get the needed support from their employers usually prefer to enrol in part-time programmes. This is usually so because part-time courses are organised mainly in the evening when most employees close from their various jobs, it also enable the workers to get the needed education while working. The question was posed to the various respondents to identify any hindrance to the taking-up of part-time programmes by their employees. The respondent from the major road construction and maintenance organization stated that there is no policy existing in the organization which regulated the taking up of part-time programmes from the polytechnic. He however stated that if the programme an employee is seeking admission to pursue is relevant to the job he or she is doing, then the employee is granted study leave to take the programme, such initiative however does not affect the normal government duties. The major utility organization stated that staff who wish to take on part-time programmes are usually required to apply to the company's training committee for approval before undertaking part-time training programmes, once the training committee approves of the programme by the employee, the company bears all training related costs. Upon successful completion of training, the staff is considered for appropriate evaluation and upgrading. One manufacturing organization and an internal revenue collection agency indicated that although the organization does not have such policy, any part-time programme taken up by an employee of the organization would be seen as very laudable; a respondent from a revenue collection agency and another manufacturing organization also stated that most part-time programmes taken by employees of their organization was at the distant learning section of the University of Cape Coast and lectures were organized on week ends. A respondent from the financial institution indicated that the organization had no policy on part-time programmes taken by employees of the organization but stated that if such programme was found to be beneficial to the organization, then employees could enrol in the programme only if it would not interfere with the business of the organization

4.4.0 ANALYSIS OF QUESTIONNAIRE FOR DIRECT-APPLICANT RESPONDENTS

The analysis of questionnaire for direct-applicant respondents details the various reasons for the increasing demand for tertiary education in Ghana, the study however was designed to cover direct applicant-respondents to Cape Coast Polytechnic. The conceptual model used identified five main aspects for demand for tertiary education namely; demographic factors, individual demand, policy objectives, socio political reasons, and economic reasons.

4.4.1.0 Demographic information on direct applicant respondents.

This part of the research was designed to obtain information on the demographic statistics of respondents in relation to tertiary education participation and students selectivity in the Cape Coast

polytechnic. The demographic information covered include, age of respondents, sex of respondents, and geographical location of respondents.

4.4.1.1 Age of direct-applicant respondents

The first item on the questionnaire for direct entry respondents was on the issue of the age of respondents. From table 6 below, the highest frequency of respondents was from those in the age group between eighteen and twenty-three, thus, setting the average age to be 21.5 years. The result however reflects the average age given in the background study which was provided by the Ministry of Education in Ghana. The second group however recorded thirty-four percent of the total number of respondents; most of the applicants in this age range are people who had to either wait for some time before pursuing tertiary programmes because of financial reasons or people who had to re-sit their secondary school examination. Some however also passed through the technical education system which usually takes more years to complete. The percentage marked by respondents within the ages, eighteen and twenty-three shows that majority of direct applicants who apply to the polytechnic are students who complete secondary education and aspire to obtain post secondary education to acquire skills needed for their future career. Demand for tertiary education is thus high among secondary school leavers mainly because tertiary institution provides middle-level training for individuals who wish to acquire the needed skills for job.

Table 6: Age of direct-applicant respondents

Age of respondents	Frequency	Percent	Average Age
18-23	42	66	20.5
24-29	22	34	26.5
Total	64	100	

4.4.1.2 Sex distribution of direct-applicant respondents

The sex of respondents as shown in table seven below indicates that the percentages of male and female respondents (52% v 48%) hardly differ. Tertiary education among females in Ghana is gradually gaining the needed support to help females acquire tertiary education and contribute meaningfully to the development of Ghana. The figure however does not reflect the reality on the ground as many applicants who are usually granted admission are males. In the 2005/2006 academic year, Male tertiary enrolment rate in the Cape Coast polytechnic was 69% as against 31% by females in the polytechnic. One major reason for the sharp difference between the numbers in enrolment and the numbers in application for admission is that many female applicants who do not gain admission to the polytechnic usually have problems in passing the numeric courses such as mathematics and science although some male applicants also have some problems with the numeric courses.

Table 7: Sex distribution direct-applicant of respondents

Sex	Frequency	Percent	Cumulative Percent
Female	31	48.4	48.4
Male	33	51.6	100.0
Total	64	100.0	100.0

Enrolment figures in the polytechnic also shows that many females do not offer courses in the Engineering departments and in the 2005/2006 academic year, the enrolment statistics indicated that female participation in Engineering programmes was 5% of the total enrolment. Most females

participate in the Business programmes such as Marketing, Secretaryship and Management studies, and Accountancy. The department of Hotel Catering and Institutional Management however recorded the highest female participation in programmes offered by the polytechnic in the 2005/2006 academic year, with enrolment rate of 93% as against 7% by males.

4.4.1.3 Geographical distribution of direct-applicant respondents

The geographical distributions of the respondents show the location of respondents or their place of residence. The concept of regionalization of polytechnic education in Ghana was instituted to provide an even platform in all the regions to serve the economy with the needed skilled middle-level manpower training. The regionalization of polytechnic education in Ghana also provides opportunity for secondary school leavers and other qualified individuals to get the needed training to develop their skills. The regional distribution of respondents was done mainly to ascertain the effect of participation rate among prospective applicants from different regions the country. Proximity of the location of tertiary institutions to the residence of the applicants to a larger extent determines the participation rate among respondents within the region.

Table 8: Geographical distribution of direct-applicant respondents

Region	Frequency	Percent	Cumulative percent
Greater Accra	9	14.1	14.1
Volta Region	1	1.6	15.6
Ashanti Region	4	6.3	21.9
Eastern Region	3	4.7	26.6
Western Region	5	7.8	34.4
Central Region	40	62.5	96.9
Brong-Ahafo Region	2	3.1	100.0
Upper East Region	0	0.0	
Upper West Region	0	0.0	
Northern Region	0	0.0	
Total	64	100.0	100.0

From the table above, the central region recorded the highest number of applications to the polytechnic; it recorded a figure of sixty-two point five percent (62.5%) which is an indication that most applicants to the polytechnic are from the central region. Secondly, the figure shows that the concept of regionalization of polytechnic education system is having the desired impact on the educational system in Ghana. Greater Accra region was the next region with the highest number of respondents, it had fourteen point one percent (14.1%) of the total respondents; the Greater Accra region is very close to the Central region and it is the Capital city of Ghana and has the highest population in Ghana. Respondents from the region also apply to the polytechnic because of the proximity of the region to the Central region. The same reasons however could be given to the respondent rates from the Western region which is also very close to the central region, the western region recorded seven point eight percent (7.8%) which was the third highest percentage of geographical representation.

Four other regions namely Ashanti, Eastern, Brong-Ahafo and Volta regions recorded six point one (6.1%), four point seven (4.7%), three point one(3.1%) and one point six (1.6) percent respectively. The figures however show that applicants to the polytechnic are from the lower part of Ghana which is very close to the Central region. The respondent-rate also shows that prospective applicants consider the geographical location of the institution when applying for admission. The three regions in the northern part of Ghana recorded the least application rate because of the distance from the region to the Central region. The result however is an indication that applicants consider the proximity of their location to the institution they wish to enroll.

Table 9: Regional distribution of direct-applicant applicants to Cape Coast Polytechnic, 2004/2005 academic year.

Region	Frequency	Percent	Cumulative percent
Greater Accra	447	34.4	34.4
Volta Region	62	4.8	39.2
Ashanti Region	78	6	45.2
Eastern Region	86	6.6	51.8
Western Region	125	9.6	61.4
Central Region	486	37.4	98.8
Brong-Ahafo Region	11	0.8	99.6
Upper East Region	0	0	99.6
Upper West Region	2	0.2	99.8
Northern Region	3	0.2	100
Total	1300	100	

Source: Cape Coast Polytechnic admission statistics, 2004/2005 Academic year.

Table nine above show the distribution of direct applicants to the Cape Coast Polytechnic for the 2004/2005 academic year. The table represents the total application for admission received from applicants for the 2004/2005 academic year, the figure however show that the lower part of Ghana were largely represented than the parts of the country. The Central region recorded the highest number of applications while the Upper East region recorded the least number of applications.

4.4.2.0 Information on direct-applicant respondents' application for admission.
This part of the research questions were posed to applicants to provide information on their previous application for admission to Cape Coast Polytechnic and the details involved in those previous applications. The demand for tertiary education make most applicants to the polytechnic purchase forms for admission each year and the polytechnic keep details of the information of previous applicants to the polytechnic. An applicant to the polytechnic is not allowed to purchase two forms for enrolment within an academic year but is allowed to apply again in the subsequent years if he or she was not successful in the first application. The information covers, number of times respondents applied for admission, the reasons for which such respondents could not gain admission the first time, and the courses chosen by the respondents.

4.4.2.1 Prior education achievement level of direct-applicant respondents

The prior level of education of applicants suggests the level of education attained by applicants prior to the submission of their application forms. From table 10 below, the highest groups of respondents were those with Senior Secondary School Certificate Examination (SSSCE), 82.8%: They represent the highest group of individuals who seek tertiary education because they fall within a category of 'passing stream' of students who are trained by the nation to acquire the needed skills to help develop the economy.

Table 10: Prior education achievement level of direct-applicant respondents

Prior level of education	Frequency	Percent	Cumulative percent
SSSCE	53	82.8	82.8
DBS	7	10.9	93.7
LCCI	1	1.6	95.3
Others	2	3.1	98.4
Invalid entry	1	1.6	100
Total	64	100	

Second were those with Diploma in Business Certificates (10.9%) who, in addition to the diploma certificates had passes in either the Senior Secondary School Certificate Examination or the Ordinary Level Examination. Some students who prefer to work before obtaining tertiary certificates take the diploma programmes to get jobs and then get the needed money to enroll in tertiary programmes. There was also one respondent (1.6%) with London Chamber of Commerce and Industry Certificate which is also a requirement for entry to the polytechnic. There were two other respondents who had technician certificates in Engineering (3.1%). Many students from the technical institutions apply for Higher National Diploma courses upon completion. Finally, two respondents, representing three point one percent did not enrol in the polytechnic because they were not given their first choice programmes. One respondent however did not complete the space meant for the prior level of education. Eighty one point three percent of the respondents completed their pre-tertiary education between the years 2000 and 2005 which is an indication that demand for tertiary education among pre-tertiary school leavers is very high. Fifteen point six percent of the respondents however completed their pre-tertiary education between the years 1995 and 2000.

4.4.2.2 Number of times direct-applicant respondents applied for admission

Information on respondents' previous application for admission was provided based on respondents' previous admission statistics or details provided by the applicants. The question was asked to ascertain respondents' background information on the number of times respondents had applied for admission and the number of times respondents had not been successful in securing admission to the polytechnic.

Table 11: Number of times direct-applicant respondents applied for admission

Number of times applied for admission	Frequency	Percent	Cumulative percent
Once	45	70.3	70.3
Twice	12	18.8	89.1
Thrice	5	7.8	96.9

Invalid entry	2	3.1	100
Total	64	100	

In the 2004/2005 academic year, 1,961 applicants applied for various HND programmes in the Cape Coast Polytechnic and out of that number, 1,078 applicants representing 55% qualified for admission to the various Higher National Diploma programmes. 963 applicants representing 49% were offered admission to the various Higher National Diploma programme. Most of the applicants who were refused admission in the previous years had reapplied after working to meet the requisite requirement. From table 11 above, forty-five respondents representing seventy point three percent had applied once to the polytechnic for the Higher National Diploma programme. Twelve respondents representing eighteen point eight percent had previously applied for admission once and five respondents had previously applied for admission twice. From the statistics above, the number of rejected applicants was very high although the result of the research does not highlight the magnitude of the problem. From the available statistics provided in the research, there was a high rate of rejection of applicants although the demand for tertiary education is very high.

4.4.2.3 Distribution of direct-applicant respondents with previous admission to the polytechnic
Out of the sixty-four respondents who answered the questionnaire, eighty-two point eight percent (82.8%) responded to the question, however, sixteen respondents representing twenty-five percent indicated that they had been given admission in previous years. Thirty-seven respondents representing fifty-seven point eight percent had never been given admission, the figures shown indicates that some factors influenced the participation of the respondents in tertiary education. On the reasons for which respondents who had applied for admission in previous years could not secure admission to the polytechnic, seventy-nine point seven percent did not comment on the issue, however, fifteen point six percent of the respondents indicated that they were previously refused admission because they did not meet the requirement. This figure shows that respondents who had previously been refused admission to the polytechnic did not have the requisite passes to enrol in their preferred programmes. Finally, two respondents, representing three point one percent did not enrol in the polytechnic because they were not given their first choice programme

Table 12: Distribution of direct-applicant respondents with previous admission to the polytechnic

Have you ever been given admission?	Frequency	Percent	Cumulative percent
Yes	16	25.0	25.0
No	37	57.8	82.8
Invalid entry	11	17.2	100
Total	64	100	

The figures provided in table 12 above show that majority of respondents had not previously purchased forms for admission, it is so because majority of applicants to the polytechnic are fresh graduates from pre-tertiary institution in Ghana namely, the Senior secondary schools, technical institutes and vocational schools.

4.4.2.4 First choice programme of direct-applicant respondents
The Cape Coast polytechnic offers ten Higher National Diploma programmes in the schools of Engineering, Applied Sciences and Arts, and Business. The study was aimed at also identifying the most preferred programmes by applicants to the Cape Coast Polytechnic and the least preferred programme in the polytechnic.

Table 13: First choice programme of direct-applicant respondents

Programme	Frequency	Percent	Cumulative percent
HND Secretaryship and Management studies.	5	7.8	7.8
HND Accountancy studies.	30	46.9	54.7
HND Marketing	12	18.7	73.4
HND Electrical Engineering	2	3.1	76.5
HND Mechanical Engineering.	1	1.6	78.1
HND Statistics	1	1.6	79.7
HND Tourism	4	6.3	86.0
HND Catering	1	1.6	87.6
HND Building technology	1	1.6	89.2
HND Civil Engineering	0	0	89.2
Invalid entry	7	10.8	100
Total	64	100	

The most preferred programme from table 13 is HND Accountancy programme which recorded forty-six point nine percent (46.9%) of the total respondents' rate, the huge representation stems from the fact that most applicants identify the well-paid professions on the job market. Secondly, they also seek programmes which could provide them with ready jobs upon completion of the programme. Available statistics from the enrolment figures in the polytechnic (2005/2006 academic year) show that HND Accountancy students were nine hundred and thirty-four representing thirty-four point five percent (34.5%) of the total students' population. In the same academic year, out of the total applications for admission received, four hundred and fifty one representing thirty-eight point three percent (38.3%) chose HND Accountancy as their first choice programme. The second highest preferred programme was HND Marketing programme which recorded eighteen point seven percent (18.7%) of the total respondents; in the 2005/2006 academic year, total applicants to the HND Marketing programme were two-hundred and fifteen representing twenty-one percent of the total applications for the year. The response trend however shows that most applicants to the polytechnic prefer business programmes because they tend to identify those courses as having future job prospects. The HND Secretaryship and Management Studies programme also had the third highest representation among respondents with seven point eight (7.8%) percent of the total respondents. In the 2005/2006 academic year, admission applications to the HND secretaryship and management studies programme was nine point four percent (9.4%) of the total application received for the year.

The school of applied sciences and arts had the largest respondents' rate from the HND Tourism programme with four respondents representing six point three (6.3%) of the total respondents. Cape Coast Polytechnic is the only polytechnic in Ghana which offers a HND program in tourism and in the 2005/2006 academic year, applications to the programme represented nine point two percent (9.2%) of the total applications. Respondents who applied for the HND statistics and Hotel Catering and Institutional Management programmes from the school of applied sciences and arts were one each representing one point six percent (1.6%) respectively. The two programmes are the least participated

programmes in the polytechnic and both programmes recorded the least applications for admission in the 2005/2006 academic year with four percent (4%) and two point five percent (2.5%) respectively. The reason for the low participation rate in the Catering programme is mainly due to the weak passes in numerical courses by applicants to the programme and the difficulties often encountered by students applying with other professional certificates. Most of the applicants with vocational certificates do not meet the minimum admission criteria and as a result, they are usually not picked for the programme. The HND statistics programme also receive minimal application entries due to the job prospects which are very limited to some few organizations in Ghana and this does not motivate applicants to choose the programme.

Respondents to engineering programmes in the polytechnic are usually senior secondary school leavers and graduates from technical institutes in Ghana. The highest participation rates in the questionnaire distribution were from the electrical/electronic engineering department, the mechanical engineering department and the building technology departments respectively which had three point one percent (3.1%) and one point six percent (1.6%) each respectively of the total respondents' rate. The department of civil engineering had no representation in the study conducted. The engineering department of the polytechnic has been recording reducing participation rates among applicants over a five year period. The situation is caused by the reduction in participation of students in science programmes at the senior secondary school level in Ghana. Secondly, most applicants from the technical institutions do not meet the requisite minimum entry qualification needed to enrol in engineering programmes offered by the polytechnic. In the 2005/2006 academic year, application for admission in relation to the total applications received for the four departments were; seven percent (7%), five point four percent (5.4%), and four point eight percent for the last two department respectively.

4.4.3.0 Information on demand for tertiary education.
This part of the study deals with the various reasons given for the demand for tertiary education by respondents as provided in the questionnaire which detailed different level of opinion on several issues relating to the demand for tertiary education. This part is divided into three major issues as contained in the literature review on the general demand for tertiary education. The first issue identifies the economic motives for the demand for tertiary education, the second issue deals with the socio-political demand for tertiary education and finally on education financing. Respondents were made to rate their opinion on a likert scale of; strongly agree, agree, undecided, I disagree, and I strongly disagree.

4.4.3.1 Economic motives for the demand for tertiary education.
Six different issues were placed under economic motives for the demand for tertiary education and the respondents to the questionnaire gave their opinion on those issues. The fist issue raised for respondents to rate on the likert scale was, 'tertiary education would help me build my chosen career'. Respondents to this question expressed their opinion by indicating the extent to which they supported the statement. Fifty-one respondents representing seventy-nine point seven percent (79.7%) indicated that they strongly agreed that tertiary education would help them build their chosen career. Their opinion represented the strong demand for tertiary education as the basis for developing career path of students. Twelve respondents representing eighteen point eight percent (18.8%) indicated that they agreed to the statement while one respondent did not comment on the issue. From the ratings given by the various respondents, most applicants were of the opinion that tertiary education would help them build their chosen career.

The second statement that was made for respondents to give their ratings was; 'I would be able to get a better paid job when I obtain tertiary education'. Eighteen respondents representing twenty eight-point one percent (28.1%) indicated a strong agreement to the statement, they were of the opinion that tertiary education results in better paid job. When applicants indicate their strong agreement to this statement, it suggests that their prime objective of enrolling in tertiary education is to secure highly paid jobs. The second group of respondents who agreed to the statement represented the highest group with thirty-eight concurring response representing fifty-nine point four percent (59.4%) of the total respondents. To this group of respondents, although tertiary education could lead to better paid jobs,

their opinion was not very strong on the issue as the most important factor for the demand for tertiary education. Two respondents representing three point one percent (3.1%) were undecided on the issue while two other respondents representing three point one percent (3.1%) disagreed with the statement. To this group of people, demand for tertiary education does not necessarily mean demand for better paid jobs. Four respondents representing six point three percent (6.3%) did not indicate their opinion on the issue.

The third aspect under economic motives for demand for tertiary education was; 'tertiary education to me is not a form of economic investment. The investment motive for demand for tertiary education is linked to the human capital approach in the economics of education. Within this approach, education is an investment of current time and money for future pay. The returns on education investment could be related to the money and time spent over a period of time in gaining the knowledge needed to work for income. Five respondents representing seven point eight percent (7.8%) strongly agreed with the statement that tertiary education was not a form of economic investment. To this group of respondents, tertiary education could not provide them with the needed returns upon completion of their education when they could be employed by several organizations. Ten respondents representing fifteen point six percent (15.6%) indicated that they agreed to the statement that tertiary education was not a form of economic investment, their position on the issue was that the economic investment aspect of tertiary education was not very important although to some extent, some aspects were quite important. Five respondents representing seven point eight percent (7.8%) were undecided on the statement that tertiary education was a not source of economic investment.

Table 14: Tertiary education to me is not a form of economic investment

Tertiary education is a form of economic investment.	Frequency	Percent	Cumulative percent
Strongly agree	5	7.8	7.8
Agree	10	15.6	23.4
Undecided	5	7.8	31.2
Disagree	22	34.4	65.6
Strongly disagree	21	32.8	98.4
Invalid entry	1	1.6	100
Total	64	100	

Twenty-two respondents representing thirty-four point four percent (34.4%) of the total respondents disagreed with the statement that tertiary education was not a form of economic investment, to this group of respondents; tertiary education could be viewed as a form of economic investment although their stance was not very strong. Several factors however link up with the issue of economic investment and these factors influenced respondents' choice of agreement. Twenty-one respondents representing thirty-two point eight percent (32.8%) strongly disagreed with the statement that tertiary education was not a form of economic investment. This group of respondents where of the opinion that tertiary education was a very important economic investment, they thus agreed with the human capital theorist in the economics of education that education is an investment of current time and money for future pay. One respondent representing one point six percent (1.6%) did not enter his opinion to the statement.

'Obtaining tertiary education would not necessarily lead to increased productivity in my organization' was the fourth statement under the economic motives for the demand for tertiary education. This

statement referred to the skills acquired and applied at the job setting by graduates of tertiary institutions. It has its basis from the human capital theory which states that, 'higher education increases the productive characteristics of the workforce that may enhance the national output, economic development and growth'. Three respondents representing four point seven percent (4.7%) of the total respondents indicated that they strongly agreed to the statement that obtaining tertiary education would not necessarily lead to increased productivity in their organizations when they begin to work. Eight respondents representing twelve point five percent (12.5%) indicated that they agreed with the statement that obtaining tertiary education would not necessarily lead to increased productivity. Four respondents representing six point three (6.3%) percent of the total respondents were undecided on the statement. Twenty-one respondents representing thirty-two point eight percent of the total respondents disagreed with the statement, to this group of respondents, higher education to some extent increases the productive characteristics of the workforce that may enhance the national output, economic development and growth. The last group of respondents was made up of twenty-seven, representing forty-two point two percent (42.2%) of the total respondents; they however strongly disagreed with the statement. Their position was based on the fact that higher education increases the productive characteristics of the workforce that may enhance the national output, economic development and growth.

The fifth statement made was 'tertiary education would help me earn a good salary and lead a quality life'. Fifteen respondents representing twenty-three point four percent (23.4%) of the total respondents strongly agreed to the statement and indicated that tertiary education would help them earn good salary and lead a good life. The statement was posed to get the reasons for demand for tertiary education and find out the motives for which applicants apply for tertiary education in Ghana. Thirty respondents representing forty-six point nine percent (46.9%) of the total respondents agreed to the statement that tertiary education would help them earn a good salary and lead quality life. Five respondents representing seven point eight percent (7.8%) of the total respondents were undecided on the statement. Twelve respondents representing eighteen point eight disagreed to the statement that tertiary education would help them earn good salary and lead quality life, according to this group of respondents, several factors lead to earning good salary. Two respondents representing three point one percent (3.1%) strongly disagreed with the issue that tertiary education would help them earn good salary and lead quality life upon completion of their educational programme in the polytechnic.

4.4.3.2 Socio-political demand for tertiary education.
Socio-political demand for tertiary education identifies equal opportunity for education for all citizens in a country regardless of social class, age or ethnicity. With this provision, many individuals seek tertiary education to enhance their social status in the society and help contribute meaningfully to the development of the country. Four issues were selected for discussion under this topic and they relate directly to the socio-political demand for tertiary education. The first issue discussed was 'the programmes offered at the polytechnic would help me meet my career aspiration'. Most applicants to the polytechnic identify their career path way and pursue programmes that would help them meet their career objectives. Forty-two respondents representing sixty-five point six percent (65.6%) indicated that they strongly agreed to the statement that programmes offered at the polytechnic would help them meet their career aspirations and according to this group, the courses they select at the polytechnic would lead them to their chosen career. Twenty respondents representing thirty-one point three percent (31.3%) of the total respondents indicated that they agreed with the statement that the programmes offered at the polytechnic would help them meet their career aspirations. They however identified other aspects as culminating to carve a career pathway for applicants. One respondent representing one point six percent (1.6%) of total respondents indicated that he was undecided on the issue. One respondent representing one point six percent (1.6%) of the total respondents strongly disagreed with the statement that the programmes offered at the polytechnic would help them meet their career aspiration, according to this respondents, programmes offered by the polytechnic has no bearing on applicants' career aspirations.

The second item for discussion under socio-political demand for tertiary education was 'tertiary education would help enhance my social status upon completion of school'. Social status in Ghana is

considered as important aspect of life especially when it is linked to educational qualification. Respondents were asked to indicate the extent to which they agreed or disagreed to the statement. Eighteen respondents representing twenty-eight point one percent (28.1%) of the total respondents strongly agreed to the statement. They thus identified tertiary education as a pathway which could enhance their social status. Forty respondents representing sixty-two point five percent (62.5%) of total respondents indicated that they agreed with the statement that tertiary education would enhance their social status upon completion of the programme. Five respondents representing seven point eight percent (7.8%) of the total respondents were undecided on the issue while one respondent representing one point six percent (1.6%) of the total respondents strongly disagreed with the statement that tertiary education would enhance their social status upon completion of the programme.

'I consider my social status as an important aspect of enrolling in the polytechnic'. This statement was made to confirm the choice of respondents' option to the statement that 'tertiary education would help enhance my social status upon completion of the programme'. Nineteen respondents representing twenty-nine point seven percent (29.7%) of the total respondents' strongly agreed with the issue that their social status was an important aspect of enrolling in the polytechnic. Thus, to this group of people, one strong demand for tertiary education was their social status that would be enhanced upon completion of the programme.

Table 15: Social status is an important aspect of enrolling in the polytechnic.

Tertiary education enhances social status.	Frequency	Percent	Cumulative percent
Strongly agree	19	29.7	29.7
Agree	32	50.00	79.7
Undecided	7	10.9	90.6
Disagree	4	6.3	96..9
Invalid entry	2	3.1	100
Total	64	100	

Thirty-two respondents representing fifty percent (50%) were of the opinion that although their social status was a major factor in their demand for tertiary education it was only a part of a total set of demand influence for tertiary education. Seven respondents representing ten point nine percent (10.9%) of the total respondents were undecided on the issue for discussion. Four respondents disagreed with the issue that social status of individuals was an important aspect of enrolling in the polytechnic while two respondents representing three point one percent of the total respondents did not comment on the issue.

The last item identified under the socio-political demand for tertiary education was, 'I consider myself as likely to be employed upon completion of the programme. This statement could be linked to respondents' aspirations for better job placement upon completion of the programme in the polytechnic; respondents to this statement were asked to state the extent to which they were convinced that they would secure employment upon completion of the programme if they were admitted.

Table 16: Polytechnic education as an important aspect of social status

Polytechnic education as an important aspect of social status	Frequency	Percent	Cumulative percent
Strongly agree	32	50.00	50.00

Agree	25	39.1	89.1
Undecided	1	1.6	90.7
Strongly disagree	2	3.1	93.8
Invalid entry	4	6.2	100
Total	**64**	**100**	

Thirty-two respondents representing fifty percent (50%) indicated that they strongly agreed to the statement that they considered themselves as likely to be employed upon completion of the programme if they were selected. According to this group of respondents, they were very convinced that when given their first choice programmes, they would be employed upon completion of the programme. Twenty-five respondents representing thirty-nine point one percent (39.1%) agreed to the statement that they considered themselves as likely to be employed upon completion of the programme, to this group of respondents, they were quite convinced that when selected, they could secure jobs in organizations they applied for. One respondent representing one point six percent (1.6%) of total respondents indicated that he was undecided on the issue while two respondents representing three point one percent (3.1%) of the total respondents indicated that they strongly disagreed with statement. According to this group of respondents, completion of tertiary education would not necessarily help them secure jobs. Four respondents representing six point three percent of total respondents did not express their opinion on the issue.

4.4.3.3 Education financing.

Education financing is very important in every country and in Ghana; the government supports the educational system by annual subvention to the various tertiary institutions. The government supports polytechnic education in Ghana each year through annual subvention which covers all students enrolling on full time tertiary programmes in the polytechnic.

Table 17: How direct-applicant respondents intend to finance their education

How I intend to finance my education.	Frequency	Percent	Cumulative percent
Government loan	25	39.1	39.1
Parental support	31	48.4	87.5
Self financing	8	12.5	100.0
Total	64	100.0	

However, over the past years, government's support for polytechnic education has increased but the increase does not correspond with the percentage increase in enrolment rates. Respondents were asked about how they intended to finance their education. Twenty-five respondents representing thirty nine point one percent (39.1%) indicated that they would secure sponsorship through government loan. Thirty-one respondents representing forty-eight point four percent (48.4%) of total respondents indicated that they would rely on their parent's support to enrol in the polytechnic; these groups of people are predominantly young applicants who receive support in their education from their parents. Eight respondents representing twelve point five percent stated that they were going to fund their education.

The first statement which was posed for respondents to comment on their level of agreement was, 'I should be responsible for funding my education in the polytechnic if I gain admission'. Fifteen respondents representing twenty-three point four percent (23.4%) strongly agreed to the statement that they should be responsible for funding their education in the polytechnic if they gained admission to the polytechnic. These groups of respondents were of the opinion that tertiary education financing should be the responsibility of students and not government. Sixteen respondents representing twenty-five percent (25%) representing twenty-five percent agreed to the statement that they should be responsible for funding their education in the polytechnic when they gain admission. Seven respondents representing ten point nine percent (10.9%) were undecided on the statement.

Table 18: Students should be responsible for funding tertiary education.

I should be responsible for financing my education.	Frequency	Percent	Cumulative percent
Strongly agree	15	23.4	23.4
Agree	16	25.0	48.4
Undecided	7	10.9	59.3
Disagree	14	21.9	81.2
Strongly disagree	11	17.2	98.4
Invalid entry	1	1.6	100
Total	64		

Fourteen respondents representing twenty-one point nine percent (21.9%) disagreed with the statement that students should be responsible for the funding of education in the polytechnic, according to this group of people; the government should be wholly responsible for financing tertiary education. Eleven respondent representing seventeen point two percent disagreed with the statement that students should be responsible for the funding of education in the polytechnic, according to this group of respondents, the government should support the funding of tertiary education for all students. One respondent representing one point six percent (1.6%) of total respondents indicated that he was undecided on the issue.

'Since the government would benefit from the services of graduates, students should not be made to pay fees when enrolling in tertiary institutions' was the second statement on which respondents were to indicate their agreement or disagreement. Eighteen respondents representing twenty-eight point one percent (28.1%) of the total respondents strongly agreed to the statement. According to this group of respondents, since the government needed the services of the graduates, the government should be responsible for financing tertiary education in the country. Twelve respondents representing eighteen point eight percent (18.8%) of total respondents were of the opinion that to some extent, government should be responsible for funding tertiary education in Ghana. They indicated their opinion by agreeing on the issue. Four respondents representing six point three percent (6.3%) of the total respondents were undecided on the issue while twenty-six respondents representing forty point six percent (40.6%) disagreed with the statement. According to this group of people although the government uses the services of graduates from the polytechnics, the government does not necessarily have to fully fund tertiary education. One respondent representing one point six percent strongly disagreed with the statement, and their choice meant that although the government would use the services of the graduates, she (government) was not responsible for the funding of tertiary education in the country.

The third statement posed to respondents to comment on was, 'if I gain admission and I am offered students loan, it would help me meet most of the cost involved in tertiary education'. Funding of tertiary education is heavily supported by government but that only covers tuition fees and use of facilities, however, most students who do not have support financially from their family or employees depend on government loan to finance their education. Forty-five respondents representing seventy-point three percent (70.3%) strongly agreed to the statement that students' loan would help students meet the cost of enrolling in tertiary education in Ghana. Fifteen respondents representing twenty-three point four percent (23.4%) agreed to the statement that students' loan was important for students to meet their financial obligation in enrolling in tertiary education.

Table 19: Students' loan would help me meet the cost of my education.

Students' loan would help me meet the cost of my education.	Frequency	Percent	Cumulative percent
Strongly agree	45	70.4	70.4
Agree	15	23.4	93.8
Undecided	2	3.1	96.9
Disagree	2	3.1	100
Total	64	100	

Two respondents representing three point one percent (3.1%) of the total respondents were undecided on the issue while two other respondents representing three point one percent (3.1%) of the total respondents disagreed with the issue. They were of the opinion that the granting of students' loan was not very important for students to meet the cost involved in enrolling in the polytechnic.

The last statement on education financing for tertiary applicants was on government support for the needy students. The statement made for respondents to comment was, 'The government should set up scholarship funds to help needy students to get financial support'. Fifty-six respondents representing eighty-seven point five percent (87.5%) of the total respondents agreed strongly to the statement that government should set up scholarship funds to help needy students to get financial support. Six respondents representing nine point four respondents agreed to the statement that government should set up scholarship funds to help needy students to get financial support while one respondent representing one point six percent (1.6%) was undecided on the issue.

4.5.0 ANALYSIS OF QUESTIONNAIRE FOR MATURE APPLICANT- RESPONDENTS
Mature applicants to the Higher National Diploma programme in Cape Coast Polytechnic are individuals who are more than thirty years of age at the time of admission and have acquired the requisite pre-tertiary level education with some working experience. Forty questionnaires were designed to be completed by mature respondents while the actual number of respondents was twenty eight representing seventy percent (70%) of the total respondents.

4.5.1.0 Demographic information of applicants.
The demographic information on mature applicant-respondents was designed to get information on the demographic statistics on respondents in relation to tertiary education participation and students selectivity to the Cape Coast polytechnic. The demographic information covered, age of mature respondents, sex of respondents, and geographical location of respondents.

4.5.1.1 Age of mature-applicant respondents
The first item on the questionnaire of mature-applicant respondents was the issue of the age of respondents. From the table 20 below, the highest frequency was forty-two representing sixty-six

percent (66.6%) of total respondents. These figures represent the dominant age group of mature participation in tertiary education in Cape Coast Polytechnic and make the average age of the highest group of mature applicants thirty-two point five (32.5). The second group was made up of twenty-two respondents who were between the ages, thirty-six to forty one representing thirty-four percent (34%) of the total respondents.

Table 20: Age of mature-applicant respondents

Age of respondents	Frequency	Percent	Average Age
30-35	42	66	32.5
36-41	22	34	38.5
Total	64	100	

All mature-applicant respondents to the polytechnic were within the age range of thirty (30) to forty-one (41), they were also within the working age group with experience in the working environment, they were mostly individuals who broke from job to acquire more knowledge related to their job. The result of acquiring increased knowledge and training could be seen as reward through increased remuneration to graduates of tertiary institutions. There is also increased responsibility that comes with new knowledge and training acquired.

4.5.1.2 Sex distribution of mature-applicant respondents

The sex of respondents as shown in table twenty-one below indicates that male respondents were twenty-one representing seventy-five percent of total respondents and female respondents were seven representing twenty-five percent (25%) of total respondents. Male tertiary participation among mature applicants in Cape Coast Polytechnic is often more than the female participation in tertiary programmes. This development could be interpreted as the result of continuous male interest in securing better living conditions as bread winners of their families. Secondly, females as the reproductive sex group are often faced with problems of combining schooling and house keeping. Some organizations encourage male participation in tertiary education among the working population than females.

Table 21: Sex distribution of mature-applicant respondents

Sex	Frequency	Percent	Cumulative Percent
Male	21	75	75
Female	7	25	100
Total	28	100	

Most female mature applicants apply for courses in Accountancy, Secretaryship & Management Studies, Marketing, Hotel Catering and Institutional Management and Tourism. The Engineering departments however do not receive applications from female mature-applicants. Thus tertiary education participation in the Engineering department is dominated by males.

4.5.1.3 Geographical distribution of mature-applicant respondents

Most mature applicants to the Cape Coast Polytechnic are workers within the municipality who wish to further their education through the normal tertiary programmes offered by the polytechnic. However, some mature applicants apply to the polytechnic from other regions for reasons such as existence of lecturers to teach the courses and the availability of laboratory and equipment to meet their training needs. Since Cape Coast Polytechnic is the only polytechnic in Ghana that offers Higher National Diploma Programme in Tourism, all applicants to the programme in Ghana apply to the

polytechnic to receive the needed training. Proximity of the location of tertiary institutions to the residence of the applicants to a larger extent determines the participation rate among respondents within the region. From the table 22 below, the central region recorded the highest number of mature applicants to the polytechnic with seventeen respondents representing sixty point seven percent (60.7%) which is an indication that most mature applicants to the polytechnic are from the central region. Secondly, the figure shows that the concept of regionalization of polytechnic education system is having the desired impact on workers' participation in tertiary education. Greater Accra region was the next region with the highest number of respondents; it had four respondents representing fourteen point three percent (14.3%). Most mature applicants from the Greater Accra region identify the distance between the two regions as very close and recognize that they could enroll in the polytechnic. The same reasons however could be given to the respondent rates from the Western region which is also very close to the central region. The western region recorded two applicants representing seven point one percent (7.1%) of total respondents which was the third highest percentage of the geographical representation.

Table 22: Geographical distribution of mature-applicant respondents

Region	Frequency	Percent	Cumulative percent
Greater Accra	4	14.3	14.3
Volta Region	0	0	14.3
Ashanti Region	1	3.6	17.9
Eastern Region	1	3.6	21.5
Western Region	2	7.1	28.6
Central Region	17	60.7	89.3
Brong-Ahafo Region	1	3.6	92.9
Upper East Region	0	0	0
Upper West Region	0	0	0
Northern Region	0	0	0
Invalid entry	2	7.1	92.9
Total	28	100	100

Four other regions namely Ashanti, Eastern, and Brong-Ahafo regions had one respondent each representing three point six percent of the total respondents (3.1%). The figures however show that mature-applicants to the polytechnic are from the lower part of Ghana which is very close to the Central region. The respondent-rate also shows that prospective mature-applicants consider the geographical location of the institution when applying for admission. The three regions in the northern part of Ghana recorded the least percentage rate because of the long distance from the region to the Central region. The result however is an indication that applicants consider the proximity of their location to the institution they wish to enroll. Two respondents however did not give their opinion on the issue.

4.5.2.0 Information on mature-applicant respondents' application for admission.
This part of the research questions were posed to mature-applicant respondents to provide information on their previous application for admission to Cape Coast Polytechnic and the details involved in those previous applications. The demand for tertiary education make most mature-applicants to the polytechnic purchase forms for admission each year and the polytechnic keep details of the information of previous applicants to the polytechnic. An applicant to the polytechnic cannot purchase two forms for enrolment within an academic year but is allowed to apply again the following year if he or she is not successful in the first application. The information covers, number of times respondents applied for admission, the reasons for which such respondents could not gain admission the first time and the courses chosen by the respondents. Mature applicants to the polytechnic usually obtain admission forms at a higher price than the direct applicants. The admission process involves selecting mature applicants who meet the minimum entry requirements and the conduct of mature-applicants examination.

4.5.2.1 Prior tertiary education achievement level of mature-applicant respondents
The prior level of education of mature-applicants suggests the level of education attained by the applicants prior to the submission of their application forms. From the table 23 below, the highest number of respondents were those with Senior Secondary School Certificate Examination (SSSCE), who were thirteen respondents representing forty-six point four percent (46.4%) of the total respondents. Most of the mature-applicants are individuals who have worked for some years with the Senior Secondary School Certificate Examination (SSSCE) certificates.

Table 23: Prior education achievement level of mature-applicant respondents

Prior level of education	Frequency	Percent	Cumulative percent
SSSCE	13	46.5	46.5
'O' & 'A' Level	3	10.7	57.2
Diploma in Business Studies	3	10.7	67.9
Others	7	25	92.9
Invalid entry	2	7.1	100
Total	28	100	

Second were those with technical and vocational certificates, this group of people was made up of seven respondents representing twenty-five percent (25%) of total respondents. Ordinary and advance level applicant were three, representing ten point seven percent (10.7%) of total respondents, the same number of respondents also represented mature-applicants with Diploma in Business Studies. Two respondents representing seven point one percent (7.1%) of total respondents did not indicate their prior level of education. The figures represented show that most mature applicants to the polytechnic have different qualifications which they apply to the polytechnic with, the Senior Secondary School Certificate is also conducted as private exams and most mature applicants write the examination as private student.

4.5.2.2 Number of times mature-applicant respondents applied for admission
Information on respondents' previous application for admission was provided based on respondents' previous admission statistics or details provided by the applicants. The question was asked to ascertain respondents' background information on the number of times respondents had applied for admission and the number of times respondents had not been successful in gaining admission to the polytechnic. Information on respondents' previous application for admission was provided based on respondents' previous admission statistics or details provided by the applicants.

Table 24: Number of times mature-applicant respondents applied for admission

Number of times applied for admission	Frequency	Percent	Cumulative percent
Once	21	75	75
Twice	7	25	100
Total	28	100	

The question was asked to ascertain respondents' background information on the number of times they had applied for admission and the number of times respondents had not been successful in gaining admission to the polytechnic. The most competitive programme for mature applicants in the polytechnic is the Higher National Diploma course in Accountancy. Mature applicants to the Accountancy programme often have limited space for selected candidates to the mature examination conducted by the polytechnic. From table 24 above, twenty-one respondents representing seventy five percent (75%) had applied once to the polytechnic for the Higher National Diploma programme. Seven respondents representing twenty-five percent (25%) had previously applied for admission once. Most departments select short listed applicants to the mature examination for the various programmes due to the spaces available for students, secondly, the departments often pick most short-listed applicants to encourage tertiary education participation among the working population in the municipality.

4.5.2.3 First choice programme of mature-applicant respondents

The Cape Coast polytechnic offers ten Higher National Diploma programmes in the schools of Engineering, Applied sciences and arts, and business. The study was aimed at also identifying the most preferred programmes by applicants to the Cape Coast Polytechnic and the least preferred programme in the polytechnic.

The most preferred programme from table 25 below is Higher National Diploma Accountancy programme which had fifteen respondents representing fifty-three point six percent (53.6%) of the total respondents. The accountancy programme is the preferred programme among most of the mature applicants, although it is the most competitive programme for mature applicants, entry into the programme is very competitive. Most mature-applicants to the HND Accountancy programme are workers with some level of experience on their jobs; these individuals are usually account clerks and data entry officers in some private and government institutions. The second highest preferred programme was HND Secretaryship and Management Studies programme which recorded four respondents representing fourteen point three percent (14.3%) of the total respondents; applicants to the programme are often stenographer secretaries from government agencies and departments in the country who enrol in the programme to gain promotion to the status of graduate secretary which is very financially rewarding. Two respondents representing seven point one percent (7.1%) of the total respondents applied for the HND Electrical Engineering programme. Most applicants to the HND Electrical Engineering programme are workers from industries in the Ghana with some years of working experience.

Table 25: First choice programme of mature-applicant respondents

Programme	Frequency	Percent	Cumulative percent
HND Secretaryship and Management studies.	4	14.3	14.3
HND Accountancy studies.	15	53.6	67.9
HND Marketing	1	3.6	71.5

HND Electrical Engineering	2	7.1	78.6
HND Tourism	1	3.6	82.2
Invalid entry	5	17.8	100
Total	28	100	

The HND Marketing programme and the HND Tourism programme recorded one respondent each representing three point six percent (3.6%) each of the total respondents. Five respondents representing seventeen point eight percent of the total respondents did not enter their opinion on the issue.

4.5.3.0 Economic motives for the demand for tertiary education.
Economic demand for tertiary education is influenced by the positive external effects that are important to the economic well being of the country. Six different issues were placed under economic motives for the demand for tertiary education and the respondents to the questionnaire gave their opinion on those issues. The fist issue raised for mature-respondents to rate on the likert scale was, 'tertiary education would help me build my chosen career'. Respondents to this question expressed their opinion by indicating the extent to which they supported the statement. Twenty-two respondents representing seventy-eight point six percent (78.6%) indicated that they strongly agreed to the statement that tertiary education would help them build their chosen career. Their opinion represented the strong demand for tertiary education as the tool for enriching their already existing on-the-job skills. Four respondents representing fourteen point three percent (14.3%) indicated that they agreed to the statement. One respondent representing three point six percent (3.6%) disagreed with the issue while one respondent did not comment on the issue. From the ratings given by the mature-applicant respondents there was a strong indication that polytechnic education would help increase the knowledge of applicants to the polytechnic.

The second item that was presented for mature-applicant respondents to provide their ratings was; 'I would be able to get a better paid job when I obtain tertiary education'. This statement was designed for mature applicants who were not employed at the time of completing the questionnaire. Ten respondents representing thirty-five point seven percent (35.7%) indicated their strong agreement to the statement; they were of the opinion that tertiary education results in better paid job although most of them were employed. Most applicants who indicated their strong agreement to this statement had their prime objective of enrolling in tertiary education as, to secure a highly paid job. The second group of respondents who only agreed to the statement represented the highest group with fourteen respondents representing fifty percent (50%) of total respondents. This group of respondents stated that although tertiary education could lead to better paid jobs, other factors could influence salary structure of workers. Three respondents representing ten percent (10%) disagreed with the statement and indicated that tertiary education had no correlation with salary or wage structure of workers. One respondent representing three point six percent (3.6%) of total respondents did not comment on the statement.

The third aspect under economic motives for demand for tertiary education was; 'tertiary education to me is not a form of economic investment. The investment motive for demand for tertiary education is linked to the human capital approach in the economics of education. Within this approach, education is an investment of current time and money for future pay. The returns on education investment could be related to the money and time spent over a period of time in gaining the knowledge needed to work for income. One respondent representing three point six percent (3.6%) of total respondents indicated he strongly agreed with statement that tertiary education was not a form of economic investment. According to the respondent tertiary education could not be viewed as a form of economic investment. Three respondents representing ten point seven (10.7%) agreed with the statement that tertiary education was not a form of economic investment. Eleven respondents representing thirty-nine point

three percent (39.3%) of the total respondents indicated that they disagreed with the statement that tertiary education was not a form of economic investment. Their position on the issue was that the economic investment aspect of tertiary education was quite important.

Table 26: Tertiary education to me is not a form of economic investment

Tertiary education is a form of economic investment.	Frequency	Percent	Cumulative percent
Strongly agree	1	3.6	3.6
Agree	3	10.7	14.3
Disagree	11	39.3	53.6
Strongly disagree	11	39.3	92.9
Invalid entry	2	7.1	100
Total	28	100	

Eleven other respondents representing thirty-nine point three percent (39.3%) of the total respondents strongly disagreed with the statement that tertiary education was not a form of economic investment and according to this group of respondents, tertiary education could be viewed as a major form of economic investment. Two respondents representing seven point one percent (7.1%) of the total respondents did not comment on the issue.

'Obtaining tertiary education would not necessarily lead to increased productivity in my organization' was the fourth statement under the economic motives for the demand for tertiary education. This statement referred to the skills acquired and applied at the job setting by graduates of tertiary institutions. It has its basis from the human capital theory which states higher education increases the productive characteristics of the workforce that may enhance the national output, economic development and growth. One respondent representing three point six percent (3.6%) of total respondents indicated that they strongly agreed to the statement that obtaining tertiary education would not necessarily lead to increased productivity in their organizations. Four respondents representing fourteen point three percent (14.3%) indicated that they agreed to the statement that obtaining tertiary education would not necessarily lead to increased productivity. Three respondents representing ten point seven percent (10.7%) of the total respondents were undecided on the statement. Eight respondents representing twenty-eight point six percent (28.6%) of the total respondents indicated that they disagreed with the statement, the respondents were of the opinion that tertiary education would lead to increased productivity in their organizations. Their views were strongly shared by eleven respondents representing thirty-nine point three percent (39.3%) of total respondents who indicated that obtaining tertiary education would increase productivity in their organizations. They however identified themselves with the statement that tertiary education to some extent increases the productive characteristics of the workforce that may enhance the national output, economic development and growth. The last group of respondents was made up of one respondent representing three point six percent of total respondents; he did not indicate his opinion on the issue.

The last issue under the economic motives for the demand for tertiary education was, 'tertiary education would help me earn good salary and lead a quality life'. Four respondents representing fourteen point three percent (14.3%) of the total respondents strongly agreed to the statement that tertiary education would help them earn good salary and lead a good life. The statement was posed to respondents to get the reasons for demand for tertiary education and find out the motives for which applicants apply for tertiary education in Ghana. Seventeen respondents representing sixty point seven percent (60.7%) of the total respondents agreed to the statement that tertiary education would help

them earn good salary and lead a quality life upon completion of the programme. One respondent representing three point six (3.6%) of the total respondents was undecided on the statement. Four respondents representing fourteen point three (14.3%) disagreed with the statement that tertiary education would help them earn a good salary and lead quality life, according to this group of respondents, several factors lead to earning good salary. One respondent representing three point six percent (3.6%) strongly disagreed with the issue that tertiary education would help them earn good salary and lead a quality life upon completion of their educational programme in the polytechnic. One respondent representing three point six percent of total respondents did not comment on the issue.

4.5.4.0 Socio-political demand for tertiary education.
Socio-political demand for tertiary education identifies equal opportunity for education for all citizens in a country regardless of social class, age or ethnicity. With this provision, many individuals seek tertiary education to enhance their social status in the society and help contribute meaningfully to the development of the country. Mature-applicants' education in tertiary institutions serve as a very important aspect of developing the skills of the existing labour force while giving responsibility to people who acquire knowledge in tertiary institutions. Four issues were selected for discussion under this topic and they were related directly to the socio-political demand for tertiary education. The first issue discussed was 'the programmes offered at the polytechnic would help me meet my career aspiration'. Most mature-applicants to the polytechnic follow their career path and pursue programmes that relate to their job setting and could help improve upon their existing knowledge on the job. Ten respondents representing thirty-five point seven percent (35.7%) of total respondents indicated that they strongly agreed with the statement that programmes offered at the polytechnic would help them meet their career aspiration, according to this group; the courses they select at the polytechnic is related to their existing jobs in their various organizations. Seven respondents representing sixty point seven percent (60.7%) of the total respondents indicated that they agreed with the statement that the programmes offered at the polytechnic would help them meet their career aspirations. They however identified other aspects as culminating to carve a career pathway for applicants. One respondent representing three point six percent (3.6%) of total respondents indicated that he was undecided on the issue. One respondent representing three point six percent (3.6%) of the total respondents did not comment on the issue.

Table 27: Social status is an important aspect of enrolling in the polytechnic.

Tertiary education enhances social status.	Frequency	Percent	Cumulative percent
Strongly agree	4	14.3	14.3
Agree	21	75	89.3
Disagree	2	7.1	96.4
Invalid entry	1	3.6	100
Total	64	100	

The second item for discussion under socio-political demand for tertiary education was 'tertiary education would help enhance my social status upon completion of school'. Social status in Ghana is considered as important aspect of life especially when it is linked to educational qualification. Respondents were asked to indicate the extent to which they agreed or disagreed to the statement. Four respondents representing fourteen point three percent (14.3%) of the total respondents strongly agreed to the statement thus identified tertiary education as a pathway which could enhance their social status as workers of various organizations. From table 27 above, twenty-one respondents representing seventy-five percent (75%) of total respondents indicated that they agreed with the statement that tertiary education would enhance their social status as employees of some organizations when they complete the programme. Two respondents representing seven point one percent (7.1%) of the total

respondents disagreed with the statement that tertiary education would enhance their social status upon completion of the programme while one respondent representing three point six percent (3.6%) of the total respondents did not indicate his opinion on the issue.

'I consider my social status as an important aspect of enrolling in the polytechnic'. This statement was made to confirm the choice of respondents' option to the statement that 'tertiary education would help enhance my social status upon completion of the programme'. Four respondents representing fourteen point three percent (14.3%) of the total respondents' rate strongly agreed to the issue that their social status was an important aspect in enrolling in the polytechnic as employees of organizations and bread winners of their families. Thus, to this group of people, one strong demand for tertiary education was their social status that would be enhanced upon completion of the programme.

Table 28: Polytechnic education as an important aspect of social status

Polytechnic education as an important aspect of social status	Frequency	Percent	Cumulative percent
Strongly agree	4	14.3	14.3
Agree	17	60.7	75
Undecided	2	7.1	82.1
Disagree	3	10.7	92.8
Strongly disagree	1	3.6	96.4
Invalid entry	1	3.6	100
Total	28	100	

Seventeen respondents representing sixty point seven percent (60.7%) of total respondents were of the opinion that although their social status was a major factor in their demand for tertiary education it was only a part of a total set of demand influence for tertiary education. Two respondents representing seven point one percent (7.1%) of the total respondents were undecided on the issue for discussion. Three respondents representing ten point seven percent (10.7%) disagreed with the issue that social status of individuals was an important aspect for enrolling in the polytechnic and one respondent representing three point six percent (3.6%) strongly disagreed to the statement while another respondent did not indicate his opinion on the issue.

4.5.5.0 Education financing.
Mature students in tertiary institutions who enrol in full time programmes often benefit from government support in the funding of their education. Education financing is very important in every country and in Ghana, the government supports the educational system by annual subvention to the various tertiary institutions. The government supports polytechnic education in Ghana each year through annual subvention which covers all students enrolling in full time tertiary programs in the polytechnic. However, over the past years, government's support for polytechnic education has increased but the increase does not correspond with the percentage increase in enrolment rates. Respondents were asked about how they intended to finance their education as mature applicants with responsibilities.

From table twenty-nine below ten (10) respondents representing thirty-five point eight percent (35.8%) indicated that they would secure sponsorship through government loan. Two respondents representing seven point one percent (7.1%) of total respondents indicated that they would rely on their employers to provide them with the financial support to enrol in the polytechnic since they were

due for study leave. Sixteen respondents however indicated that they were going to be responsible for financing their education in the polytechnic (most of the people in this category were workers in organizations who had either not attained the minimum number of years needed to qualify for study leave or are individual who work in private organizations).

Table 29: How mature-applicant respondents intend to finance their education

How I intend to finance my education.	Frequency	Percent	Cumulative percent
Government loan	10	35.8	35.8
Study leave	2	7.1	42.9
Self financing	16	57.1	100
Total	28	100	

The first statement which was posed for respondents to comment under education financing was, 'I should be responsible for funding my education in the polytechnic if I gain admission'. Four respondents representing fourteen point three percent (14.3%) strongly agreed to the statement that they should be responsible for funding their education in the polytechnic if they were granted admission to the polytechnic as mature students. Three respondents representing ten point seven percent (10.7%) agreed to the statement that they (students) should be responsible for funding their education in the polytechnic when they gain admission. Two respondents representing seven point one percent (7.1%) were undecided on the statement.

Table 30: Students should be responsible for funding tertiary education.

I should be responsible for financing my education.	Frequency	Percent	Cumulative percent
Strongly agree	4	14.3	14.3
Agree	3	10.7	25
Undecided	2	7.1	32.1
Disagree	8	28.6	60.7
Strongly disagree	11	39.3	100
Total	28	100	

Eight respondents representing twenty-eight point six percent (28.6%) disagreed with the statement that students should be responsible for the funding of education in the polytechnic, according to this group of people; the government should be wholly responsible for financing tertiary education. Eleven respondent representing thirty-nine point three percent (39.3) strongly disagreed to the statement that students should be responsible for the funding of education in the polytechnic, according to this group of respondents; the government should support the funding of tertiary education for all students.

The second statement posed to respondents to comment on was, 'if I gain admission and I am offered students loan, it would help me meet most of the cost involved in tertiary education'. Funding of

tertiary education is heavily supported by government but that only covers tuition fees and other facilities.

Table 31: Students' loan would help me meet the cost of my education.

Students' loan would help me meet the cost of my education.	Frequency	Percent	Cumulative percent
Strongly agree	16	57.1	57.1
Agree	11	39.3	96.4
Invalid entry	1	3.6	100
Total	28	100	

However, most mature students who do not have financial support from their employers depend on government loan to finance their education. From table 31 below, sixteen respondents representing fifty-seven point one percent (57.1%) agreed strongly to the statement that students' loan would help students meet the cost of enrolling in tertiary education in the polytechnic. Eleven respondents representing thirty-nine point three percent (39.3%) agreed to the statement that students' loan was important for students to meet their financial obligation in enrolling at the polytechnic while one respondent representing three point six percent did not answer the question.

The last statement on education financing for tertiary applicants was on government support for needy students. The statement made for respondents to comment on was, 'The government should set up scholarship funds to help needy students to get financial support'. Eighteen respondents representing sixty-four point three percent (64.3%) strongly agreed to the statement that government should set up scholarship funds to help needy students to get financial support. Nine respondents representing thirty-two point one percent of total respondents agreed to the statement that government should set up scholarship funds to help needy students to get financial support while one respondent representing three point six percent was did not comment on the issue.

4.5.6.0 Organization and polytechnic collaboration.
Collaboration between institutions and organizations help in the development and training of employees who work in organizations while the institution also receives money which could be used to develop the institution. This trend is a global phenomenon and many developing countries have begun this initiative. Mature-applicant respondents were asked their opinion on the issue. They were asked how important they thought collaboration between their organization and Cape Coast Polytechnic could help them enrol in the polytechnic. Six respondents representing twenty-one point four percent (21.4%) of total respondents agreed strongly with the statement that collaboration between their organization and Cape Coast Polytechnic could help them effectively enrol in the polytechnic; this is because when employees are fully supported to pursue tertiary programmes, they get the needed motivation to study well. Twelve respondents representing forty-two point nine percent (42.9%) of total respondents agreed with the statement. Five respondents representing seventeen point nine percent (17.9%) of total respondents were undecided on the issue while one respondent each representing three point six (3.6%) of total respondents strongly disagreed and disagreed with the statement respectively. Three respondents representing ten point seven percent (10.7%) of total respondents did not answer the question.

The second question that was posed to respondents was, would you suggest that Cape Coast Polytechnic begin a part-time programme to cater for the education and training needs of workers who can enrol in the polytechnic during the normal lecture period? They were provided with a rating scale in which they selected their answers from. Fifteen respondents representing fifty-three point six percent indicated that they strongly believed that the polytechnic should begin part-time programmes

in tertiary courses. Ten respondents representing thirty-five percent of the total respondents indicated that they agreed with the statement that Cape Coast Polytechnic should begin part-time courses in tertiary programmes in the polytechnic. One respondent representing three point six percent (3.6%) of the total respondents indicated that he disagreed with the suggestion while another respondent strongly disagreed with the suggestion that the polytechnic begin part-time courses in tertiary programmes.

The third question asked was, how important do you think the polytechnic can effectively help improve upon your professional skills? This question was meant to identify the extent to which applicants thought that the polytechnic could help them improve upon their understanding of their job area and profession. Fourteen respondents representing fifty percent of total respondents were of the opinion that the polytechnic could effectively help them improve upon their professional skills. Eleven other respondents representing thirty-nine point three percent (39.3%) of total respondents indicated that the polytechnic could help them improve upon their professional skills. One respondent representing three point six percent (3.6%) disagreed with the statement while two respondents representing seven point one percent of the total respondents did not answer the question.

The respondents were made to indicate their rating of agreement on the statement that; the polytechnic should run top-up programmes for mature applicants who do not meet the minimum admission criteria needed to enrol in the polytechnic. Eight respondents representing twenty-eight point six (28.6%) percent of total respondents agreed strongly to the statement that top-up programmes should be run for mature applicants who do not meet the minimum admission requirements. Fourteen respondents representing fifty percent (50%) indicated that they agreed to the statement that top-up programmes should be run for mature applicants who do not meet the minimum entry criteria while one respondent representing three point six percent (3.6%) disagreed with the statement made. Three respondents representing ten point seven percent (10.7%) of total respondents were undecided on the issue while two respondents representing seven point one percent (7.1%) of total respondents did not comment on the issue.

Applicants were asked about the person who initiated the idea for them to seek further education in the polytechnic. Twenty-four respondents representing eighty-five point seven percent (85.7%) indicated that they took personal decisions to enrol in the polytechnic. One respondent representing three point six percent (3.6%) of the total respondents indicated that his colleague advised him to obtain the forms to pursue a programme in the polytechnic. Three respondents representing ten point seven percent (10.7%) of total respondents did not answer the question.

The last question asked was about what influenced the respondents' decision to choose Cape Coast Polytechnic as the tertiary institution in which they preferred to enroll. Four respondents representing fourteen point three percent (14.3%) indicated that the proximity of the institution from their place of work was their main reason for choosing Cape Coast Polytechnic. Sixteen respondents representing fifty-seven point one percent indicated that the availability of their preferred programme was the main idea behind the selection of Cape Coast Polytechnic as their institution of study while five respondents representing seventeen point nine percent (17.9%) of total respondents indicated that the existence of qualified lecturers and facilities was the main rationale behind the selection Cape Coast Polytechnic as their institution of higher learning.

The interview schedule for management respondents from the Cape Coast Polytechnic and management respondents from some selected organizations in the Cape Coast Municipality detailed the need for a close collaboration between the polytechnic and business organizations in the Polytechnic. The questionnaire for direct and mature applicant respondents also brought out the reasons for increased demand for polytechnic education in Ghana. The economic motives for demand for tertiary education, the socio-cultural demand for tertiary education, and industry-demand driven factors were the main driving force for the increasing demand for tertiary education. The result of the data collected and summarised indicated a close correlation between industry demand and students demand for polytechnic education in Ghana. This correlation however places minimal burden on government support and funding of tertiary education in Ghana.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.0.1 Introduction

The final part of the thesis work details the conclusion and recommendation for management of the Cape Coast Polytechnic based on the data drawn from the field work. This section provides answers to the main research questions, identifies various alternatives available to the polytechnic in increasing students' enrolment rate and also provides detailed guidelines on how effective collaboration between Cape Coast Polytechnic and organizations in the Cape Coast Municipality would help improve tertiary education participation among workers. The sections also provide the main rationale behind the increasing demand for tertiary education among pre-tertiary school leavers and workers in organization all over Ghana.

5.1.0 Government access policies and its effect on students' enrolment in Cape Coast Polytechnic.

How does government restrictive access policies affect mass intake of qualified applicants to the polytechnic?

Government access policies to some extent determine student intake and enrolment in the Cape Coast Polytechnic; this was confirmed by the interview granted to a section of the management of the polytechnic. Available literature was also used in concluding that government access policies had considerable effect on mass tertiary enrolment in the polytechnic. The totality of government access policies and its effect on mass tertiary participation could be summed up under three main themes namely; restrictive admission policies, the use of selection quotas and dimensions to autonomy and governance in polytechnic education.

5.1.1 Restrictive admission policies.

The study identified the existence of government restrictive access policies in the form of general entry criteria which is observed by all tertiary institution in Ghana. Restrictive access policies define the numbers, type of programmes and financial resources made available to the polytechnic by the state. This criterion is greatly influenced by government control over the body responsible for the accreditation of both public and private tertiary institutions of which polytechnics are included. The body also identifies the availability of facilities, lecturers and requisite standard programmes in the polytechnic and ensures that all the rules that govern tertiary education are adhered to. Although the government of Ghana does not directly control participation rate in tertiary institutions, her influence in the number of students enrolled in most polytechnics in Ghana could be referred to as an indirect application of numerus clausus in tertiary participation. The numerus clausus is described as a procedure that restricts the number of entrants into higher education where limited capacity of the system does not allow further growth or where there is excess supply of graduates on the labour markets. Minimal government subvention to institutions each year could also be identified as an indirect government involvement in determining the number of students who could be enrolled in the polytechnic within a given academic year. Respondents to interview the schedule from Cape Coast Polytechnic indicated that the institution works within the broad policy framework which is directed by the National Accreditation Board and the National Council for Tertiary Education in Ghana. They identified the resources provided by the government in the provision of quality education to students and the annual government subvention as the major determining factors in the enrolment of students in the polytechnic. Thus, government restrictive admission policies greatly hinder mass tertiary participation in the Cape Coast Polytechnic. Although the government restrictive access policies limit participation rates among applicants to the polytechnic, government has a responsibility to control the number of graduates in the country and also to provide the needed skilled manpower in the country. Secondly, government uses the restrictive access policies to control the quality of students who pass out from the polytechnic each year.

5.1.2 Selection quotas in Cape Coast Polytechnic.

In what ways do institutional policy on selection and quotas limit the entry of qualified applicants to the polytechnic?

Selection quotas are used by Cape Coast Polytechnic to determine the number of students who are admitted to the institution each year after considering existing facilities, laboratories, lecturers, lecture halls, and the financial resources available. The competitive nature of the admission process in Ghana is a major factor for the establishment of the quota system which is designed to give specific maximum class size for each programme. Thus, competition for students and the availability of resources determine the polytechnic's quota for each programme. However, the Cape Coast Polytechnic sets out students selection quota to meet the resources available to the institution each year, most of the quota set by the polytechnic are influenced by the amount of government subvention received for the year. Quota for each programme in the polytechnic is usually agreed upon by the Academic Board of the institution in consultation with the various heads of department. Their agreement on the class size for the various programmes is usually influenced by the National Board for Professional and Technician Examinations' directives on student-lecturer ratio after considering the resources available to the polytechnic. The quota system thus allows the polytechnic to plan students enrolment which is aimed at providing quality education for students who are trained to help develop the economy of Ghana. The Cape Coast Polytechnic uses the quota system in its selection processes and most of the programmes do not meet the quota, however the department of accountancy has challenges in limiting its intake to the quota. Although the government white paper on the report of the education review committee of 2004 indicates that, "government would continue to equip the polytechnics to make them offer tertiary education in their own rights to emphasis skills that are needed to run and build the nation", very little has been done to increase the participation rate among prospective students to the polytechnic. The quota for each programme is usually revised to meet the existing facilities and resources available to the institution, thus an increase in students enrolment without due consideration to the facilities and resources available to the institution would result in the provision of poor quality of education in the polytechnic. The strength of economy depends on its work force and the training of more middle-level manpower would eventually help in the socio-economic development of Ghana.

5.1.3 Autonomy and governance in Cape Coast Polytechnic.

Cape Coast Polytechnic as a public sector educational institution is under obligation to conform to laws, decrees, governmental circulars and statutes which touch upon their internal academic organizations. The relationship between the state and the polytechnic influence the conduct of the institution and it is the relationship that shapes the direction of the polytechnic. The controlling trend of the institution could be described as a relationship between the state (Ghana) and the Cape Coast Polytechnic which involves dominance of the former over the latter on the provision of quality education. It has been established that standardization of knowledge and skills, and demands by regulation and diplomas on a national basis has not only furthered economic progress and division of labour in a stage of economic growth but has also consolidated the authority of the state within each national society. The existence of the concept of autonomy and governance in polytechnic education stems from the fact that institutions need the freedom to operate within an environment of competition and growing challenges. When institutions are allowed to design and implement their own programmes, it does not only motivate the actors involved but more importantly provides innovation needed in the development of education in Ghana.

Autonomy at the institutional level in Ghana could be seen in three ways namely; the level of decision making, the points of reference for steering and finally policy instruments. The level of decision making in polytechnic education in Ghana in relation to student selectivity could be seen in the degree of centralization and decentralization where relationship between the state and the polytechnic is intertwined. Government has direct control over admission criteria and very little is reserved for the institution to use when there is a conflicting interpretation of the admission criteria. This factor is buttressed by the government access policies and regulations as contained in the government white paper passed in 1991 which states that "the Ministry of Education shall work out criteria for the provision of admissions and scholarships on the basis of government priorities in consultation with the

National Development Planning Commission". Secondly, the point of reference for steering involves the inputs, throughputs and outputs of the educational system in Ghana. In relation to students participation rates in polytechnic education the input describes the quality and quantity of resources provided for activities which could be described as the financial resources in the provision of facilities and human resources needed in the educational system. When government increases the facilities and provides the needed incentives for lecturers, it would help increase the number of enrolment in the Cape Coast Polytechnic. The throughput could be described as the process and organization involved in achieving the goals of tertiary education at the institutional level where the polytechnic implements its policies based on their unique environment. Output which is the last aspect under the steering system describes the achievement on labour market after a period of extensive studies that was aimed at providing quality education needed for the job market. Last among the policy systems is policy instrument which identifies enforcement, money and persuasion that is usually aimed at making educational institutions follow the general rules which govern polytechnic education. The level of educational autonomy in polytechnic education is very minimal as compared to the universities in Ghana and this greatly affects the operation of the polytechnic as tertiary institutions and further hinders mass participation in the education of prospective students.

Students' selectivity rates and enrolment at the institutional level is greatly dependent on government access policies which also influences government support for the polytechnic education. Thus if the polytechnic does not adhere to the directives of the National Accreditation Board (NAB) as regards student-lecturer ratio, it could receive sanctions from the regulating body. Although the Ghana Education Trust Fund supports the Cape Coast Polytechnic in the provision of facilities and the building of lecture theatres, there is still more to be done to help the institution increase the existing facilities to accommodate the number of students who enrol in the institution. The level of autonomy in the polytechnic could be described as a continuum with different scale of autonomy at the various sectors of the administration. Administrative autonomy or autonomy grounded in institutional self-coordination which is the pivot of an institutional independence cannot be completely seen in polytechnic education in Ghana because of the dominant role government plays in ensuring a common standard of performance. Thus, Cape Coast Polytechnic does not wield the complete power to set complementary detailed procedure for institutional administration, budgetary control personnel policy and student selectivity process in the institution.

5.2.0 Market model and part-time education in Cape Coast Polytechnic.
How effectively can the polytechnic increase student enrolment by the use of market model under institutional governance?
The goal of the market model in tertiary institutions is to increase tertiary participation rate among all categories of students who apply for tertiary education in Ghana, and also satisfy the various stakeholders in tertiary education. The crux of introducing this model to the research work was to identify the alternative ways open to Cape Coast Polytechnic in increasing tertiary participation rates among workers or employees of various organizations in the Cape Coast Municipality and throughout Ghana. One of the goals of the market model in tertiary education in Ghana is also to widen the students' participation and achievement among socio-economic and community groups hither-to under represented in the country. The study brought to light the various approaches adopted by the polytechnic to increase students' enrolment rates and to provide quality education to applicants. These approaches are market-driven orientations which allow applicants to the polytechnic to pay their tuition and other facility-user fees. The institution in addition to this also plans to bring in private organizations in the country to build and operate hostels which would accommodate many students on campus. The Pre-Higher National Diploma programme was one of the successes of the polytechnic and the institution plans to increase participation rates in areas where enrolment rates are very small. Last among the strategies to be adopted by the polytechnic in increasing students' enrolment rates is the involvement of organizations in the Cape Coast Municipality to train staff of these organizations.

5.2.1 Pre-Higher National Diploma Programmes.
The study highlighted the major success of Cape Coast Polytechnic as including the setting up of the pre-Higher National Diploma programme, the institution was the first among the polytechnics in

Ghana to adopt the programme which was aimed at giving opportunity to applicants with aggregates beyond the level required to enrol in tertiary institutions as contained in the National Accreditation Board directives. The polytechnic however derived the authority to set up the programme from the institution's statutes and the decision was taken by the Academic Board of the polytechnic. The programme has been very successful as many students from the technical institutions with defects in their total aggregates have been given the opportunity to enrol in the pre-Higher National Diploma programme and proceed to take the Higher National Diploma programme. The major challenges faced by the polytechnic in the running of the pre-Higher National Diploma programme include lack of lecture rooms to hold lectures, unavailability of on-campus hostel facilities, inadequate lectures to handle most of the courses as lecturers are over-scheduled. Although these challenges continue to weigh on the institution, the polytechnic has been able to provide quality education to two-hundred and fifty students who have joined the mainstream Higher National Diploma programmes for the 2005/2006 academic year. Since the accountancy programme has more students than what the quota caters for, the polytechnic does not run the Pre-Higher National Diploma programme in accountancy.

5.2.2. Collaboration between Cape Coast Polytechnic and organizations in the Municipality.
The study dealt extensively on the possibility of a close collaboration between the various organizations in the Cape Coast Municipality and the Cape Coast Polytechnic to provide training to employees of the various organizations. This aspect of the market model has two advantages to the polytechnic; firstly, it serves to increase tertiary participation rates in the polytechnic and secondly it would bring revenue to the polytechnic and the money generated could be used to provide more facilities, motivate lecturers and staff, and put up more lecture rooms for the polytechnic. Most of the organizations were prepared to enter into agreement with the polytechnic to train their staff members and also get refresher courses in their specialised fields, most of the areas indicated were, training in Information Technology and communication, road construction, soil mechanics, laboratory training, and managerial training for middle-level managers of the organization. Some organizations however indicated that many of their employees had been unsuccessful in securing admission to the polytechnic for further studies, according to them, any collaboration would eventually help these employees obtain tertiary education which is needed in their job. The organizations were of the opinion that the training programmes when organised could lead to improved performance on the job and eventually increase productivity in the organizations. The major challenges to the establishment of such close collaboration include funding of the programmes and the scheduling of these programmes to achieve the desired impact and the availability of lecturers in the specialised field of training. Most of the organizations had no policy on issues related to the taking up of part-time programmes by their employees in tertiary institutions, according to most of the respondents, the important aspect of part-time education was that employees were not allowed to use working hours to enrol in tertiary institutions. Although these challenges exist, there could be a way forward to get the programme started in the coming academic year (2006/2007) to ensure that tertiary participation gets to all individuals who are ready to receive training to enhance their performance on the job.

5.3.1.0 Demand for tertiary education
What are the general demands for polytechnic education?
Demand for tertiary education is seen as very important for the development of every country and the training of the productive workforce who are involved in the provision of the basic needs of society and services needed to run the economy. The study identified the various reasons for the increased demand for tertiary education in Ghana with emphasis on Cape Coast Polytechnic. Two groups of respondents were identified for the study and these groups comprised of direct and mature applicant-respondents to the polytechnic. The issues identified were demographic information on applicants, information on application for admission, and information on demand for tertiary education. The information on demand for tertiary education was divided into three parts namely, economic motives for the demand for tertiary education, socio-political demand for tertiary education, and education financing.

5.3.1 Demographic information on direct and mature applicants.
Demographic information on direct-applicant respondents covered their ages, geographical location, and sex of respondents. The dominant age group among direct applicants to the Cape Coast Polytechnic were those between ages eighteen (18) and twenty-three (23), the average age was thus 20.5 years which confirmed the information provided earlier in the literature on the average age of direct applicants to tertiary institutions in Ghana. The age group also represent the average age of secondary school leavers who pass out of secondary schools and apply to tertiary institutions in Ghana, this however is very positive for the development of Ghana where the young generation aspire to obtain tertiary diploma programmes to enable them secure employment and contribute to the development of Ghana. On the sex distribution of direct-applicant respondents, male respondents were the highest group with fifty-two percent (52%). Female direct-applicant respondents were forty-eight percent (48%), an indication that the African society is still faced with the challenges involved in educating the reproductive sex group. Although the figures for female respondents are very encouraging, more needs to be done to educate females to attain tertiary education status. Polytechnic education in Ghana was set up to give tertiary education a regional outlook where individuals from the various regions could secure admission to enrol in various courses in the polytechnic. The study however showed that the regionalization of polytechnic education had been very successful as most inhabitants of the region have taken advantage of the polytechnic to secure tertiary education. Direct-applicant respondents from the central region represented sixty-five percent (65%) of the total respondents' rate; this was an indication of the successful approach of making prospective students in all the regions in Ghana get the needed tertiary education to develop the region and the economy of Ghana.

Demographic information on mature applicants showed that male participation among workers who apply for admission to the polytechnic exceeded the female applicants from the same background. Several factors could be given for the sharp difference. Firstly, most mature applicants are individuals who seek further education to support their families and home, the African cultural system places responsibility on the male to provide for the upkeep of the family. This reason however serves as major challenge for males to acquire knowledge and gain enough income to support their families and homes. Female mature-applicants on the other hand seek tertiary education to support their families and also get the needed recognition in society, most female groups or association seek the services of their highly educated colleagues to steer the affairs of the group and this serves as enough motivation for them to seek further education. Some mature females also decide to enrol in tertiary education to get themselves in responsible positions and acquire the necessary knowledge and skills to work with. The age distribution also showed that the average age of mature applicants was thirty-three years, which is an indication that the concept of life-long learning is seen in polytechnic education in Ghana and since education has no limit the polytechnic had to support the enrolment of mature applicant in getting the needed education to provide them with the needed knowledge. On the geographical distribution of mature applicants, the study showed that most applicants were from the Central Region although some few respondents came from the Western and Greater-Accra Regions. The result was an indication that the regionalization of polytechnic education in Ghana was getting the desired result as 'local people' could develop their knowledge and acquire new skills within their region, and with easy access to the institution. The result from the study also showed that most mature applicants where employees of several organizations within the Cape Coast Municipality.

5.3.2 Economic motives for demand for tertiary education.
Economic motives for the demand for tertiary education have been identified as one of the main driving force behind the increased enrolment figures in tertiary education in Ghana. The study showed that most applicant to the polytechnic identified tertiary education as a pathway to securing a career that could help them provide for their family. According to the human capital approach in the economics of education, tertiary education could be seen as a form of economic investment of current time and money for future pay, (Veld et al, 1996). Most respondents indicated that tertiary education was a form of economic investment thus their answer corroborated the theoretical view point that tertiary education was a form of economic investment. Impliedly this response means that the increased demand for tertiary education and its resultant effect in increased enrolment figures in Cape

Coast Polytechnic is an indication that most applicants seeking admission to the polytechnic identify the economic investment aspect of their education as important and key reason for seeking admission. Most of the respondents stated that polytechnic education would lead to increased productivity, their stance stems from the human capital theory that states that higher education increases the productive characteristics of the workforce that may enhance national output, economic development and growth. This however shows that demand for the tertiary education is characterised by the need for increased productivity which also comes with financial reward to the worker and satisfaction derived from the work process. Most respondents indicated that their major aim for seeking admission to the Cape Coast Polytechnic was to gain knowledge in their chosen field and earn good salary that could enhance their survival and well being. Another factor identified as very important for the economic motives for the demand for tertiary education is the job that graduates would have upon completion of their programme. Most of the direct respondents indicated that tertiary education could lead to a better paid job.

Most of the mature applicants were of the view that tertiary education was a form of economic investment because of the benefits they would get if they enrol in tertiary education. Some of these benefits include; increased responsibility, increased salary and improved living conditions. The most fascinating result under the economic motive for demand for education category was the overwhelming concurrence on the issue that obtaining tertiary education would lead to increased productivity. This result further showed that securing tertiary education does not only have benefit for the applicant but more importantly for the organization and the country as a whole. Majority of respondents stated that tertiary education came along with increased salaries and responsibilities and could also lead to improved living conditions.

5.3.3 Socio-political demand for tertiary education.

Socio-political demand for tertiary education involves the status achieved by individuals who enrol in tertiary education. On a national level, socio-political demand for tertiary education identifies equal opportunity for education for all citizens in a country regardless of social class, age or ethnicity. Most individuals seek tertiary education to enhance their social status in the society and in the African society, status could be achieved through education. Career aspiration is linked to the social status of individuals and most applicants to the polytechnic select programmes which they often identify as very important for their future career and status. However most direct-applicant respondents to the questionnaire indicated that tertiary education would help enhance their social status upon completion of the programme; this is very factual in the African context where tertiary enrolment rate is very small. Polytechnic education in Ghana is gaining grounds in the area of professional training for middle-level manpower in Ghana and most applicants to the polytechnic identify their social status as an important aspect of acquiring tertiary education.

Social status in the African context is often viewed from two ways; achieved status and acquired status. Tertiary education and the social status that comes along with it could be viewed from the achieved status approach which involves the achievement of individuals within their society and how their achievement projects their personal image to others. Most mature applicants were of the opinion that tertiary education was an important aspect of their social status since it would provide them with the recognition accorded to the highly educated in the society.

5.3.4 Education financing

Education financing is seen as one of the main pillars of tertiary education system in Ghana and all over the world. Although the government of Ghana supports the educational system by annual subvention to the various tertiary institutions, it does not cover the entire cost involved in training the human manpower needs of Ghana. Most students receive financial support through government loan, parental support and organizational support in the case of employees of organizations. The traditional ways of running tertiary education systems are becoming less relevant and there is the need for diversity in education financing to enable more students gain access to tertiary institutions, (World Bank, 2000). The study showed that most direct applicants relied on parental support for funding their education in the polytechnic, the implication of this result is that financial burden in the provision of

tertiary education to the applicants would be on parents and eventually would rest on the income level of the families. Thus, in families where income levels are low, the financial support to the prospective students would be very minimal and would certainly create a difficult learning environment for the students. Although about forty (40%) of respondents indicated that they would rely on government loan to help finance their education, the loans could not cover a chunk of the cost of enrolling in tertiary education.

One very startling revelation from study was on the issue of students financing of education where most respondents indicated that students should be responsible for financing their education and not the government. The reasons could stem from the fact that cost-sharing in tertiary education has really caught up with most Ghanaians as government continue to shift the cost burden of education from her outfit to students. Thus students have been given the message clearly that government cannot fully support the funding of tertiary education in Ghana and this shows the extent to which students are aware of the trend in educational financing. Government access policies in tertiary education would be successful if there are favourable alternatives to ensure that the concept of equity in the sharing of state resources is carried out in a more supporting way which would help the less privileged to get the needed funds to support their education. The study also showed that most prospective students were prepared to be responsible for financing their education although the government would benefit from the services of these students upon completion of programme. Most prospective students indicated that they would not rely on total government support for their education since the government could not fully support the funding of tertiary education in the country. The students' loan concept in Ghana has supported many students in gaining the needed education and the study showed that most students would look forward to the students' loan to support them if they gained admission to the polytechnic. Government support for tertiary education has gone through several reforms which were all aimed at giving the best support for students, although the present system of cost sharing does not help needy students, the government is still seeking ways to improve the system to support them. There is therefore the need for the involvement of private sector organizations to assist needy student finance their education.

Most mature applicant indicated that they would finance their education if they gained admission to the polytechnic; others also indicated that they would secure students' loan to help support their education if they gained admission. Very few respondents stated that they would receive funding support from their organization. Majority of mature applicants were of the view that government should be responsible for the full funding of tertiary education in polytechnics in Ghana; this result is however in contrast with the opinion of majority of direct applicants who indicated that government could not be completely responsible for funding tertiary education in Ghana. Several factors could be given for this result; firstly, most mature applicant infer from what pertained in the past as government fully funded cost of tertiary education. Secondly, most mature applicants as tax payers believe that the government would benefit from their services in the end and thus need to fully fund tertiary education. A greater percentage of mature applicants indicated their readiness to apply for students' loan if they are granted admission in the polytechnic; this result however showed that most applicants to the polytechnic expect the students' loan to support them through their study programme in school. Most mature applicants were of the opinion that government should support needy students' to secure tertiary education. To them the needy in society should be supported by the government since they do not have the money to enrol in the polytechnic.

5.3.5 Organizations and polytechnic collaboration.
The mature-applicant respondents were of the opinion that a close collaboration between industries and the polytechnic could help them in securing the needed funding to enrol in tertiary programmes offered by the polytechnic. Most of them indicated that the polytechnic should run bridging courses to enable applicants who fell outside the minimum entry criteria to gain admission to the polytechnic; this suggestion however shows that the Cape Coast Polytechnic could provide tertiary education to prospective mature applicants. There was also the suggestion that the polytechnic begin a part-time programme which would allow workers who could not enrol in full time programmes because of their work schedule enter the part-time stream.

5.3.6 General factors influencing demand for polytechnic education.
The study revealed that the conceptual model of Kaiser & De Weert (1994) used shows the determinants for demand for tertiary education all over the world. From the interaction with some management members of the Cape Coast Polytechnic and some organizations in the Cape Coast Municipality, the issue of demand driven factor for the services of graduates from polytechnics was a major determinant of demand for polytechnic education in Ghana. This was evidenced by the increasing numbers of applicants to the business programmes (especially in the HND accountancy programme) in the Cape Coast Polytechnic. A modified model detailing factors that influence demand for polytechnic education in Ghana is shown in the figure below.

Figure 4: modified model for factors determining the demand for higher education.
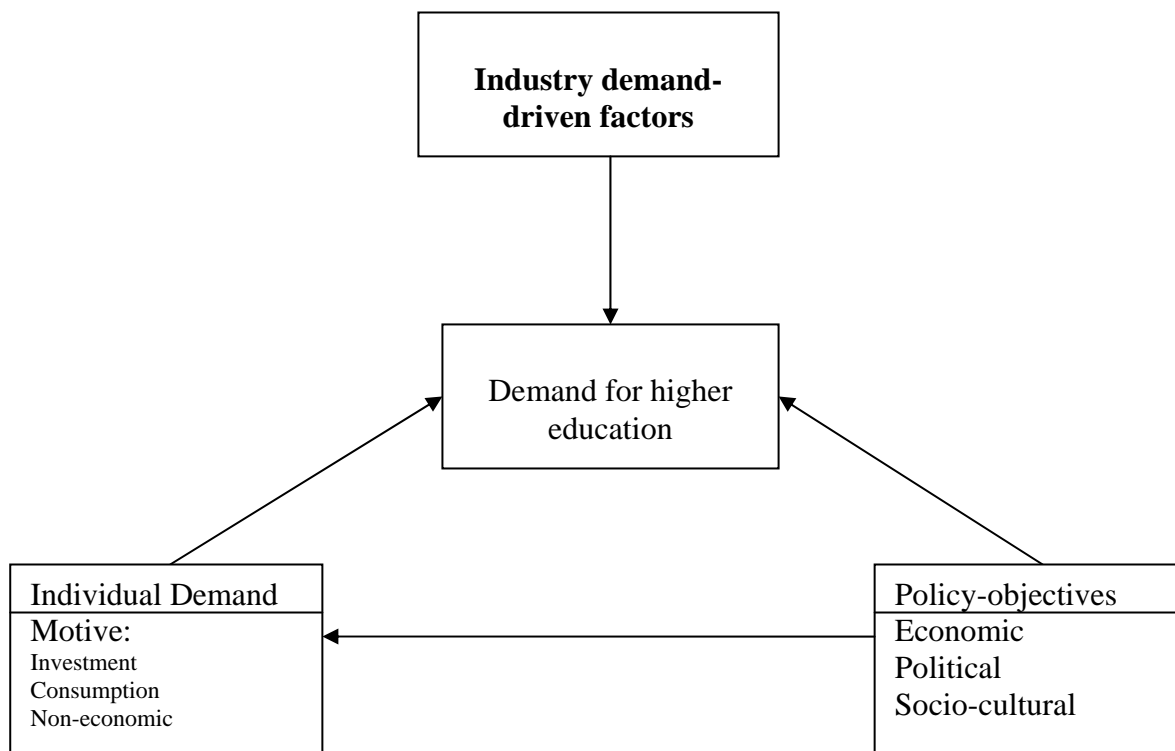
Source: Modified from Goedegebuure et.al, comparative policy studies in higher education

The result from the modified model above shows that although demographic factors are important in polytechnic education in Ghana, it is not an over-riding factor in determining demand for polytechnic education. Participation rates in the Polytechnic cover both pre-tertiary school leavers and workers from industry in the Cape Coast Municipality, however, demographic factors such as age, geographical location and sex of respondents does not greatly influence demand for polytechnic education in Ghana as the other factors in the model do. The demand-driven factor is very important and most business organizations require the services of graduates from specific programmes based on the needs of the organization, applicants to polytechnic education follow the trend of industry labour needs to choose programmes. The industry-demand driven factor is characterised by changing patterns of employment and careers and rising incomes and wealth which most polytechnic graduates aspire to achieve in their professional career. This factor is seen as one of the most prevailing issues in the increasing demand for polytechnic education in Ghana. The term demand is usually used in economics to indicate the relationship between the quantity of a good or service that is purchased at a given period of time, the price of that good or service and the preferences of potential buyers. Thus, because of the growth and diversity of tertiary education worldwide, demand for polytechnic education has been greatly influenced by industry-demands for polytechnic graduates.

5.4.0 Recommendation
The recommendation details the options open to the Cape Coast Polytechnic and the various regulating bodies responsible for running polytechnic education in Ghana. These recommendations are designed to meet the current global trends in education which ensure equal access to all citizens and create an excellent environment for all stakeholders.

5.4.1 Strengthening of regulating bodies/oversight committees in Ghana
The concept of government access policies and tertiary education in Ghana is very vital to the development of the country, however, if government makes the necessary provision to increase participation rates among secondary and technical school leavers and workers in organizations who wish to enrol in these tertiary institutions it help develop the country. Firstly, the various government agencies such as the National Accreditation Board (NAB), the National Board for Professional and Technical Examinations (NABPTEX), and the National Commission for Tertiary Education (NCTE) in Ghana should be well resourced and equipped to provide the needed support to the Polytechnics in Ghana by giving them the needed technical knowledge in meeting the increasing demand for tertiary education in Ghana. There is the need to research into possible areas of collaboration between polytechnics and other stakeholders such as professional bodies, parents, management of the various polytechnics, and organizations who have interest in supporting polytechnic education. Such support would allow flexibility in the mode of operation of most of these government organizations to adopt some practices in some countries where government give freedom to schools but regulates the activities of the institutions. The polytechnics in Ghana should be allowed to run bridging programmes for mature applicants who do not have the secondary school Certificates to enable them get the needed tertiary education. The highly bureaucratic public management system in Ghana continues to dominate the running of polytechnics in Ghana, this process does not allow institutions to run effective or bring in innovations which could help support the development of the institutions.

5.4.2 Granting more autonomy to polytechnics in Ghana.
A major problem in polytechnic education in Ghana is the minimal level of autonomy given to institutions to operate within. The dimensions of government regulation of the activities of polytechnics in Ghana would have to be completely overhauled to enable polytechnic provide education to the citizens of Ghana in its own unique way as indicated in the government white paper report of the education review committee of 2004. The report recommended among other things that, " government would continue to equip the polytechnics to make them offer tertiary education in their own right to emphasis practical skills that are needed to run the economy and build a nation". The current system of government regulation of polytechnic education in Ghana is of prescriptive control where institutions always seek government direction in every activity it carries out; this is further burdened by the bureaucracies that come with it. Although polytechnics in Ghana do not have their own diplomas provided to students upon completion of programmes, the influence of the various regulating bodies does not allow the polytechnic to operate as a tertiary institution which should enjoy certain freedom to make it competitive and innovative. The government white paper report of the education review committee of 2004 has not been implemented since the polytechnics in Ghana still lack the needed facilities and expertise to provide education to most of its applicants seeking knowledge to help develop Ghana.

Cape Coast Polytechnic is not allowed by law to set up its own admission criteria since it does not have complete control over its operation, the various regulating bodies prescribes the admission criteria and the modalities for entry into tertiary programmes in the polytechnic. The admission criteria are provided for by the National Accreditation Board (NAB) while the National Board for Professional and Technician Examination (NABPTEX) moderates the examinations conducted by the polytechnics. The very complex nature of these processes does not provide the pathway for innovation since the regulating bodies do not carry out research to seek new ideas needed to develop polytechnic education in Ghana. Polytechnic institutions should be given more autonomy in the area of students selectivity to train more students needed in the development of Ghana. Although public sector institutions in Ghana are under obligation to conform to the laws, decrees, governmental circulars and statutes which touch upon their internal organizations, the granting of some form of freedom in some areas such as flexible

admission policies could help the polytechnic carry out it main objective of training middle level manpower managers needed for the development of Ghana. There should also be several options from which institutions could choose from when embarking on programmes in the polytechnic; an example could be in the provision of different entry criteria domains from which polytechnics could select the most suitable one based on the needs of the institutions and their target clients who are students. This process calls for increased administrative autonomy which thrives on institutional self-coordination and gives institutions the power to set complimentary detailed procedures for institutional administration, budgetary control, internal access policies and personnel policy.

5.4.3 Creation of a market model approach in managing Cape Coast Polytechnic

The market model approach in polytechnic education could be seen as very important for the development of a self sustaining system of education which could help the polytechnics meet its obligations in providing quality education for all students in the institution. Since the goal of the market model in polytechnic education in Ghana is to widen students participation and achievement among socio-economic and community groups hither-to, under represented in the society, the implementation of this model would help the polytechnic meet its objectives of training the needed manpower requirements of the country without necessarily depending on government support. Cape Coast Polytechnic should liaise with the private organizations in the Cape Coast Municipality to provide training programmes for these institutions at a fee and also train the staff members of the organizations without tertiary education in the Higher National Diploma Programme. Although the polytechnic has begun some contact with some organizations in the Cape Coast Municipality, there is the need for the setting up of a research group to identify more areas of possible collaboration in which the services of the polytechnic could be effectively used by the organizations at a fee that could help augment the internally generated funds from the polytechnic. Revenue from such collaboration could be used in building more classroom facilities, training more lecturers in specialised areas to help train staff from organizations, and build more laboratories. The benefits of such collaboration would include training people to properly fit in their jobs, training people to meet the demands of industry and commerce and finally cut down on unemployment and retrenchment.

The facilities at the polytechnic would have to be upgraded to meet the needs of industry who would like to train their staff members in the Cape Coast Polytechnic, this would call for increased spending on facilities in the school and the employment of more lecturers either part-time or full-time to augment the existing staff strength to provide the needed training to staff of the various organizations. The collaboration would also call for the setting up of a special unit made up of heads of departments in the polytechnic to see to the smooth implementation of the various activities to develop the knowledge of the employees from organizations within the Cape Coast Municipality. An important finding from the research was the readiness of most of the organizations to enter into agreement with Cape Coast Polytechnic to help them in the training of staff of their organizations to help them develop their skills.

An often neglected policy is to allow individual institutions the autonomy to develop new ways of raising revenue. Offering executive training programmes, marketing the expertise of departments, and providing other services such as carrying out laboratory tests and renting facilities can provide income to the institution, (World Bank, 2000). The setting up of part-time Higher National Diploma programmes in the Cape Coast Polytechnic would help most workers in the municipality who wish to get tertiary education enrol at the polytechnic after their working hours. The part-time programmes would also help the polytechnic receive more money for the development of the institutions' facilities, training of teaching staff and the provision of more equipment needed to facilitate easy learning in the school. The success story of the Pre-HND programme in the Cape Coast Polytechnic could serve as the main driving force in the establishment of part-time programmes in the polytechnic.

5.4.4 Increasing government funding and support for tertiary education

Government assistance to polytechnics in Ghana over the past five years has risen steadily but the rise in the flow of fund does not meet the increasing students' enrolment in the polytechnic. The support of government of Ghana through the Ghana Education Trust Fund has helped increased the available

facilities in the various polytechnics in the country but this has not helped much since there is more to be done. Government would have to involve more corporate organizations in the provision of students' accommodation, lecture halls and sports facilities on the campuses of the various polytechnics. Secondly, there should be more training programmes for staff of the polytechnics in Ghana to help them provide excellent services to students and the country .The training programmes could also help improve the teaching and learning processes in the polytechnics. The improvement of working conditions of the staff of polytechnics should be a major priority of government in ensuring that students get the needed education to help the country in her development. The working conditions of the staff of polytechnics would have to be improved upon to ensure that the students get the needed studying environment to study and develop their career aspirations.

There should be increased students' financial support from government to enable more students enrol in the polytechnics, the increase in students' loan would also help more students get the various materials they would need for their studies. Long term and concessionary loans for tertiary education can help governments invest in tertiary education in a more sustained and consistent fashion, (World Bank, 2000). Needy students should also be provided with support from government and the polytechnic through its internally generated funds. The government should plan the manpower needs of the country by taking into consideration the courses offered by the polytechnics and such planning should involve committing money to the various programmes of study in the polytechnic in order to cover the expenses incurred by students in taking the programmes. Programmes that are not needed by the country should be phased out of the system to avoid joblessness on the part of graduates upon completion of their programmes while more money should be spent on programmes that would help meet the labour market demands of the country.

5.4.5 Development of internal structures to increase students' enrolment rates in Cape Coast Polytechnic.
Although the government has lots of responsibilities towards the provision of quality education in Ghana, much of these developments also rest on the internal structures of the polytechnic which supports excellent learning environment. The Cape Coast Polytechnic should engage the services of private housing agencies to build more hostels in the polytechnic for students to get accommodation to live in comfortably, the provision of such facilities would help more students from other parts of the country who are faced with accommodation problems get a better place of abode. The outlets for the sale of forms should be extended to other regions in the country especially in Accra and Kumasi to enable students purchase and process their forms without necessarily travelling to Cape Coast. The polytechnic should engage the services of more part-time lecturers to augment the existing staff strength needed to run both the full-time and part-time programmes. More lecturers should be supported to take up programmes in other universities to enrich their knowledge and expertise in the field. The polytechnic should embark on improved staff development strategies that would help in the provision of quality education to students who enrol in the Cape Coast Polytechnic.

5.4.6 Data for decision making in Cape Coast Polytechnic.
The Cape Coast Polytechnic should develop an efficient database which would be used for decision making in the institution. A good database is very important for institutional systems of monitoring and accountability which would help shape the present and future policies on students' enrolment and issues concerning students' selectivity. A database would also ensure that increased collaboration between industry and the polytechnic are adequately monitored to achieve the aim of the institution in providing quality middle level manpower needed to develop Ghana. The data base would also serve as a reference for decision making on mature applicants to the polytechnic which would also aim at increasing tertiary education participation rates among workers from the various organizations in the Central Region and other parts of Ghana. An effective use of database system would ensure that quality educational standards are met and information technology would facilitate most of the data collection procedure and also cater for analysis of students' application for admission to the polytechnic. Thus, when an effective database system is put in place, it would improve decision making on students participation rate and enrolment, it would also ensure that such decisions are based on evidence which are made in a way that is clear and understandable to all stake holders.

5.4.7 Recommendation for further research.

The development of a market model approach thrives on an effective organizational communication system which ensures a close coordination of the various departments within Cape Coast Polytechnic. An effective organizational communication in Cape Coast Polytechnic would help bring innovation in the institution aimed at increasing students' enrolment. A well coordinated internal structure in the polytechnic would draw ideas from the various departments into a pool which would enhance the flow of communication and interaction in the polytechnic to help develop an effective process in increasing students' enrolment. A research into the development of an effective organizational communication system in Cape Coast Polytechnic would draw up the channel through which effective coordination of the various programmes between the polytechnic and other stakeholders outside the polytechnic could be achieved. Organizational Communication would also ensure that an effective market model practices aimed at providing quality education to the increasing number of students are successfully implemented. The concept of organizational communication involves a well structured means of interaction which allows for the flow of information from all departments in the polytechnic and the receiving of similar information from other stakeholders outside the institution which would help bring innovation aimed at increasing tertiary participation rates in the Cape Coast Polytechnic.

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Appendix

This section contains sets of data collection instruments used for the research work. They are made up of two interview schedule for management of Cape Coast Polytechnic and management of some business organizations in Cape Coast Municipality. The questionnaires were completed by direct and mature applicants to the Cape Coast Polytechnic for the 2006/2007 academic year.

Appendix
Appendix A: Interview schedule for management of the cape coast polytechnic
Appendix B: Interview schedule for management of business organizations
Appendix C: Questionnaire for direct applicants
Appendix D: Questionnaire for mature applicants

As a component of my master of educational science and technology thesis, I am undertaking a study to identify the effect of government access policy on increased students' enrolment in the Cape Coast Polytechnic. The research aims to identify factors that influence students' enrolment rate in the polytechnic and ways of increasing the enrolment rates. It would investigate the various alternatives open to the polytechnic in increasing students' intake.

In acknowledging that this questionnaire requests you to divulge certain information that may be considered sensitive to you or to your office, I would like to assure you that your response to the questions would be kept very confidential. No personal identifiers would be included or disclosed as part of the completed research. The questionnaire would take about 10 minutes to complete and I would be grateful if you could go through the various questions and answer them accordingly.

INTERVIEW SCHEDULE FOR MANAGEMENT OF THE CAPE COAST POLYTECHNIC

Name   :

Position   :

Department   :

The first section of the interview cover the effect of government access policies on mass student enrolment in the polytechnic. The aspect of government access policies that was delved into was mainly on the issue of government restrictive access policies on tertiary education.

1. Do restrictive government access policies have any effect on tertiary enrolment in the Cape Coast Polytechnic.
2. If yes, how do these restrictive access policies influence student selectivity rates in the Cape Coast Polytechnic?
3. Do the criteria set out by the National accreditation Board influence students' selectivity rates in the Polytechnic?
4. What are the problems faced by the polytechnic in increasing enrolment rates.
5. What steps has the polytechnic taken in increasing students' enrolment rates in the face of these challenges.
6. Are the various courses offered by the polytechnic competitive?
7. In your opinion why are they competitive?

The second part of the interview covers the issue of student selectivity and selection quotas by the polytechnic. It sought to identify factors that cause limitation of students' entry into the polytechnic and the rationale for setting up selection procedures and selection quotas. The issue of structural reform, school autonomy and influence by the National Accreditation Board on student selectivity criteria was also posed to the respondents.

8. What are the rationales for setting up selection quotas in the process of student selectivity?
9. Does the polytechnic meet these quotas in during students' selectivity process?
10. If yes why and if no why.
11. The government white paper on the report of the education review committee of 2004 indicated that government would continue to equip the polytechnics to make them offer tertiary education in their own right to emphasis practical skills that are needed to run the economy and build a nation". Does this policy in anyway influence students' selectivity in the polytechnic?

12. Would you consider student selectivity at the institutional level as dependent on government access policies as regards selection quotas and numerus clauses?

13. The concept of institutional autonomy in tertiary institutions implies that tertiary institutions enjoy freedom from government regulation in respect of the internal organization of the institution, its governance, internal distribution of financial resources among others. To what extent is the polytechnic empowered to set its own admission criteria to meet the needs of the increasing rates of applicants?

14. What are the major hindrances to increased students enrolment in the Cape Coast polytechnic?

15. Does the polytechnic have enough autonomy to carry admissions outside the general criteria specified by the National Accreditation Board?

16. What options has the polytechnic got in increasing students enrolment without relying solely on government funding?

Competition between institutions for money, reputation and status places a further premium on the managerial rationalization of tasks and responsibilities and most particularly so now that the survival of a tertiary institution becomes dependent on the strength of its ties with external society. This is reflected in the nature of basic tasks of governance, De Groof et al 1996. A greater reliance on market signals also brings shift in decision-making power not just from the government but also from tertiary institutions to the consumer. Tertiary education was mostly borne by government and the state ensured that all qualified applicant received the needed education. However, the trends are changing and this is greatly affecting the support the state is giving to tertiary institutions, and to many economists, shifting some of the cost burden from the taxpayer to students and parents also reflects a reform in the direction of greater equity and a more reasonable alignment of those who pay with those who benefit. A market orientation therefore includes; tuition fees and the sale of research and instruction, contracts and entrepreneurial training; the private sector, including both non-profit and proprietary providers of tertiary education; regional decentralization, or the devolution of authority from the central government to the regions and finally, institutional autonomy, or the devolution of authority from government at whatever level to institutions. (World Bank, 1998)

17. Does the polytechnic have any plans to develop a market model approach aimed at increasing students' enrolment in the polytechnic?

18. If yes, what are the various plans?

19. Does the polytechnic have any plans of targeting business organizations in the region to train staff members of these organizations and upgrade the skills of the working force to the tertiary level?

20. What would be the likely benefits for the polytechnic if such initiative is embarked upon?

21. In the wake of this, does the polytechnic plan establishing part-time courses for workers who are not able to enrol during the normal lecture periods?

22. Would part-time education increase tertiary enrolment in the Cape Coast polytechnic?

23. What are the major challenges that the institution face in increasing student enrolment in the polytechnic?

24. To what extent is funding a major problem facing tertiary education in the Cape Coast Polytechnic?

25. What are some of the alternatives that the polytechnic is using to address the problem?

26. Does government increase its subvention when students' enrolments increase?

27. Does the polytechnic have the needed lecturers to take up the part-time programmes?

28. Do the programmes offered by the polytechnic meet the demands of the labour market?

As a component of my master of educational science and technology thesis, I am undertaking a study to identify the effect of government access policy on increased students' enrolment in the Cape Coast Polytechnic. The research aims to identify factors that influence students' enrolment rate in the polytechnic and ways of increasing the enrolment rates. It would investigate the various alternatives open to the polytechnic in increasing students' intake.

In acknowledging that this distant-mode interview requests you to divulge certain information that may be considered sensitive to you or to your office, I would like to assure you that your response to the questions would be kept very confidential. No personal identifiers would be included or disclosed as part of the completed research. The interview would take about 10 minutes to complete and I would be grateful if you could go through the various questions and answer them accordingly when I call on your outfit to receive your response.

INTERVIEW SCHEDULE FOR MANAGEMENT OF BUSINESS ORGANIZATIONS

Name of organization   :

Type of organization   :

Location of organization   :

1. What is the total number of employees in your organization?
2. How often does the organization organize training programmes to upgrade the level of skills of your employees?
3. In which areas/courses would your organization need assistance in developing the skills of your staff?
4. How would your organization adopt the idea of liaising with the Cape Coast Polytechnic to provide training for members of staff of your organization who do not have tertiary education?
5. Do you think the idea of training staff at the polytechnic would help improve the technical skills of staff and thereby increase productivity in your organization?
6. How would you access the importance of such a training programme to the employees of your organization?
7. What are the major challenges to comprehensive staff development in your organization?
8. What is the policy of the organization as regards the taking of part-time programmes by of your organization in tertiary institutions?

UNIVERSITY OF TWENTE, THE NETHERLANDS
FACULTY OF BEHAVIOURAL SCIENCES
MSC PROGRAMME IN EDUCATIONAL SCIENCE AND TECHNOLOGY

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In acknowledging that this questionnaire requests you to divulge certain information that may be considered sensitive to you, I would like to assure you that your response to the questions would be kept very confidential. No personal identifiers would be included or disclosed as part of the completed research. The questionnaire would take about 10 minutes to complete and I would be grateful if you could go through the various questions and answer them accordingly.

QUESTIONNAIRE FOR DIRECT APPLICANTS

DEMOGRAPHIC INFORMATION
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1. Age : ☐ 18-223   ☐ 24-29   ☐ 30-35   ☐ 36-41   ☐ 42-47

2. Sex : ☐ Male   ☐ Female

3. Level of education/Educational qualification: ………………………………………….

4. Location /Place of abode:……………………………………………………………...

INFORMATION ON APPLICATION FOR ADMISSION
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5. Year of completion of pre-tertiary education:………………………………………...

6. How many times have you applied for admission to the Polytechnic:…………………..

7. Where you offered admission during the previous years in which you applied. . Yes ☐   No ☐

8. If you were refused admission, on what grounds were refused admission. (Please tick)

☐ I did not meet the minimum entry requirements.

☐ I did not submit the requisite certificates for consideration.

If any other, please specify. …………………………………………………………...

9. How would you finance your education in the polytechnic? (Please tick)

☐ Government loan

☐ On study leave/ support from employers

☐ Parental support

☐ Self financing

If any other, please specify………………………………………………………………………….

10. What is your first choice programme as stated on your admission form…………………………………………………………………………………………....

INFORMATION ON DEMAND FOR TERTIARY EDUCATION

The scale provided is a five-point scale indicating the degree of agreement for the various items presented for the objective view or respondents. The interpretation of the rating scale is.
1. Strongly agree
2. Agree
3. Undecided
4. I Disagree
5. I strongly disagree

Economic motives for the demand for tertiary education.

11. Tertiary education would help me build my chosen career.	1	2	3	4	5
12. I would be able to get a better paid job when I obtain tertiary education certificate.	1	2	3	4	5
13. Tertiary education to me is not a form of economic investment.	1	2	3	4	5
14. Obtaining tertiary education would not necessarily lead to increased productivity in my organization.	1	2	3	4	5
15. Tertiary education would help me earn a good salary and live a quality life.	1	2	3	4	5
16. I want to enrol in the polytechnic because I want to earn more salary.	1	2	3	4	5

Please answer the questions below under a 5-point scale rating.
1. Strongly agree
2. Agree
3. Undecided
4. I Disagree
5. I strongly disagree

Socio-political demand for tertiary education

17. The programmes offered at the polytechnic can help me meet my career aspirations.	1	2	3	4	5
18. Tertiary education is less rewarding when there are ready jobs available upon completion of school.	1	2	3	4	5
19. Tertiary education would help enhance my social status upon completion.	1	2	3	4	5

20. I would prefer to enrol in the polytechnic as a part-time student if tertiary programmes were run on part-time basis by the polytechnic.	1	2	3	4	5
21. I consider my social status is an important aspect of enrolling in the polytechnic.	1	2	3	4	5
22. I consider myself as likely to be employed upon completion of the programme if I am selected.	1	2	3	4	5

Please answer the questions below under a 5-point scale rating.
1. -Strongly agree
2. - Agree
3. -Undecided
4.-I Disagree
5.-I strongly disagree

Education financing

23. I should be responsible for funding my education in the Polytechnic if I gain admission.	1	2	3	4	5
24. Applicants to the polytechnic should pay for their fees themselves and not government.	1	2	3	4	5
25. Since the government would benefit from the services of graduates, students should not be made to pay fees when enrolling in tertiary education.	1	2	3	4	5
26. If I gain admission and I am offered students' loan, it would help me in meeting most of the cost involved in enrolling in tertiary education.	1	2	3	4	5
27. The government should set up scholarship funds to help needy students to get financial support.	1	2	3	4	5

Thank you

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In acknowledging that this questionnaire requests you to divulge certain information that may be considered sensitive to you, I would like to assure you that your response to the questions would be kept very confidential. No personal identifiers would be included or disclosed as part of the completed research. The questionnaire would take about 10 minutes to complete and I would be grateful if you could go through the various questions and answer them accordingly.

QUESTIONNAIRE FOR MATURE APPLICANTS

DEMOGRAPHIC INFORMATION

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1. Age : ☐ 30-35 ☐ 36-41 ☐ 42-47 ☐ 48-53 ☐ 54-59

2. Sex : ☐ Male ☐ Female

3. Level of education/Educational qualification:.……………………………………………

4. Location /Place of abode:………………………………………………………………...

INFORMATION ON APPLICATION FOR ADMISSION

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5. Year of completion of pre-tertiary education:……………………………………………...

6. How many times have you applied for admission to the Polytechnic:…………………………..

7. Where you offered admission during the previous years in which you applied. . Yes ☐ No ☐

8. If you were refused admission, on what grounds were refused admission. (Please tick)

☐ I could not meet the minimum entry requirements.

☐ My mode of entry into the polytechnic was not specified in the admission brochure.

If any other, please specify. ………………………………………………………………...

…………………………………………………………………………………………………
9. How would you finance your education in the polytechnic? (Please tick)

☐ Government loan

☐ On study leave/ support from employers

☐ Parental support

☐ Self financing

If any other, please specify……………………………………………………………………………….

10. What is your first choice programme as stated on your admission form………

INFORMATION ON DEMAND FOR TERTIARY EDUCATION

The scale provided is a five-point scale indicating the degree of agreement for the various items presented for the objective view or respondents. The interpretation of the rating scale is.
1. Strongly agree
2. Agree
3. Undecided
4. I Disagree
5. I strongly disagree

Economic motives for the demand for tertiary education.

11. Tertiary education would help me build my chosen career.	1	2	3	4	5
12. I would be able to get a better paid job when I obtain tertiary education certificate.	1	2	3	4	5
13. Tertiary education to me is not a form of economic investment.	1	2	3	4	5
14. Obtaining tertiary education would not necessarily lead to increased productivity in my organization.	1	2	3	4	5
15. Tertiary education would help me earn a good salary and live a quality life.	1	2	3	4	5
16. I want to enrol in the polytechnic because I want to earn more salary.	1	2	3	4	5

Please answer the questions below under a 5-point scale rating.
1. Strongly agree
2. Agree
3. Undecided
4. I Disagree
5. I strongly disagree

Socio-political demand for tertiary education

17. The programmes offered at the polytechnic can help me meet my career aspirations.	1	2	3	4	5
18. Tertiary education is less rewarding when there are ready jobs available upon completion of school.	1	2	3	4	5
19. Tertiary education would help enhance my social status upon completion.	1	2	3	4	5

20. I would prefer to enrol in the polytechnic as a part-time student if tertiary programmes are run on part-time basis by the polytechnic.	1	2	3	4	5
21. I consider my social status is an important aspect of enrolling in the polytechnic.	1	2	3	4	5
22. I consider myself as likely to be employed upon completion of the programme if I am selected.	1	2	3	4	5

Please answer the questions below under a 5-point scale rating.
1. Strongly agree
2. Agree
3. Undecided
4. I Disagree
5. I strongly disagree

Education financing

23. I should be responsible for funding my education in the Polytechnic if I gain admission.	1	2	3	4	5
24. Funding of tertiary education should be the responsibility of applicants into the polytechnic and not government.	1	2	3	4	5
25. Since the government would benefit from the services of graduates, students should not be made to pay fees when enrolling in tertiary education.	1	2	3	4	5
26. If I gain admission and I am offered students' loan, it would help me in meeting most of the cost involved in tertiary education.	1	2	3	4	5
27. The government should set up scholarship fund to help needy students to get the needed financial support.	1	2	3	4	5

INFORMATION ON APPLICANTS' WORK AND SCHOOL RELATIONSHIP

The scale provided is a five-point scale indicating the degree of importance for the various items presented for the objective view or respondents. The interpretation of the rating scales are.
1 – Very important
2 - Important
3 – Quite important
4 –Of little important
5 – Unimportant

Organization and polytechnic collaboration.

28. Would you suggest that the Cape Coast polytechnic begin a part-time programme to cater for the needs of workers who can not enrol during the normal lecture periods? Please rate the importance of this suggestion.	1	2	3	4	5

29. How important do you think the polytechnic can effectively help improve upon your professional skills.	1	2	3	4	5
30. The polytechnic should run top-up programmes for mature applicants who do not meet the minimum criteria needed to enrol in any of the tertiary courses offered by the polytechnic?	1	2	3	4	5
31. How important would you rate the set of tertiary programmes run by the polytechnic to your current job?	1	2	3	4	5
32. How important do you think collaboration between your organization and the Cape Coast Polytechnic can help you enrol in the polytechnic.	1	2	3	4	5

33. Who initiated the move for you to seek further education in the polytechnic?

☐ My Employers

☐ My own decision

☐ Advice from colleagues

34. What motivated you to choose Cape Coast Polytechnic?

☐ The proximity of the institution to my place of residence.

☐ The availability of my preferred programme.

☐ The existence of qualified lecturers and facilities.

Thank you