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Beyond the Reengineering of Polytechnics into Technical Universities in Ghana: A Model of Marketing the Offering!

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Abstract

The purpose of the current study is to develop a model for the marketing of technical university education in Ghana. The study based its analysis on 10Ps of a marketing mix which includes: programme, price, place, promotion, processes, people, practicality, prospect, proof of performance and post-entrepreneurship. These elements of the marketing mix were supported by the resource based view, human capital theory and the marketing mix concept. The review of literature and analysis showed that the 10Ps are critical and practical elements for the marketing of technical university as they help identify the unique areas of the offering that give technical education sustainable competitive advantage. The primary recommendations of the study were that technical university education must not be indiscriminately established if it should have a powerful influence on national development. Finally, the process should be gradual and be based on a polytechnic institution's readiness.

Key words: Marketing mix, national development, traditional university, technical university

INTRODUCTION

On Tuesday January 5, 2015, Dr George Afeti, Chairman of the Technical Committee on the Conversion of Polytechnics in Ghana to Technical Universities presented the report at a forum in Accra on the theme: "Repositioning Technical Education as a Driver of Economic Transformation and National Development". The report stated that the nation's Polytechnics will have to re-engineer themselves to become technical universities. In this case, polytechnics are to be granted technical university status to offer Bachelor of Technology degree programmes in science and technology-based disciplines. According to the report, this would entail the polytechnics emphasizing staff development programmes to raise staff qualifications to university levels and developing capacity for curriculum engineering, management of internships, quality assurance, applied research and technology inter-change with industry. The report recommended that it was important for the polytechnics to remain focused on career-focused programmes and not fall into the academic drift "trap" of offering traditional university programmes. The report recommended the effective commencement date for converting the Polytechnics to Technical Universities to be September, 2016 (i.e. beginning of 2016/2017 academic year) to allow for sufficient time to undertake due diligence on the current status of the polytechnics.

This step by the nation is yet another milestone in the life of polytechnic education in Ghana. Polytechnic education had earlier been up-graded from pre-tertiary to tertiary education to run programmes in Higher National Diploma (HND) Certificates, a decision which was greeted with cheers by stakeholders of tertiary education in Ghana. The Polytechnic Law 1992 (PNDCL 321, 1992) made this possible as the HND program started in 1992/1993 academic year. The

reform was not for the polytechnics to directly compete, but to perform a complementary role to the universities to increase access to tertiary education by training middle level manpower for the country's manpower needs. It is interesting to note that the first few years of the Polytechnic's upgrading saw encouraging and appreciative participation, with students' enrollment increasing from year to year.

Nevertheless, in the last few years, the enthusiasm of which people enrolled into polytechnic education seems to be going down with the passage of time. This is evidenced by decrease in enrollment, which is so alarming that managers of polytechnic education and government must be weary. The emergence of private universities, particularly in the middle to late 1990s, the expansion and increase of the number of public universities, the increased attention to distance learning, and establishment of same admission requirements for entry into both polytechnic and university might primarily explain why polytechnic institutions suffer a setback of students' enrollment. It is in this vain that further transformation of Polytechnic education into Technical University to run Bachelor of Technology degree programmes in science and technology-based disciplines is a welcome idea.

This university status of the polytechnics put them in line with the traditional universities, thus exposing them to direct competition from the traditional universities. Research has suggested that tertiary education institutions can maintain competitiveness if they realign themselves to meet the needs and expectations of society (Tierney, 2008). This means a competitive tertiary institution is able to consistently predict the future success, innovation and contributions of its graduates to society in order to remain competitive (Zhao, 2009). In this connection, polytechnics in Ghana can compete for prospective students if they re-align their offerings to the technical and vocational needs of targeted prospective students. This re-alignment could be possible if the polytechnics reposition their offering to be distinct from the offerings of the traditional universities. This calls for application of marketing in the planning and running of technical university in Ghana.

The significance of marketing in the competitiveness of tertiary education has received attention in the extant literature (McGrath, 2002; Hammond; Harmon & Webster, 2011; Webster & Hammond, 2012; Zebal & Godwin, 2012), with particular reference to such marketing practices as segmentation, targeting and market positioning (Newman, 2002). In this connection, application of marketing approaches in the higher educational institution has received appreciable recognition as a means of growing, transforming and improving the success of the institutions (Hemsley-Brown & Oplatka, 2006). This does not mean that polytechnic education institutions can be treated as mere commercial organizations (Akonkwa, 2009), yet due to the reengineering, and the dynamic nature of the tertiary education environment, effective management of the marketing mix can play a crucial role in managing the transformation programme, as well as the pressure and changing needs that these bring.

Since marketing involves provision of customer needs and expectations in ways unique to the institution (Kotler and Fox, 1995), polytechnic institutions that effectively manage appropriate marketing mix and implement them in a greater degree might be in a position to differentiate their offerings against other competing tertiary institutions. The application of marketing to tertiary education is found to contribute significantly to the management of institutions to compete effectively for students at the institutional, national and international levels (Sizer, 2001). This suggests that if polytechnics apply marketing mix appropriately in the management of their institutions, as they reengineer to technical universities they would not only compete amongst themselves, but also be in the position to differentiate their offerings to

attract applicants who might ordinarily opt for traditional university education; and they can even target foreign students. It is significant to note that the traditional universities have the image and goodwill from the public, therefore given them some degree of competitive advantage over the prospective technical universities. Thus, the only way to succeed in the university education environment is for the technical universities to strategically enter and take some reasonable amount of the market share, hence the urgent need for application of an appropriate marketing model.

Regarding the marketing model as it applies to university education, authors have suggested different possible mixes. For example, Ivy and Naude (2004) suggested "7Ps" consisting of 'programme, prospectus, price, prominence, people, promotion and premiums' as effective approach for marketing university education. Earlier, Kotler and Fox (1995) had developed a similar marketing mix for marketing tertiary education, which comprise of programme, price, place, promotion, people, process and physical evidence. These different marketing mix approaches are not only similar in their approach and orientation, but they are also focused on marketing university education in general (Ivy & Nuade, 2005). It is however significant to acknowledge that marketing approaches used for traditional university education may not necessarily work for the technical university education. This is based on the premise that unlike traditional university, technical education lays the foundation needed to acquire the technical knowledge and skills offered by a technical university and on-the-job training (Bozick & Dalton, 2013). Again, unlike traditional university education, technical university is supposed to provide specific human capital development instrument that can be effective in promoting socioeconomic progress (Okoli & Onwuachu, 2009). In this vain, it would not be too necessary to apply the same marketing model in the marketing of technical university as it for traditional university education. Thus the current study pays particular attention to the marketing of technical university in Ghana by expanding the frontiers of the Ps from 7Ps to 10Ps. The current study conceptualizes a model of marketing technical education to consist of: programme, price, place, promotion, people, process, prospect, pro-entrepreneurship, practicality and proof of performance. This expansion is to bring out certain critical elements of marketing that could be specific in marketing technical education but not necessarily for traditional university education.

Thus, the purpose of this article is to make progress in analysing some key elements of a technical university by synthesizing some of the principal contributions to this emerging field. The paper develops and extends some of the concepts and theories in technical education, human capital, resource based view and the marketing mix. The study also seeks to expand the marketing mix of tertiary education from the usual 7Ps to 10Ps as a model for marketing technical university in particular. The rest of the paper also contains recommendations and direction for future research.

LITERATURE REVIEW

Technical Education

Technical education is the training of engineers and technicians for work in industry, construction, transportation, communications, agriculture, and forestry (Temple, 2009). The term "technical education" is also understood to include the theoretical and practical scientific knowledge and skills that permit a person receiving such education to solve production, engineering and economic problems in his specialty. In addition to specialized technical education, there is also supplementary and general technical education. Supplementary technical education provides students at higher educational institutions with the technical knowledge and skills required for the study and use of machines, mechanisms, equipment, and automatic control devices used in many areas of science, education, and culture. It includes

technical and engineering disciplines that are studied in university departments: engineering, science, applied arts and applied science; in agricultural higher educational institutions in the departments of agriculture and veterinary medicine; and in specialized business and administration programmes in the area of marketing and entrepreneurship. The importance of supplementary technical education has grown with the increasing use of technical equipment in various areas of science and culture; for example, the technology of experimental research, computer technology, and technical aids in education. General technical education is provided in general-education and lays the foundation needed to acquire the technical knowledge and skills offered by a technical university and on-the-job training (Bozick & Dalton, 2013).

In most countries, specialists with higher technical educations are trained in polytechnic and industrial institutes, specialized higher technical educational institutions, including factory-based higher technical educational institutions, in the technical departments of several universities, and in higher technical military educational institutions. Technical education is considered by development experts and donors to be a specific human capital development instrument that can be effective in promoting socioeconomic progress. Investments in technical education is seen as an approach to increasing economic competitiveness and reducing poverty, increasing productivity, employability and sustainable national development (Wallenborn, 2010). This suggests that technical universities, if well managed should have certain core competences that could give them sustainable competitive advantage over the traditional universities.

The roles of technical education, with its focus on science and technology in national development cannot be overemphasized. Any nation which fails to plan for effective technical education plans to fail in its national growth and development. Akerele (2007) aver that rapid and sustainable development of a country can only be achieved through scientific research, rational application of science and technology knowledge and skills. According to Okoli and Onwuachu (2009), technical education provides the tools for economic, social, and political development of a nation. The categorisation of national states into developed, developing, and less developed nations has even been largely linked to the ability of the developed countries to convert scientific ideas to usable technology while the developing and underdeveloped countries are yet to do so effectively. Many nations, including the developing ones have come to the recognition of the impact of technical education, particularly in science and technology development to the overall national development. Thus, Ghana cannot afford to move with the rest of the world by developing its technical education at the higher level of education.

The Role of Technical and Vocational Education in National Development

Discussions on technical education could be better put into context by looking at it from the human capital theory point of view, since the theory is considered to have significant influence on the analysis of the labour market (Alam, 2007). According to Alam (2007) investment in education and training must produce a return for the individual and the society as a whole. To the individual, this could be the benefit in terms of better career path, increased earning and a better quality of life. The return on investment for society on the other hand will be a skilled workforce that will enable global competitiveness and economic growth. Earlier work by Fagerlind and Shah (1989) on the concept of 'human capital' had suggested that education and training raises the productivity of workers, and increases their lifetime earning capacity.

According to Alam (2007), governments have being using technical education systems to help unemployed young people and older workers get jobs, reduce the burden on higher education, attract foreign investment, ensure rapid growth of earnings and employment, and reduce the

inequality of earnings between the rich and the poor. This means in a country with high unemployment rate like Ghana, technical education is a must to address the unemployment 'canker'. However, Zymelman (1976) and Tailak (1998) argue that technical education provides a lower rate of return than traditional education. Yet, Bennell (1996) refutes this assertion, arguing that even if technical education students are less 'academically brilliant', the rate of return for it is still high. Similarly, Colin (1999) suggests that technical education does not only prepare skilled labor but also provides general education to the students. According to Colin (1999) technical education can play vital role for development planning, but he warns that if the policy makers do not make it up-to-date, and technical education institutions do not have enough qualified teaching faculty and sufficient facilities to offer quality technical education, it will not be useful. This suggests that the government has a key role to play to ensure that technical education works to generate the necessary return to the individuals and society by providing the necessary facilities. At the same time the institutions must develop their human capital to improve the quality of teaching faculty.

Theory of Human Capital

The concept of human capital recognises that not all labour is equal and that the quality of employees can be improved by investing in them. The education, experience and abilities of an employee have an economic value for employers and for the economy as a whole (Crook, Todd, Combs, Woehr & Ketchen, 2011). Human capital is the stock of knowledge, habits, social and personality attributes, including creativity, embodied in the ability to perform labor so as to produce economic value (Mahroum, 2007; Jaison & Richard, 2012). Alternatively, Human capital is a collection of resources - all the knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom possessed individually and collectively by individuals in a population (Heiner, 2008; Simkovic, 2013). These resources are the total capacity of the people that represents a form of wealth which can be directed to accomplish the goals of the nation, or state, or a portion thereof.

Human capital is an aggregate economic view of the human being acting within economies, which is an attempt to capture the social, biological, cultural and psychological complexity as they interact in explicit and/or economic transactions. Many theories explicitly connect investment in human capital development to education, and the role of human capital in economic development, productivity growth, and innovation has frequently been cited as a justification for government subsidies for education and job skills training (Bowles & Gintis, 1975).

According to Erhurua (2007) human capital development presupposes investments, activities and processes that produce knowledge, skills, health or values that are embodied in people. It implies building an appropriate balance and critical mass of human resource base and providing an enabling environment for all individuals to be fully engaged and contribute to goals of an organization or a nation. Any effort to increase human knowledge, enhance skills, productivity and stimulate resourcefulness of individuals is referred to as human capital development. Thus, technical university qualifies to provide the needed human capital for national growth, and must be given the due attention; hence it is appropriate to consider human capital as a theory that supports a study of technical university education.

Resource Based Theory

The resource-based theory or resource-based view (RBV) has been one of the necessary theories in management and marketing studies, especially studies that concern themselves with management of organisation's internal resources for sustainable competitive advantage. The resource-based theory stipulates that for an organisation to achieve a state of sustainable

competitive advantage, it must acquire and control valuable, rare, inimitable, and non-substitutable resources and capabilities; and also put in place responsive management system that can absorb and apply the resources (Barney & Clark, 2007; Helfat & Peteraf, 2003). This requires that individual polytechnic institutions need to be internally ready for the transformation to the technical university status. Reengineering should not be automatic but should be based on internal resources strengths of the institution.

Similarly, Vorhies and Morgan (2005) and Barney, Ketchen and Wright (2011) opined that the resource-based theory provides an important framework for explaining and predicting the basis of a firm's competitive advantage and performance. In this connection the theory proposes that a firm must possess valuable resources, which other firms find it too costly or difficult to imitate for it to have control over the resources and attain to sustainable competitive advantage (Barney & Hesterly 2012). This suggests that for technical universities to deliver superior performance, they must gain competitive advantage through design and implementation of technical programmes which are unique to only technical institutions and also have the requisite faculty (Hafer & Gresham, 2008). The resource-based view also emphasises the need to disseminate information about the organisation's (Rumelt, 1984; Mahoney, 1995). Thus, technical universities should make information generation and dissemination a regular feature to ensure superior education delivery that leads to sustainable competitive advantage (Langerak, Hultink, & Robben, 2004; Malik & Naeem, 2009).

The features of organisation's resources, which are: valuable, rare and imperfectly imitable are critical for competitive advantage. Nevertheless, an organisation must be "organised to exploit the full competitive potential of its resources and capabilities" in order to gain sustainable competitive advantage (Barney and Hesterly 2012). If the organisation fails to put in place an organised system to deal with poor organisational processes, policies, and procedures, this may undermine a resource's potential competitive advantage (Barney & Clark 2007). Thus, effective the 10Ps model proposed for this study is critical for technical universities to realise their full potential.

Furthermore, the usefulness of the resource-based theory in the study of organisation's competitiveness is emphasised by the varying studies in the area of information systems (Wade & Hulland, 2004), organisational networks (Lavie, 2006), areas of management studies (Armstrong & Shimizu, 2007; Lockett, Thompson & Morgenstern, 2009), and a number of marketing studies (Morgan, Slotegraaf & Vorhies, 2009). Therefore the resource based theory is appropriate in the study of marketing technical university education in Ghana because it supports the current model of the study.

The Marketing Mix

Marketing is about communicating the value of a product, service or brand to customers for the purpose of promoting or selling that product, service, or brand (Kotler & Keller (2009). An organisation in the market economy survives by providing goods and services that persons are willing and able to buy. Consequently, ascertaining customer demand is vital for a firm's future viability and even existence as a going concern. Many organisations today have a customer focus philosophy (Kotler & Keller (2009). This implies that the company focuses its activities and services on customer demands. A formal approach to this customer-focused marketing is known as the marketing mix.

The marketing mix refers to the set of actions, or tactics, that a company uses to promote its brand or product in the market. The marketing mix is a model suggesting that a marketing

strategy consists of tools and techniques (elements) that can be identified for ease of understanding a product offering (Kotler & Keller, 2009). The marketing mix is a marketing strategy model, with a set of controllable elements available for an institution to shape the nature of its offer to customers. In connection with technical university, it is to put the educational service offering into a number of component parts and arrange them into manageable subject areas for making strategic decisions (Palmer, 2001). The traditional marketing mix involves the 4Ps of Price, Product, Promotion and Place. However, with the increasing demand for services, the marketing mix increasingly includes several other Ps depending on the services offering (Palmer, 2001). This explains the appropriateness of the 10Ps adapted for this study.

Kotler and Fox (1995) have developed a model of a marketing mix which is designed specifically for educational institutions that seem to address the limitation of using the 4Ps in studying the education offering (Palmer, 2001). According to Kotler and Fox (1995) marketing mix in educational context should consists of seven marketing tools (i.e. 7Ps). They identify these tools as: 'programme, price, place promotion, processes, physical facilities, and people. Other elements of the marketing mix has been suggested for the study of education offerings, such as Ivy and Naude (2004) "7Ps" and Ivy (2008) "7Ps", involving 'programme, prospectus, price, prominence, people, promotion, premiums'; and Gray's (1991) "5Ps"; Coleman (1994) "5Ps" and Ho and Hung's marketing mix (2008) which consists of 'living, learning, reputation, economy and strategy.

THE MODEL OF MARKETING TECHNICAL EDUCATION IN GHANA

In discussing and analyzing how to market the technical universities in Ghana the study adapted and expanded the analysis on the marketing mix model (7Ps) developed by Kotler and Fox (1995). This model consists of elements including programme, price, place, promotion, processes, people, practical facilities, prospect, proof of performance and pro-entrepreneurship. The reason for adapting the Kotler and Fox (1995) elements of the marketing mix in this study is because the tools capture most of the areas of concern for the analysis and set of actions, or tactics, that the institutions can use to promote and sell its technical university brand. The extension of Kotler and Fox's (1995) model is to ensure that key elements that are specifically significant to marketing technical education in particular are covered.

Programme

The first element in the marketing mix used to study technical education's offerings is 'programme' (Kotler and Fox (995). This is concerned with issue of what programme to offer and how to structure and design it within an institutional marketing strategy. The literature is full of studies relating to the educational programme to be offered (Cubillo & Cervino, 2006; Frumkin, Milankovic & Sadler, 2007).

According to this element of the marketing mix, an institution usually begins by identifying the programmes and services to be offered and make available to the market and customers, whether they are students, companies or grants providers. An institution also questions whether this programme matches customers' needs. This suggests that technical universities with technical programmes will find their markets and differentiating between them from the traditional universities on the basis of their programmes and their quality (Kotler & Fox, 1995). If the technical universities are able to offer technical education and training that is distinct from those of the traditional universities, it will help establish the institution's identity which can lead to sustainable competitive advantage (Barney and Hesterly 2012). This is because the positive identity as institution that train people duly for the job market shall

position the institution in mind of its customers and determines how they will respond to their offerings (Gibbs & Knap, 2002). In this direction, it is critical that the technical universities appropriately come out with well designed, developed, tested, piloted, provided, installed and refined programmes (Hollensen, 2003). This will require that programme design should involve students and employers, bearing in mind their needs and requirements (Gibbs & Knap, 2002).

Marketing of technical university education will be more challenging than even marketing Higher National Diploma programmes. This is because technical university is going to offer degree programmes and shall therefore have direct competition from the traditional universities. Also, they are going to offer professional and technical services, which customers cannot inspect before purchasing (White, Martin, Stimson, & Hodge, 1991). Moreover, education is an experience service, which relevant characteristics can only be effectively assessed by consumption (Amaral & Magalhaes, 2007). This means it is only when a student attends and studies the technical programme that he or she gets an idea about what has been 'purchased' in terms of quality relative to the programme of the traditional education. In this connection, the technical university programme does not exist until the institution performs the service, usually in the presence of the customer, and it does not necessarily result in the ownership of any material thing (Kotler, Bloom, & Hayes, 2002). Thus it is suggested that the technical universities increase tangibility of their programmes by providing in advance, lecture materials, course outlines, handouts, course books and free access to the institutions website (Gibbs & Knap, 2002). They can also use graduates from foreign technical universities and their physical contribution to national development as an experiential factor to market the programmes

Price

The price element of the marketing mix is in this model relates to school fees offered, which is critical to every institution as it reflects on revenues (Kotler & Fox, 1995). This is because the technical universities shall rely on school fees as a basic and most immediate revenue source (Tang, Tang & Tang, 2004). Pricing is an important element that the managers of technical universities must pay particular attention if they want to be competitive in the tertiary education sector. This is because, pricing will play a major role on the marketing strategies as most students and their parents are concerned about the financial implications of attaining university education (Pugsley, 2004; Holdsworth & Nind, 2005; Beckie, 2009). Students and parents alike are usually cost conscious and usually pay fees with difficulty as they compare how much they are paying and how soon they can get jobs to compensate for the lose (Eckel, 2007) Parents and students are also aware that public universities get a lot of money from the government and that the actual cost of attending university varies from institution to institution. With such public awareness and sensitivity, technical universities would have to set price policies that allow student to offer courses at relatively lower cost.

As the traditional universities are already ahead, technical universities would have to charge reasonably low fees that should be gradually upgraded as the relative quality of their programmes continue to become manifest with time (Foskett & Hemsley-Brown, 2001). Where it becomes necessary to charge high fees for some programmes it needs to be justified and this, in turn, should be explained to the public. It must be stated here that pricing should be done with utmost care as there is substantial impact on the perception of quality when being matched to price (Foskett & Hemsley-Brown, 2001). Other strategies that the technical universities can use to attract students are rebate for early payment of fees, discount on fees and scholarship offers. The universities attract potential students to enroll by seeking

scholarships from government, organisations and other agencies; provide financial assistance internally where possible and offering financial benefits. There are often more scholarships for technical programmes than other university programmes, which the technical university institutions can take advantage of... This will affect the students' choices as they may consider technical universities as institutions with the most generous offer (Kirp, 2003)

Place

According to Brassington (2006) the place element of the marketing mix refers to the system of delivery and channels of service distribution. This involves making education available and accessible in terms of time and geographical distribution of teaching and learning (Kotler & Fox, 1995). In a technological driven world, place is not restricted to the physical and geographical location of the institution, since there can be other virtual means of providing education. It is anticipated that there will be heightened competition between the technical universities and the traditional universities. This expectation requires that technical universities plan to offer alternative ways of delivery, such as evening and weekend schools, Open University campuses in relevant locations (El-Khawas, 1999), to cater for workers seeking job skilled programmes or women that care for their children or other members of family at home. Online service is not recommended as an immediate strategy since technical education delivery usually involves hands-on activities. However, for effective and timely delivery, institutions would have to include a website that allows students to download information all the time (Kotler, Bloom & Hayes, 2002). Place is not only restricted to university's way of delivery; it should also take into account the convenience of an institution's location and access to the students. This means in planning for the technical university education in Ghana, managers of the programme should consider campus built-environment and residential facilities (Ivy & Naude, 2004; Maringe, 2006)

In planning strategically, the institutions would have to consider the convenience and attractiveness for students in terms of place, having in mind that the students are the very essence of the existence of the university, and that their needs and requirements should be a concern. While the institutions might decide to operate a single location delivery, to have students physically study there (Kotler & Fox, 1995), they might also decide by way of availability and accessibility expands not only the delivery system but also the location to others, such as a multi-site strategy (Jobber, 2004). The schools can also target a certain customer segment by distance learning, part-time, evening or weekend courses.

Promotion

One element of the marketing mix that needs careful attention, planning and management because of its pervasiveness is promotion (Brassington, 2006). Promotion is defined as an institution's ability to communicate with its markets. Promotion of university education has received some degree of attention in the literature (Armstrong & Lumsden, 1999; Harris, 2009). Palmer (2001) breaks down promotion into four distinct elements: advertising, sales promotion, public relations and personal selling. There are various sets of tools within each of these elements, available for an institution to use in order to communicate with its customers, such as Web-advertising, search engine optimisations (Blumenstyk, 2006), direct mail, educational show exhibits, open days or conferences. This requires that the technical universities establish efficient internet system that is active 24 hours a day, seven days a week. The schools can also participate in trade fairs and workshops to exhibit their offering to potential buyers. Presentations at local and international seminars and conferences should also be a constant factor to sell the institution's offerings. Promotional activities are more effective when they are sustained and targeted. In other words, beyond the conferences and

exhibitions, the institutions can target continuously students at their final year at senior high schools.

Managers of the technical universities should liaise and collaborate with authorities of senior high schools and parent-teachers associations to sell this new offering of technical education and its potential benefits to them. This is one of the less expensive ways of promoting the institute's programmes. Institutions need to build up channels of communication with potential customers, and use marketing intelligence to gather any information that an institution would find useful (Kotler, 1999).The difficulty in communicating educational programmes due to its intangibility, notwithstanding, institution could use tangible cues to help customers understand and judge a service. For example, tracer studies of successful graduate of technical education at the HND level could be gathered as evidence of the usefulness and benefits of the institution's programmes (Jobber, 2004).

Processes

Processes refer to the way an institution does business, and this relates to the whole administrative system to this element (Kotler, Bloom & Hayes, 2002). Processes are how things happen in an institution, such as the process of management, enrolment, teaching, learning, social and even sports activities. Processes may be of little concern to customers of manufactured products (Palmer, 2001); nonetheless, they are of critical concern to high contact services such as education. In view of this, technical universities would have to take into consideration how their services are to be offered. Some of these importance processes may include teaching methods and assessment system, which is of great concern to most prospective students (Ivy & Naude, 2004). On a strategic level, institutions are careful about the delivery of service, and what quality controls can be built in (Brassington, 2006), so that customers can be confident that there is consistency in the service offered. In this connection, technical universities would have to strengthen and efficiently manage their quality assurance systems. In order to avoid inconsistency in the processes to erode students' confidence, technical universities would have to establish common criteria that can guarantee consistency and maintain satisfaction. In line with this, the institutions could adapt quality management systems, such as the Total Quality Management (TQM) or other franchised systems such as the ISO9000 series (Sallis, 2002).

People

People' refers to all the teaching, workshop, laboratory and administrative staff through which the service is delivered, and students' relations built (Kotler & Fox, 1995). People also include the institution's current and former students. This is because information and views of former students have great influence on prospective students (Kotler & Fox, 1995; Hollensen, 2003; Brassington, 2006). This view is based on the argument that education like many other services, depends on the people who perform them, as they are the ones that are delivering the service. Lovelock and Wirtz (2004) supported the argument by suggesting that direct involvement in service production means that students evaluate the quality of employees' appearance and social skills, as well as their technical skills; and consequently this is reflected on the way the offer is judged.

People as an element of marketing mix require that technical university institutions start on developing its staff. This is because research has shown that the success of an institution is more dependent on the attitudes, commitment and skills of the whole workforce, than on any other factor (Wright, 1999). Qualified lecturers and administrators are essential for efficient delivery of technical education. Thus, management of the institutions identify and sponsor

more teachers for higher studies and requisite training to give them the required skills to produce the technical service needs of the country. Necessary and deserving promotions would need to be made to put people at the ranks needed to champion the necessary services delivery that ensures the conveying of shared beliefs and goals, that the institution is customer oriented. Failure to work toward achieving this feat may have serious consequences on the idea of building a positive relationship with stakeholders of the institutions. On the other hand if the institutions are able to raise staff that can deliver to make stakeholders feel comfortable with and trusts a particular institution, then the traditional universities would find it quite challenging to disrupt this relationship (Brassington, 2006). Trained and sponsored staff should cultivate the habit of keeping track and following-up each individual student, not only on an academic level but on many individual levels (Dennis, 1998). Furthermore, alumni unions should be established and strengthened to maintain mutual relationship after the service is complete.

Practicality

Technical education cannot attain its competitiveness without practical tools necessary to give assurance of hands-on activities. The physical and tangible items an institution makes available to students ranging from brochures to the infrastructure such as well-equipped laboratory is a pre-requisite for marketing technical university education (Palmer, 2001). Practical facilities, as an element of the mix, plays a major role as it is the means by which an institution is likely to increase the practicality of its offering, especially with the fact that there is not usually much to be inspected before purchase (Gibbs & Knapp, 2002). In this respect, practical facilities in the form of laboratories and other practical training centres should be evident of the institution's preparedness to offer truly technical education to prospective students. The institutions should work together with laboratory technicians, caterers, architects and graphic designers in order to present attractive and effectively functioning facilities.

Also, as suggested by Kotler, Bloom and Hayes (2002) the most immediate clue for prospective students about a university's technical-oriented identity is evidence of availability and quality of its practical facilities, including science and computer laboratories, automobile and mechanical workshops, production shops and drawing rooms. This may be the first impression prospective students have of an institution upon visiting. Usually, the first thing they see is the built-environment and the facilities the university has. Similarly, Gibbs and Knapp (2002) aver that the condition of the practical training facilities have a significance contribution to the image of the institution. In this vain, institutions should not only ensure the provision of comfortable lecture rooms and students hostels, but also ensure well equipped laboratories and other hand-on training facilities. These would make the individual student comes to understand what and how the institution is able to offer practically in the context of the learning experience (Gibbs & Knapp, 2002). Existing of practical facilities at the right quantity and quality should make it possible for prospective students to purchase technical university education's offering now and in the future (Hollensen, 2003).

Prospect

Studies have identify needs that motivate students to select a university as teacher inspiration (Corwin & Tierney, 2007; Mullen, 2009); instrumental reasons (Townsend 2003; Saiti & Prokopiadou, 2008); enjoyment of the subject (Pasternak, 2005) and wanting to be with friends (Mullen, 2009). This will require that technical universities do not only promise to provide prospective students' needs, but also find ways to fulfill these needs in order to attract students to their institutions. It should be prudent that the institutions attempt to put in place measures that can motivate students to collect more information about their institutions,

especially through direct visits and Open Days to give students the opportunity to process more information (Moony & Robben, 1997).

It is important at this stage for the institutions to pay attention to the staff members at the point of enrolment, which are the reception desk and the admission team. These people have a significant role in the marketing mix because they are the first to communicate face-to-face with the public (Stott & Parr, 1991). In order to positively influence the student's choice behaviour, it is recommended that the institutions pay particular attention to the enrolment staff members' training and motivation (Dennis, 1998).Students usually speak with these people about their needs and whether the institution is able to satisfy them. Therefore, it is important for the enrolment team members to know what information students and their guardians require in order to prepare them to answer. Achievement in the field of technical education from the HND level should be made available to prospective customers in the form of photo shows and documentaries at the point of purchase and in other attractive platforms. This should encourage the customers to anticipate what the future holds for them as they purchase technical education offering. Documentaries and photo shows of successful technically trained alumni could be made available for prospective students' consumption. Past students in the technical fields and technocrats could be engaged to take students through the unique advantages of pursuing technical education programmes.

Proof of Performance

It is worthy to note that student's choice behaviour of a university does not end with a purchase decision. After enrolling in an institution and experiencing the service, a student usually assesses whether the programme or the institution lived up to their expectation (Brassington, 2006). At this stage, students begin to compare with their standards, judgement and opinion about the experience (Lovelock & Wirtz, 2013). A student might do post purchase evaluation of whether they are receiving value for money, time and effort. They may also assess whether or not they have made the right decision by enrolling at that specific university. The way they arrive at an answer will determine whether they establish an attitude which can either be negative leading to dissatisfaction, or positive leading to satisfaction (Kotler & Armstrong, 2008).

It is critical that technical universities produce satisfied students. This means that marketing effort does not end when a student has enrolled. The institutions should establish a lasting relationship with students' right from admission till completion and even beyond. This marketing approach to managing students should help a university with satisfied students has a higher probability of retaining its students for the subsequent years (Dennis, 1998), and to build up the university's reputation and creates an indirect word-of-mouth promotional campaign (Al-Alak, 2006). Performance should be measured against expectations from time to time in order to bridge any gaps that might exist either perceived or real. Documentaries of successful past students of technical education, both local and international can be a source of proof to customers. Technical universities could also organize workshops where past technical students shall have the platform to interchange encouragement with students.

Pro-entrepreneurship

As the Polytechnics re-engineer to technical education, they do so not only with their science and technology programmes, but also the business programmes. One question that is worth considering is how could the polytechnics handle business programmes at the era of technical education? It is therefore important that technical education emphasis entrepreneurship in all its programmes, particularly business programmes in order to distinguish it from that of the

traditional universities. The importance of entrepreneur in the affairs of nations and their people is of great importance to both academics and practitioners (Garba, 2010; Keat, Selvarajah & Meyer, 2011). It is a popular belief that advancement of developed countries in the global market place could be attributed to attention given to entrepreneurship as a means to reduce unemployment and address issues of poverty (Venkatachalam & Waqif, 2005; Gurol & Atsan, 2006). This suggests if technical universities are proactive in emphasising the entrepreneurial nature of the programmes, they are likely to inculcate into the prospective students hope of having jobs to do after enrolling and completing a programme which could make them prosperous and competitive in the global market environment (Kuratko & Hodgetts, 2004; Schaper & Vorely, 2004). In this connection, technical education institutions should link entrepreneurship with its unique features of job creation, wealth creation and economic sustainability to technical education (Lena & Wong, 2003; Schaper & Vorely, 2004). The school curriculum should be designed in such a way to inculcate the spirit of entrepreneurship (Kantis, Ishida & Komori, 2002). The philosophy is that education in general and higher education in particular provide the basis for gainful employment in recent times (Seet & Seet, 2006). Thus, in order to rekindle the hope of higher education's role to investment in education and training that produce a return for the individual and the society as a whole (Alam, 2007), technical university must take the entrepreneurship components of the programmes seriously.

The model of marketing technical education is represented by figure 1.

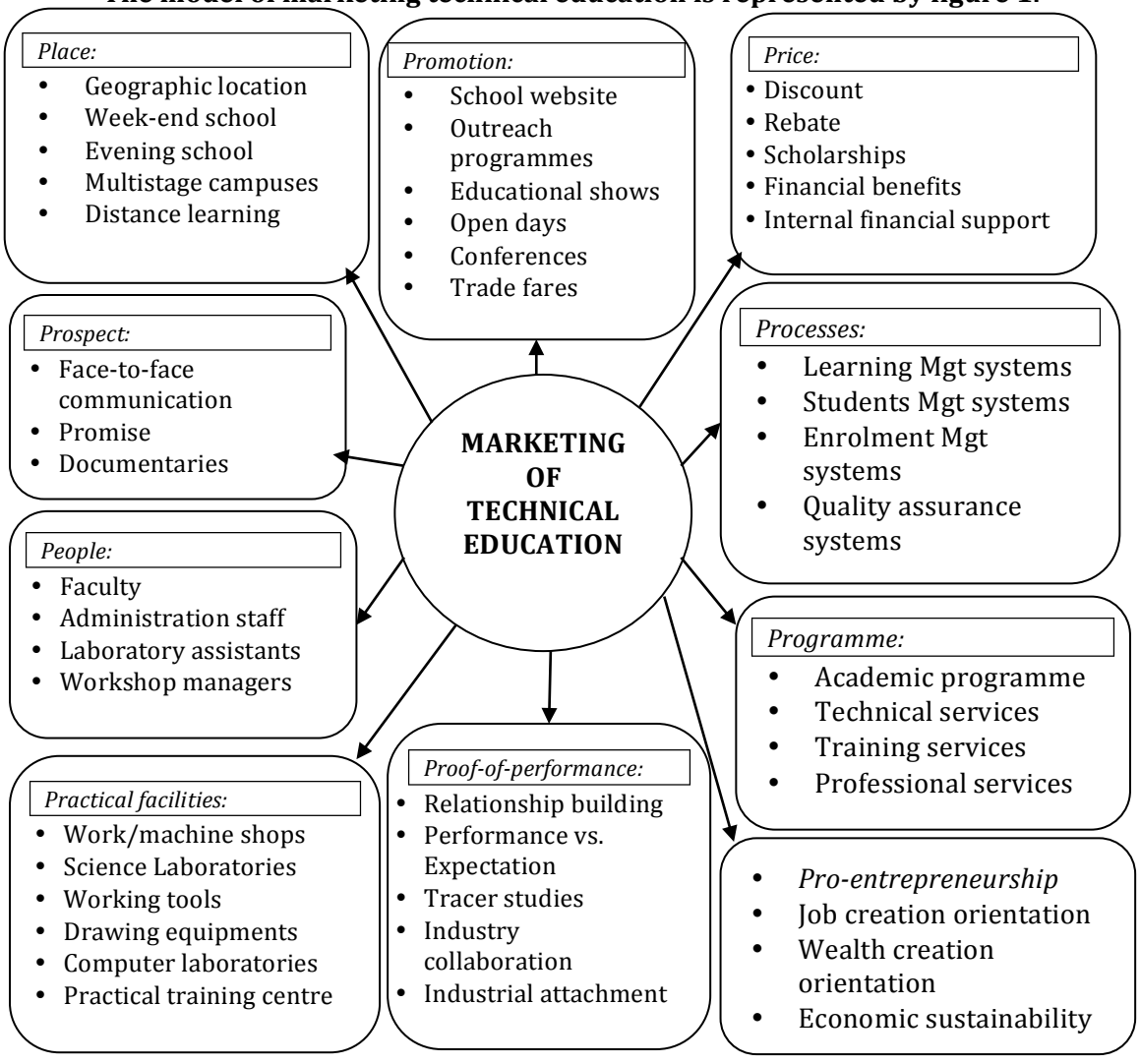

Figure 1: A Model of Marketing Technical Education

CONCLUSION

Starting from the premise of the need to market technical education, this paper identifies the primary role of marketing as a strategic tool to implement, sustain and evaluate the emergence of technical universities in Ghana. The primary task of marketing is establishing the coordination of elements necessary for the marketing of the institutions. While the reengineering has tended to concentrate upon the issues of policy formulation and timely implementation, the complexity of marketing the programme, especially when the traditional universities have already caved the niche for themselves, point to the fact that adoption of marketing approach to the implementation and sustainability are not trivial issues. With students' enrolment being a critical part of the success of the transformation of the Polytechnics to Technical Universities, the implications for the effective application of the marketing mix and the management of the students' choice decision making process are profound.

The theories of human capital and resource based view support the model of the marketing mix model suggested by the current study. An interesting feature of the 10Ps model is that it offers a theoretical basis for understanding a number of areas that the Technical Universities would have to concentrate to make the offerings competitive and sustainable. These include the design of programmes that meet the current needs of students and the job market; charging reasonable fees that is low enough to attract more enrollment but high enough not to undermine the perceived quality of the programme. It also include effective communication of the programme to current and prospective students and their parents; ensure convenient and assessable delivery of programme; recruit and train the right caliber of staff to manage the process; and put the right systems in place to support effective running of the institutions. Other areas include, providing fitting and comfortable practical facilities in the form of laboratories, workshops and drawing room. Finally, there should be defined hope for the students to enable them identify the future prospects of the programmes they purchase; while at the same time tangible and concrete evidence of achievement in the field of technical education are made manifest; and designing programmes that give credence to entrepreneurial acumen.

The primary driving force behind this marketing mix has been the quest for students' value maximization and enhances stakeholders' ability to do cost-benefit analysis of the investment in technical education. If the unique feature of the institution's programme is skill and professional development, if the programme is industry relate, if the programme promises jobs, then the theoretical foundations of choosing technical university is supported. The important difference between the technical universities and the tradition universities is the emphasis which the current marketing mix model brings to the fore for the provision of the technical university education in Ghana. It is the task of the institutions to turn each decision of the customer to concrete actions, from the need recognition to the post-purchase reaction.

This paper has attempted to adapt and expand the previous literature on marketing mix model by given due attention to application of marketing to the study of technical university education. The emphasis upon the 10Ps marketing mix model as the primary actor in marketing technical university is essential to analysing the reengineering of polytechnics to technical universities and the role of the institutions to create a market niche.

Research shows that though technical education has been a powerful influence in development planning, indiscriminately offering of technical education may have negative impact on development (Bennell, 1996). Thus, it behooves on government not to rush into transforming

all polytechnics to technical universities. A polytechnic institution must meet the required set standard before it is roved into the technical university status. The process should be gradual and be based on a polytechnic's readiness so as to produce the desired human capital (Colin, 1999; Alam, 2007)

LIMITATIONS AND FUTURE RESEARCH

In fact, what seems to be missing in this analysis is that in order to achieve a better understanding of the marketing strategies and mix, and reach into an effective marketing strategy, there is the urgent need to understand customer demands, preferences and buying behaviour empirically. In other words, the design of each of the marketing mix elements should depend on customer analysis from a survey (Peter & Olson, 2008). However, since this study is more of a model building than empirical study, no such data were collected. Future studies can consider collecting empirical data to test the model developed to add more coherence, relevance and depth to the issue of technical education marketing.

References

- Akerele, W. O. (2007). Management of Technical and Vocational Education in Nigeria: Challenges of the Country. Journal of Educational Administration and Planning: 3(1) 11-21.
- Akonkwa, D. B. M. (2009). „Is market orientation a relevant strategy for higher education institutions? Context analysis and research agenda", International Journal
- Al-Alak, B. (2006) The impact of marketing actions on relationship quality in the higher education sector, Journal of Marketing for Higher Education, 16(2), 1-23.
- Alam, G.M. (2007). Private HE in Bangladesh: the impact on HE governance & legislation. Unpublished PhD thesis, University of Nottingham, United Kingdom.
- Amaral, A. & Magalhaes, A. (2007) Market competition, public good and institutional governance: analysis Portugal's experience, Higher Education Management and Policy, 19(1), 51-65.
- Armstrong, C. E., & Shimizu, K (2007) A Review of Approaches to Empirical Research on the Resource-Based View of the Firm. Journal of Management, 33, 959-986.
- Armstrong, J., & Lumsden, B. (1999) Impact of universities' promotional material on college choice, Journal of Marketing for Higher Education, 9(2), 83-91.
- Barney, J. & Clark, D. (2007). Resource-based Theory: Creating and Sustaining Competitive Advantage. New York: Oxford University Press.
- Barney, J. & Hesterly, W. (2012). Strategic management and competitive advantage: Concepts and cases (4th ed.). New Jersey: Pearson.
- Barney, J., Ketchen, D. & Wright, M. (2011). The Future of Resourcebased Theory: Revitalization or Decline? Journal of Management, 37(5) 1299–1315.
- Beckie, S. (2009) The psychology of college pricing, Chronicle of Higher Education, 55(33).
- Bennell, P. (1996). General versus vocational secondary education in developing Country: A review of rates of return evidence. The Journal of Development Studies, 33(2), 230-247.
- Blumenstyk, G. (2006) Marketing: the for-profit way, Chronicle of Higher Education, 53(15)
- Bowles, S & Gintis, H. (1975). "The Problem with Human Capital theory – A Marxian Critique," American Economic Review, 65(2) 74–82.
- Bozick, R. & Dalton, B. (2013). Career and Technical Education and Academic Progress at the End of High School: Evidence from the Education Longitudinal Study of 2002. Research Triangle Park, NC: RTI International.
- Brassington, F. (2006) Principles of Marketing (4th ed.). Harlow: Prentice Hall.

- Coleman, M. (1994) Marketing and External Relations, In T. Bush & J. West-Burnham (Eds.), The Principles of Educational Management (pp. 361-386). Harlow: Longman.
- Colin, N.P. (1999). Technical and vocational education for the twenty first century. Prospect, 29(1) 29-36.
- Corwin, Z. & Tierney, W. (2007) Getting there - and beyond: building a culture of college-going in high schools, Centre of Higher Education and Policy Analysis, University of Southern California: California.
- Crook, T. R., Todd, S. Y., Combs, J. G., Woehr, D. J., & Ketchen, D. J. (2011). Does human capital matter? A meta-analysis of the relationship between human capital and firm performance. Journal of Applied Psychology, 96(3): 443 - 456.
- Cubillo, J., Sanchez, J. Cervino, J. (2006) International students' decision-making process, International Journal of Educational Management, 20(2), 101-115
- Dennis, M. (1998) A Practical Guide to Enrolment and Retention Management in Higher Education. Westport: Bergin and Gravey.
- Eckel, P. (2007) Redefining competition constructively: the challenge of privatisation, competition, and market-based state policy in the United States, Higher Education Management and Policy, 19(1), 1-17.
- El-Khawas, E. (1999) The 'new' competition: serving the learning society in an electronic age, Higher Education Management, 11(2) 7-17.
- Erhurua, H.E.O. (2007). Skills Acquisition: A Tool for Youth Empowerment for Economic Growth and Development. Journal of Business and Management Studies: 1(2) 116-125.
- Foskett, N., & Hemsley-Brown, J. (2001) Choosing Futures: Young People's Decision making in Education, Training, and Careers Markets, London: Routledge Falmer.
- Frumkin, L., Milankovic, M., & Sadler, C. (2007) Postgraduate preferences: a study of factors contributing to programme satisfaction amongst masters students, New Horizons in Education, 55(2), 37-54.
- Garba, A.S (2010) Reinforcing Education System towards Entrepreneurship Development in Nigeria: A Tool for Poverty Eradication, European Journal of Social Sciences, 15(1) 140 – 150
- Gibbs, P., & Knapp, M. (2002) Marketing Higher and Further Education: an Educator's Guide to Promoting Courses, Departments and Institutions. London: Kogan Page.
- Gray, L. (1991) Marketing Education. Buckingham: Open University Press.
- Gurol, Y. & Atsan, N. (2006) "Entrepreneurial Characteristics among University Students: Some Insight for Entrepreneurship Education and Training in Turkey, Education & Training, 48(1) 25 – 38.
- Hafer, J. & Gresham, G.G (2008) Organisational Climate Antecedents to the Market Orientation of Cross-Functional New Product Development Teams. Journal of Behavioural and Applied Management, 9(2) 184.
- Hammond, K. L., Harmon, H. A. & Webster, R. L. (2007). University performance and strategic marketing: and extended study", Marketing Intelligence & Planning, 25(5) 436-459.
- Harris, M. (2009) Message in a bottle: university advertising during bowl games, Innovative Higher Education, 33(5) 285-296.
- Heiner, R. (March 2008). "Relevance of education and intelligence at the national level for the economic welfare of people". Intelligence 36 (2) 127–142.
- Helfat, C.E. & Peteraf, M.A. (2003). The Dynamic Resource-Based View: Capability Life-Cycles, Strategic Management Journal, 24, 997-1010.
- Hemsley-Brown, J. & Oplatka, I. (2006). Universities in a competitive global marketplace: A systematic review of the literature on higher education marketing. International Journal of Public Sector Management. 19(4) 316-338.
- Holdsworth, D. & Nind, D. (2005) Choice modelling New Zealand high school seniors' preferences for university education, Journal of Marketing for Higher Education, 15(2), 81-101.

- Hollensen, S. (2003) Marketing Management: a Relationship Approach, Harlow: Financial Times & Prentice Hall.
- Ivy, J. & Naude, P. (2004) Succeeding in the MBA marketplace: identifying the underlying factors, Journal of Higher Education Policy & Management, 26(3) 401-417.
- Ivy, J. (2008) A new higher education marketing mix: the 7Ps for MBA marketing. International Journal of Educational Management. 22 (4) 288-299.
- Jaison, A.R. & Richard, D. (2012). "Do Colleges and Universities Increase Their Region's Human Capital?". Journal of Economic Geography 12 (3) 667.
- Jobber, D. (2004) Principles and Practice of Marketing (4th Ed.), London: McGraw-Hill Higher Education.
- Kantis, H, Ishida, M & Komori, M (2002) Entrepreneurship in Emerging Economies: The Creation and Development of New Firms in Latin American and East Asia, Inter American Development Bank, Washington
- Keat, O.Y, Selvarajah, C & Meyer, D (2011). Inclination towards Entrepreneurship among University Students: An Empirical Study of Malaysian University Students, International Journal of Business and Social Science, Vol. 2 (4)
- Kirp, D. (2003) Shakespeare, Einstein, and the Bottom Line: the Marketing of Higher Education, Cambridge, Massachusetts: Harvard University Press.
- Kotler, P. & Armstrong, G. (2008) Principles of Marketing (12th Ed.), Upper Saddle
- Kotler, P. (1999) Kotler on Marketing: How to Create, Win, and Dominate Markets, New York: Free Press.
- Kotler, P., & Fox, K. (1995) Strategic Marketing for Educational Institutions (2nd Ed.), Englewood Cliffs, N.J.: Prentice-Hall.
- Kotler, P., Bloom, P., & Hayes, T. (2002) Marketing Professional Services (2nd Ed.), Paramus, N.J. ; London: Prentice Hall.
- Kotler, P., Keller, K.L. (2009) Marketing Management. 13th ed. New Jersey: Prentice Hall.
- Kuratko, D.F & Hodgetts, R.M (2004). Entrepreneurship: Theory, Process and Practice, Thompson Learning, Ohio
- Langerak, F., Hultink, E.J. & Robben, H.S.J. (2004) The Impact of Market Orientation, Product Advantage, and Launch Proficiency on New Product Performance and Organizational Performance. Journal of Product Innovation Management, 21, 79-94.
- Lavie, D. (2006) The Competitive Advantage of Interconnected Firms: An Extension of the Resource-Based View. Academy of Management Review, 31: 638-658.
- Lena, L. & Wong, P.K (2003) "Attitude towards Entrepreneurship Education and New Venture Creation" Journal of Enterprising Culture, 11(4), 339 – 357.
- Lockett, A., Thompson, S., & Morgenstern, U (2009) The Development of The Resource-Based View of the Firm: A Critical Appraisal. International Journal of Management Reviews, 11, 9-28.
- Lovelock, C. & Wirtz, J. (2004) Services Marketing: People, Technology, and Strategy (5th Ed.), Upper Saddle River: Pearson Prentice Hall.
- Lovelock, C. & Wirtz, J. (2013). Services Marketing: People, Technology & Strategy. Upper Saddle River: Pearson Prentice Hall.
- Mahoney, J. T (1995) The Management of Resources and the Resource of Management. Journal of Business Research, 33, 91-101.
- Mahroum, S. (2007). Assessing human resources for science and technology: the 3Ds framework. Science and Public Policy 34 (7) 489–499
- Malik, M. & Naeem, E. B. (2009) Identification of Drivers and Obstacles of Market Orientation among Diversified Industries of Pakistan, A Research Journal of South Asian Studies 24(2) 322-33.

- Maringe, F., & Gibbs, P. (2009) Marketing Higher Education: Theory and Practice, Maidenhead: Open University Press and McGraw-Hill Education.
- McGrath, J. (2002). Attitudes about marketing in higher education: an exploratory study. Journal of Marketing for Higher Education, 12(1) 1-14.
- Moony, S., & Robben, H. (1997) Managing consumers' new product evaluation through direct product experience, Warwick.
- Morgan, N., Slotegraaf, R., & Vorhies, D. (2009). Linking Marketing Capabilities with Profit Growth. International Journal of Research in Marketing, 26(4) 284–293.
- Mullen, A. (2009) Elite destinations: pathways to attending an Ivy League university, British Journal of Sociology of Education, 30(1), 15-27.
- Newman, C. M. (2002). The Current State of Marketing Activity Among Higher of AACSB international business schools", American Journal of Business Education, 5(1) 1-10.
- of Quality and Service Sciences, 1(3) 311-333.
- Okoli, J. N. & Onwuachu, W. C. (2009). Preparedness of STM Teachers to develop Entrepreneurial Skills in Secondary School Students through STM Education. Proceedings of the 50th Annual Conference of Science Teachers Association of Nigeria. 38-46. Ibadan: HEBN Publishers plc.
- Palmer, A. (2001) Principles of Services Marketing (3rd Ed.), London: McGraw-Hill.
- Pasternak, R. (2005) Choice of institution of higher education and academic expectations: the impact of cost-benefit factors, Teaching in Higher Education, 10(2) 189-201.
- Peter, J. & Olson, J. (2008) Consumer Behavior and Marketing Strategy (International Ed.), Boston: McGraw-Hill.
- Pugsley, L. (2004) The University Challenge: Higher Education Markets and Social Stratification, Aldershot: Ashgate. River, NJ: Pearson/Prentice Hall.
- Rumelt, R. P (1984) Towards a Strategic Theory of the Firm. In R. Lamb (Ed.), Competitive Strategic Management: 556-570. Englewood Cliffs, NJ: Prentice Hall.
- Saiti, A. & Prokopiadou, G. (2008). The demand for higher education in Greece, Journal of Further and Higher Education, 30(3), 285-296.
- Sallis, E. (2002) Total Quality Management in Education, London: Kogan Page.
- Samuel, B. & Gintis, H. (1975). "The Problem with Human Capital Theory – A Marxian Critique," American Economic Review, 65(2) 74–82
- Schaper, J.M & Vorely, T. (2004). Entrepreneurship and Small Business: A Pacific Rim Perspective, John Wesley & Sons Ltd, Queensland
- Seet, Pi-Shen & Sheet, Lip-Chi (2006). Changing Entrepreneurial Perceptions and Developing Entrepreneurial Competencies Through Experiential Learning: Evidence from Entrepreneurship Education in Singapore's Tertiary Education Institutions, Journal of Asia Entrepreneurship and Sustainability, 11(2)
- Simkovic, M. (2013). "Risk-Based Student Loans". Washington and Lee Law Review 70 (1) 527
- Sizer, J. (2001), Research and knowledge age, Tertiary Education and Management, 7(3) 227-242
- Stott, K. & Parr, H. (1991) Marketing your School, London: Hodder & Stoughton.
- Tailak, J. (1998). Economics of vocationalization: A review of the evidence. Canadian and International Education, 17(1) 227-236.
- Temple, P. (2009) From space to place: university performance and its built environment, Higher Education Policy, 22(2) 209-223.

- Tierney, W.G. (2008). Remaking the American university: Market smart and mission centered by Robert Zemsky, Gregory Wegner, and William Massey. Journal of Higher Education Columbus Ohio, 79(3) 358-359.
- Townsend, B. (2003) The two-year college as a first choice, second choice institution for baccalaureate-degree holders, Community College Journal of Research and Practice, 27(4) 273-288.
- Venkatachalam, V.B. & Waqif, A.A. (2005). Outlook on Integrating Entrepreneurship in Management Education in India, Decision, 32(2) 57 – 71.
- Vorhies, D.W., & Morgan, N. A. (2005). Benchmarking Marketing Capabilities for Sustained Competitive Advantage. Journal of Marketing, 69(1) 80–94.
- Wade, M., & Hulland, J (2004) Review: The Resource-Based View and Information Systems Research: Review, Extension, and Suggestions for Future Research. MIS Quarterly, 28, 107-142.
- Webster, R. L. & Hammond, K. L. (2012). „An organizational performance study
- White, R., Martin, M., Stimson, M., & Hodge, R. (1991) Management in English Language Teaching, Cambridge: Cambridge University Press
- Wright, R. (1999) Marketing: Origins, Concepts, and Environment, London: Business Press.
- Zebal, M. A. and Goodwin, D. R. (2012). „Market orientation and performance in
- Zhao, Y. (2009). Catching up or leading the way: American education in the age of globalization. Alexandria, VA: ASCD.
- Zymelman, M. (1976). The economic evaluation of vocational training programs. Baltimore: Johns Hopkins University Press.

