

INCORPORATING 11 P'S OF SERVICE MARKETING MIX AND ITS IMPACT ON THE DEVELOPMENT OF TECHNICAL EDUCATION

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ABSTRACT

Technology Education or Technical Education (TE) is a key driver for the growth and development of a country and is essential input for national development and for strengthening of the industry, economy and ultimately improving the quality of life of the people. Rapid and drastic changes in economic growth are creating higher demands for TE. Most of developed countries witnessed economic growth with the promotion of TE in the country. There is a rapid growth of TE in last decade in terms of the no. of institutes and the intake capacity in India. However, there is noticeable gap in between the actual no. of enrollments and intake capacity of these institutes along with poor performance of institutes in terms of service provided specially by private institutions which resulted in enormous unemployment in India. This study is sought to investigate a perception and determination towards accessing TE with 11 P's of Service Marketing Mix rather than traditional service marketing mix of 7 P's. The study discloses different approaches by the service providers (institutions) and service consumers (students) to TE in terms of 11 P's of marketing mix; program, price, place, promotion, people, physical evidence, process, and additional P's; performance, position, pleasure and pointing-out. Findings of the study will be useful for the institutes, government and direct or indirect service providers of TE in developing an effective strategic plan through 11 P's, that will not only boost TE in terms of quantity but also improve quality and performance of the service providers. A quantitative research survey through a structured questionnaire for the students who are studying or have recently completed their TE in engineering, pharmacy and management from the institutes affiliated to the North Maharashtra University, Jalgaon was conducted. The survey is delimited to the TE belonging to North Maharashtra University, Jalgaon and Khandesh region of India.

Keywords: Technical Education/Technology Education, Service Marketing Mix, Higher Education, Program, Price, Place, Promotion, People, Physical Evidence, Process, Performance, Position, Pleasure and Pointing-Out

INTRODUCTION

The aim of this paper is to discuss a new marketing mix based on TE students' attitudes and opinions towards the marketing initiatives undertaken by the service providers in Khandesh region of India. In the scenario where the gap in between the expectations & experience is more in terms of quantity and quality of diversified TE enrollments scattered in rural and tribal area, we felt 7Ps is not sufficient. This paper reveals additional 4Ps (students' attitudes and opinions towards Performance, Position, Pleasure and Pointing-out) to understand TE scenario in depth. A holistic approach by addition of 4P's as stated above; we also recognized that the diversified

enrollments will be motivated towards TE much better than earlier. Such enrollments will be easily attracted and retained in TE. The services delivered through 11Ps will result in better performance of enrollments in terms of knowledge and skill enhancement which will make them capable to compete globally producing satisfaction among stakeholders. This approach also focuses on the relationships of stakeholders that facilitate reference marketing (pointing-out) to attract and aware enrollments at their own. This approach also takes competitor's strategies (positioning) into consideration which can be utilized to adopt benchmarking of the services. The 11 P's approach can be used to proceed to not only growth but the holistic development (performance) of TE in proper direction. 11 Ps of service marketing mix can create a service that corresponds to the expectations of target market and deliver a value based service. A qualitative research survey through a structured questionnaire for the students who are studying or have recently completed their TE in engineering, pharmacy and management from the institutes affiliated to the North Maharashtra University, Jalgaon was conducted. The responses were obtained on Likert Scale on numerous promotional and service activities carried out by the institutes. Such activities were studied through Primary data collection, received by no. of publications of the institutes available on their websites, interaction with the faculty and students of the institutes and publication of these institutes in print media. The systematic review of the related literatures was done.

LITERATURE REVIEW

Our literature review is organized into two main phases (Cerchione & Esposito, 2016) and is further divided into two steps.

Phase of Papers Acquisition and Selection: Phase 1

1. Material Search: This step included the identification of keywords related to topic of this paper and the choice of databases to be examined (Scopus, Web of Science, etc.). The keyword searched were, higher education, technical/technology education, marketing strategies in service industry, service marketing Ps in education industry etc.
2. Selection: This step included the definition and selection of criteria for inclusion/exclusion of article for review.

Phase of Descriptive and Content Analysis of the Selected Papers: Phase 2

1. Descriptive Analysis: The papers were collected according to different abstract perspectives to give a summary view of the selected papers. In this case all papers highlighting Ps of service marketing clubbed to study in detail.
2. Content Analysis: Papers were reviewed and studied in deep. The analysis of papers highlights strengths and weaknesses in the body of literature, specific findings of literatures and future research needed on the topic.

We have chosen to examine academic journals that focus exclusively on P's of Service Marketing mix applied for the TE. Such journals are peer-reviewed and researches based and are searched through tandfonline.com, Google Scholar, Research ID, Science Direct and Social Science Research Network & Research gate.

By using a marketing approach, new information can be gathered and the decisions can be improved (Maringe, 2005). According to (Darrell & Brain, 2008), the most successful institutes will be those that can do strategic marketing planning carve out niches and fulfill needs

of students by adding valuable services that will drive students to the institution (Laura, 2015) explained relationship marketing concept; a shift in hegemony-from the 4Ps to relationships, networks and interaction. (Ivy, 2008) conducted a quantitative survey of students registered at state subsidized universities in South Africa. The author presented the 7Ps (Program, Price, Place, Promotion, People, Physical evidence and Process) that form the basis of a new marketing mix specifically for MBA recruitment for the development of effective marketing strategy. (Gajic, 2012) explained different combinations of marketing mix; Service (Product), Price, Distribution, Promotion, People, Physical Evidence & Process which provide comparative advantage in education market. The author concludes that modern education providers gain competitive advantage primarily through attractive curricula, renowned teaching staff, which applies modern technologies in performing teaching process and through quick adaptation and reaction to changes or new needs of a background. New ways of communication and service processes, with the help of new technologies, allow more efficient delivery of educational services. The author further added that by analyzing marketing mix, the communication strategy should have a specific approach that builds good image. (Enache, 2011) discussed Product, Price, Placement, Promotion, People, Physical Evidence & Process as a marketing mix for higher education marketing. The author concludes that using the 7 Ps framework a university & institute will be able to create a coherent marketing mix and will be able to address its objectives. (Kotler & Patrick, 1981) specified that though the adoption of a marketing orientation is slow but now many universities and institutes have inculcated the conscious practice of strategic marketing. (Smith & Tamer, 1984) found that many institutes find themselves in reactive positions to refurbish damages left from their inability to adjust as marketing strategy are not at the priority in their administrator's priority list. As per (Jump, 2004) opinion, many academics fear changes and consider a marketing mix approach as a challenge to intellectual integrity hence they still refrain the application of so-called marketing approach. The institutes, those who will be involved in strategic marketing planning and who succeed to reach out niches and fulfill needs of students by adding valuable services will pull the students to the institution, according to (Darrell & Brain, 2008). (Levine, 2000) said that students have so many career choices so service providers must be skilled at selling prospective students on the benefits of their institution over another. (Sathivel, Rajendran & Raju, 2005) believed that demographic variable like type of institutions, gender of respondents, size of institutions, age of institutions and commitment of top management and its leadership, customer focus, course delivery, communication, campus facilities learning environment are the various factors in attracting the prospective students. (Johnson & Jones, 2006) are of opinion that precollege efforts must be extended to attract women into the engineering education and enhance the public understanding of engineering and its contributions to society. (Morrill, 2010) thought that the increased competitiveness has pushed institutes and universities to evaluate their identity and their image, establish what their strengths and weakness and to develop strategies for positioning or repositioning themselves. Competition among government and private institutions, population explosion, government initiatives have enforced the marketing concept in education sector which was not the main concern in the past. In the past few years, the TE market has become more dynamic and complex due to the competition between institutes & universities, different characteristics of diversified enrollments, the political situation which governs the educational policies and unpredicted level of student's and employer's satisfaction. In this situation, the TE providers are looking for new ways to improve their market presence and to increase the satisfaction of the stakeholders. Although they are not fully market oriented, the changing environment and the increasing pressure from social

groups and the public are forcing them to develop service marketing mix.

Although, most of the literature talked about the communication strategies to attract enrollments, very few gave emphasis on the retaining the enrollments, performance of the enrollments during service period, positioning of service providers and act of enrollments for referring service to others after their service utilization (pointing-out). Pointing-out for reference lubricates inclusivity and interaction of all stakeholders. Despite the significant number of studies that have been conducted in marketing education and dealing with the TE, little attempt has been made to translate these findings systematically into a comprehensive review of current knowledge. Hence, we felt a holistic approach to the marketing service mix by the addition of additional 4 Ps to the traditional 7 Ps which was indeed a need of the situation. This offers strong add-ons to the special characteristics of dynamic TE environment and also creates a win-win situation for all stakeholders of the TE.

TE: OPPORTUNITIES AND CHALLENGES IN INDIA

The economic growth of a country largely depends on technological improvements and on its scientific and technical manpower. TE, therefore, has a crucial role in speeding up the country's industrial development. It provides one of the most potent means for development of skilled manpower as required by various sectors in the country's economy. It has made a significant contribution to India's economic development. With this vision and with the establishment of 10th Plan, All India Council for Technical Education (AICTE), New Delhi, (2017) an apex body for Technical Education in India, has promoted TE by raising intake capacity almost twice in last decade. Albeit quality and employability are the main concerns of responsible. Since last three years almost 50% seats were vacant in the country; in 2016-17, enrollments were 18,86,396 against sanctioned intake of 37,01,366. As per the reports of All India Survey on Higher Education, (2016), TE contributes 25% in terms of enrollments in higher education in India with Engineering and Technology was third major stream in terms of enrollment in Higher Education in India in 2015-16.

Opportunities

Initiatives like Smart City development, Skill India, Digital India, Start-up India, FDI enhancement, National Investment & Manufacturing zone, creation of Industrial Corridor will not only make India a global manufacturing hub but it will also generate a huge number of employment opportunities with growing Industrial demand. In India, almost 30% and 50% contribution to GDP is made by Industry Sector and Service Sector, the foundation for this is TE. The Digital India initiative aims to transform India into a digitally empowered society and knowledge economy. This will encourage manufacturing of electronics in India and reduce electronics import and help in job creation too. According to careerride.com (2015) Employment opportunities will be increased for IT jobs too. As per Union IT minister, employment prospects for the sector was encouraging as flagship schemes such as Digital India gain momentum. Hindustan Times India's domestic IT market offers strong prospects for industry growth even if global markets were to face challenges. As per article in Financial Express (2016) Skill India Mission launched to find solutions for making 40 crore citizens employable by 2022.

India's Smart City plan is part of a larger agenda of creating Industrial Corridors between India's big metropolitan cities in India with allocation of US\$1.2 billion for smart cities, US\$83 million allocated for Digital India Initiative. According to article published on

www.makeinindia.com (2016) Smart City projects are expected to create 10-15% rise in employment. The Government of India has allocated US\$13.95 billion in the Union Budget 2014-15 for the education sector, up by 12.3% from the previous year. Union Budget 2014-15 has a plan to have 1,000 private universities for producing trained manpower to meet services and industry requirements along with 100% FDI allowed in the education sector. As per Times of India (2017), NASSCOM has confirmed that the industry continues to be a net hirer and reports that 2.5-3 million new jobs will be created by 2025. As per the news published on DNA (2017), to increase employability with a degree of TE, AICTE, New Delhi is planning to completely revamp syllabus of technical courses across the institutes in the country by addition of job oriented new subjects to bring uniformity in the curriculum in technical institutions throughout the nation. As per the news published in India Today (2016), AICTE has tied up with global online skill assessment firm Wheebox to improve the job skills of students which will conduct employability skill test to give candidates a view of their capabilities and also these capabilities can be assessed by the industry on their knowledge in respective field for the employment.

Challenges

Business Standards (2017) pointed out a survey that had claimed that 95 per cent of engineers in the country are not fit to take up software development jobs. National Employability Report 2016, conducted by job skills matching platform Aspiring Minds (2016) indicated a significant skill gap and revealed that over 80 per cent of engineers in India remain unemployable. There is indeed a real concern about employability because of the large number of Indian engineering students graduating every year, outdated curriculum, poor teaching infrastructure and a shortage of good faculty, said IIT directors, according to a report published by The Economic Times (2017). Dr Vinay Vishwanathan revealed that TE graduates in India have a zero hand-on experience as per the interview posted on the magazine, Outlook (2017). Outdated curricula, teaching methods, quality of teachers and a lack of physical infrastructure have all contributed to the low standards that plague the TE sector, as per the article of AICTE Director published on www.english.manoramaonline.com (2016). A survey by Wheebox Employability Skills Test (WEST) (2016) revealed that only 34%, 37% and 39% of Indian graduates were employable in 2013, 2014 and 2015 respectively. As per the survey of Confederation of India Industry (CII) (2016), carried for 901 technical institutes in 2015, the average composite score secured by the respondent institutes at national level was only 17 (out of 100), based on measurement on the parameters; curriculum, faculty, entrepreneur and development, governance, infrastructure, placement and research and consultancy.

11 P'S OF SERVICE MARKETING MIX INCORPORATED TO TE

There are several studies which found out numerous factors that decides the choice of career of TE. According to (Kallio, 1995), decision of selection of under-graduation and graduate studies are mostly same and similar as; the reputation of the institution, quality and size of program, financial aids/cost of education, geographic and demographic factors. As per (Agarwala, 2008), selection of career choice depends on individual and external factors. Individual factors consist of education, family background, attitudes etc. while external factors include labor market, state of the economy etc.

Program (Product)

TE program like engineering, pharmacy etc. are the products/services of the TE institutes. (Ivy, 2007) correlates the significance of program and curriculum with the desires of the students. (Gajic, 2012) states that at the time of deciding career choice, program/curricula are the priority. (Briggs, 2013) diagnosed that advanced degree, earn more money, change careers, advance their careers by obtaining a required credential and obtain business management knowledge are the top priority while as per (Agarwala, 2008), competencies and abilities are most common factors in deciding selection of MBA career. (Tobias, 2000) discussed that women are disinterested to opt engineering as a career than men as women pursue that engineering is basically mathematics oriented program.

Price

(Ivy, 2007) is of opinion that tuition fee, fee concessions, scholarships, educational loan, fee installments offered by the institutes for their services/program to the students includes in this category. According to (Jacobs, 1999), the price elements of the services marketing mix are the monetary charges or tuition fees occupied for the program offered. Parents of female students and parent belonging to lower income group are less likely to invest in TE due to its educational cost anxiety.

Place

Place is a measured in terms of accessibility, acceptability and convenience of the program/service offered. This refers distance of institute from the targeted students native place. As per (Gajić, 2012), the location can refer to the place where the institute is. Then, it can refer to the characteristics or type of the area where the institute is located. Location can also have a relative meaning, i.e. it can be viewed in relation to where current and future students and high school students live. (Singh, 2007) found that physical safety of the girls and locality of institute as a main priority for selection. The other cause of worry is a long distance of an institute.

Promotion

The promotional communication is made through presentations, print & visual advertisements, digital marketing, displays, internet & social media. (Ivy, 2007) identified that promotion incorporates all the tools that institute can use to provide the market with information on its program/product related offerings; advertising, publicity, public relations and sales promotional efforts etc. (Gajić, 2012) defines promotion is a process of communication between an institute and service user with an aim to create a positive attitude on program and services which create positive image of program/service in market. (Kotler & Fox, 1995) is of opinion that most of educational institutions use public relations and marketing publications for the promotion of services however less focus is given on advertising. (Laurer, 2006) suggested that institutions must coordinate and integrate all the promotional activities to meet the needs of students and parents. As adoption rates of social media by the younger generation is high, (Boyd, 2008) suggested that engaging with social media as a higher education marketing tool can be an attractive tool.

People

Because most services are provided by the people and experienced by the people by their motivation and behavioral characteristics, they make a huge difference in customer satisfaction. Previous Teachers, Alumni, Current-Students, Parents, Siblings, Relatives, Management People and Prospective students themselves affect the decision of selection in TE. As per (Pike & Kuh, 2005), people are a key instrument in educational process. (Bryan, Holcomb, McCoy, Moore-Thomas & Day-Vines, 2009) elaborated that students pursue that their parental and elder sibling's encouragement is a primary reason for deciding selection of institute. (Maduakolam, 2000) believes that institute counselor or staff from institute can build confidence of families in decision making who may otherwise shy to visit and gather information about institute. Parents' discussions and interaction with counselors are an important step toward in making institute decision. (Howard & Levine, 2004) said that many studies have connected parent support and encouragement to institute plans. Similarly, alumni and current student of an institute is important asset as they are the real experience holder of the program and services of institute and their positive words can be more effective in decision of selection.

Process

The procedures, mechanisms and flow of activities which lead to an exchange of value are known as the process. (Ivy, 2007) believed that services are often realized in many steps, mixture of such a number of steps constitutes the service process. Process includes flow of activities like; Teaching Learning Methods, Research Activities, Campus Placements, Industry Interactions & Tie-Ups, Co & Extra-Curricular Activities, Alumni Interaction, Soft Skills & Technical Skills services etc. According to (Sahu & Shrivastava, 2008), there are seven major heads; Administration, Infrastructure, Teaching Effectiveness, Students, Interaction with Industry and Society, Extra-Curricular Activities, Research and Development, which contributes to the effectiveness of process.

Physical Evidence

Because the educational product is intangible the physical evidence plays a major role as a proof of the product that is going to be delivered-a match between expectations and perceptions. The physical layout of a service facility can greatly affect students' satisfaction. It includes state-of-art technology, building, total ambience, parking facility, playground, gymnasium, swimming pool, indoor stadium, transportation facility, hostel, class room facility, computer laboratory, canteen, library etc. (Bonnema & Van der, 2008) grouped factors like; university, college, employability aspects, course content, student experience, sporting aspects, financial aspects, direct sources, media sources and social sources to verify physical evidence.

Performance

Marketing performance is the systematic management of marketing resources and processes to achieve measurable gain in return on investment and efficiency, while maintaining quality in customer experience. [Edited from American Marketing Association, 2005]. Productivity and performance scrutinizes how well an institute's services develops students' ability, their performance in examination and enhance their skills for making them employable.

The performance of institute can be measured on ability of institute's services that translate into benefits of students as it is being delivered. (Sharon, 2008) said that various qualities like judgment, experience and understanding of social complexities, creativity and visual skills, which are not generated by technical curriculum, are important to measure performance of TE. Performance can be view as final product of this process. Thus, performance of TE is the measurement of improvement and development achieved in knowledge and skill enhanced by the students while learning TE.

Positioning

(Maggard, 1976) defined positioning as a place or perception that a service occupies in the mind of the customer and how it is eminent from competitor's services. Positioning includes building a brand's reputation and competitive standing. (Ostasevičiūtė & Šliburytė, 2008) believed that to be successful in a market a service must occupy an explicit, distinct, unique and proper place in the minds of all potential and existing consumers. In general, it is a higher order 'P' of service marketing mix that drives on the foundation of the other previous 'P's. Generally, technical institutes position themselves based on supportive and extension services like placements, industry linkages, teaching-learning etc.

Pleasure

(Kotler & Clarke, 2012) defined pleasure or satisfaction as a state felt by a person who has experienced service performance or an outcome that fulfill his or her expectation. (Qureshi, Shaukat & Hijazi, 2011) believed that Educational institutions use certain methods to determine the level of their students' satisfaction regarding the services and programs they offer to fulfill student needs and satisfy student aspirations. If the institute knows the factors that improve students' perception of satisfaction, it can provide better services to the students however, the main problem is to find out such factors. (Farris, Neil, Phillip & David, 2010) defined customer satisfaction as the number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals. The type of pleasure differs from student to student; some might be pleased with the services or some might be pleased with the infrastructure provided by the institute.

Pointing-Out as a Reference

It is most important mix which is related to pleasure of service offered which means willingness to recommend or refer the service to others. This is what the institute shall be more concerned about. (Jansen, Zhang, Sobel & Chowdury, 2009) defined referral marketing (pointing-out) as a method of promoting products or services to new customers through referrals, usually word of mouth from existing customers. This can be accomplished by encouraging and rewarding customers, and a wide variety of other contacts, to recommend products and services from consumer and B2B brands, both online and offline. Writing positive comments on the institute's social networking sites, give likings and comments for the posts on social networking sites like; LinkedIn, Facebook, Tweeter etc. and guiding students towards programs and services offered by the institutes also is a referral activity. In the case of TE, Alumni or the Present students who are the real experience holders act as a referral to the prospective students and to the parents. (Farris, Neil, Phillip & David, 2010) said willingness to recommend or pointing-out

as a reference is a key metric relating to customer satisfaction i.e. pleasure; more the pleasure more is the act of pointing-out to others as a reference. 11 P's incorporated across the students' life cycle of TE is shown in Figure 2.

RESEARCH METHODOLOGY

A quantitative research through a survey was made which comprised of a structured questionnaire sent through e-mail to the current-students enrolled and recently passed-out students belonging TE affiliated to North Maharashtra University. Sample size (n) was calculated at 95% Confidence Level for which Standard Normal Variate (Z) is 1.96 & at Standard Error (e) of 0.03 by $n = Z^2 (p) (1-p) / e^2$; where n=Sample Size to be used for this study, N=unknown population, p=Estimated Portion of Population N. For p=80%, 'n' comes out to be 670. However, sample size of 674 was selected by quota sampling from students enrolled in or recently passed out from technical institutes. The Google form with questionnaire was sent through E-mail to the respondents which comprised structured and fifty-eight closed ended questions measuring importance, perception and experience on market mix activities of the institutes; program, price, place, promotion, people, physical evidence, process, performance, position, pleasure and pointing-out as a reference. To measure significance and impact made by service marketing mix, respondents were asked to weight on a scale ranging from 0 to 5 on their perceptions/experience on service marketing mix. Mean of responses received on each marketing mix activity was calculated by statistical software MiniTab 17 which is shown in Figure 1.

DATA INTERPRETATION AND OBSERVATIONS

[1] Program									
				<i>Mean</i>	<i>St. Dev</i>				
1	Importance of Program			4.16	0.97	5	Face-to-Face counselling	2.5	1.88
2	Age of Institute/Program			3.21	1.67	6	Educational Fairs	2.48	1.83
3	Program anxiety			<i>Responses</i>	<i>%</i>	7	Leaflet/Brochure	2.75	1.74
	A Hard			494	73.29	8	Sponsorship	2.46	1.87
	B Easy			180	26.71	9	Publicity	2.74	1.84
4	Reasons for joining Program			<i>Mean</i>	<i>St. Dev</i>	[6] Process			
	A Job Prospectus and Career			3.54	1.52			<i>Mean</i>	<i>St. Dev</i>
	B Better quality of life			3.68	1.51	1	Faculty & Teaching Learning	3.61	1.59
	C Talent & Strength			3.53	1.49	2	Placement Activities	3.28	1.7
	D Entrepreneurship			2.91	1.71	3	Industry Interactions & Tie-up	3.09	1.69
[2] Place						4	Co & Extra Curricular Activities	3.11	1.69
				<i>Responses</i>	<i>%</i>	5	Alumni Interaction services	3.1	1.7
	<i>Institute Distance from Native Place</i>					6	Soft & Technical Skill services	3.51	1.62
	10 Km			119	17.66	7	Research Activities	2.9	1.74
	21-20 Kms			91	13.50	[7] Physical Evidence			
	321-50 Kms			74	10.98			<i>Mean</i>	<i>St. Dev</i>
	451-100 Kms			197	29.23	1	Infrastructure & Technology	3.58	1.57
	5101-200 Kms			128	18.99	2	Amenities & Recreation	3.25	1.61
	6Above 200 Kms			65	9.64	3	Library & Computational Facilities	3.46	1.62
	<i>Localit /Native Place</i>					4	Safety, Security & Medical Facilities	3.06	1.73
	1 District (Urban)			163	24.18	5	Gradation & Accreditation	3.2	1.64
	2 Taluka			284	42.14	6	Sports & Cultural Activities	2.85	1.81
	3 Village			227	33.68	7	Finance & Scholarship Services	3.04	1.72
	<i>Institute Locality</i>					8	Campus Life & Discipline	3.5	1.69
	1 District (Urban)			57	8.46	[8] Performance			
	2 Taluka			594	88.13			<i>Mean</i>	<i>St. Dev</i>
	3 Village			23	3.41	1	General Knowledge	3.23	1.49
	<i>Importance to Institute-Native Place distance</i>					2	Intelligence Quotient	3.34	1.48
						3	Technical Skills	3.59	1.4
						4	Soft Skills	3.56	1.45

	Mean	St. Dev					
				5	Group/Team Development	3.5	1.49
	2.64	1.844		6	Leadership	3.34	1.53
[3] People				7	Confidence Level	3.54	1.49
				8	Stress handling ability	3.59	1.51
1	3.13	1.79		9	Creativity/Idea generation	3.45	1.51
2	2.43	1.88		10	Hardworking ability	3.8	1.44
3	2.14	1.82		[9] Positioning			
4	2.4	1.83		(Comparison with Competitors)	Mean	St. Dev	
5	2.22	1.9		1	Promotional activities	2.56	1.77
6	2.06	1.86		2	Service activities	3.31	1.67
7	1.86	1.86		[10] Pleasure of selection			
8	2.33	1.94			Responses		%
9	3.42	1.67		1	Completely Satisfied	388	57.57
10	3.66	1.62		2	Somewhat Satisfied	233	34.57
[4] Price				3	Somewhat Dis-Satisfied	45	6.68
				4	Completely Dis-Satisfied	8	1.19
Mean				[11] Pointing-out for reference			
Cost of Education	2.65	1.81			Responses		%
[5] Promotion				1	Will refer for admission	518	76.85
				2	Can't Say	139	20.62
1	2.23	1.77		3	Will not refer for admission	17	2.52
2	2.35	1.78					
3	2.78	1.76					
4	2.74	1.79					

Figure 1
RESPONSES RECEIVED ON 11 P'S OF SERVICE MARKETING MIX OF TE

- Students are well-known to TE and are known about the importance of program, with mean of 4.16. They have shown greater importance to the age of institute/program with a mean of 3.21 while selecting an institute of TE. The major reason for joining TE is better quality of life (with mean 3.68) followed by job prospectus and career, self-talent and strengths. However, it is found that entrepreneurship is a less motivator factor to join TE. 73.29% of respondents expressed that they think the technical program is hard to achieve or learn.
- In general students do not think distance as a major factor to join TE (mean 2.64). However, almost 71% students prefer taking their TE within a periphery of 100 Km.
- Students have a major impact of their own decision (mean=3.66) followed by management people, parents, siblings, staff of institute, current students, friends and peer, relatives, alumni and previous teacher. These shows management images of these institutes have a strong impact on the students. However, the institutes have failed to gain a 'word of mouth' through their alumni (mean=2.06) and current students (mean=2.22).
- Costs of education do not affect the enrollments to TE.
- The institutes lag in their overall promotional activities (mean ranging from 2.78 to 2.23) with the most attractive promotional strategy is being institute website (mean=2.78) followed by leaflet-brochures (mean=2.75) and social networking (mean=2.74), publicity (mean=2.74). Other traditional sources like advertisement, banner/hoardings, and educational fairs are not much attractive.
- The students' response to faculty and teaching learning is high (mean=3.61) than the other process or services delivered by the TE institutes where research activities (mean=2.9), indicates that TE institutes have not paid much attention.
- TE institutes have provided satisfactory infrastructure (mean=3.58), followed good library and computational facilities (mean=3.46) and amenities and recreation facilities (mean=3.25). On the other hand, institutes have failed to provide expected facilities on sports and cultural (mean=2.85), safe, security and medical facilities (mean=3.06).
- With the process, services and facilities provided by the TE institutes, students are able to gain on hardworking ability (mean=3.8), stress handling ability and technical skills (mean=3.59), soft skills (mean=3.56), confidence level (mean=3.54). However, these service and processes of TE unsuccessful to develop most demanded employability skills like; general knowledge, intelligence quotient, leadership and creativity up to the expectations.
- Students responded that promotional activities of their institute could have been better (mean=2.56). They feel their institute's services are better than the competitors (mean=3.31).

- 57.57% of respondents are completely satisfied with the services and facilities provided by the TE institutes.
- 76.85% of respondents will likely to refer their institutes and programs to the prospective students of TE.

EMPIRICAL FINDINGS AND DISCUSSIONS

Students do not think TE as a base for entrepreneurship. Students pursued that TE is a hard to achieve or learn. This is may be due to non-awareness to TE, improper guidance from school teachers and alumni of TE. The institutes have not given priority to traditional promotional activities. Students are keen to search and gather information from institute websites and social networking sites i.e. e-Promotion for selecting an institute which is gaining importance due to empowering effect, elimination of geographic barriers, target reaching, immediate results, cost effective, reaching wider or international auditory, measurable result, can be personalized, relationship build, 24 hours/seven days" availability. Cost of education and distance of institute do not affect much on the selecting an institute. This is because of most of the burden i.e. admission fee is reimbursed to the students belonging to the category students (up to 100% fee reimbursement) and economic backward class (50% fee reimbursement) by the government. Also 5% students join under Tuition Fee Waivers Scheme (100% tuition fee waiver) of AICTE. Institutes have failed to connect previous teacher/school, current students and alumni in promoting TE and having a word of mouth to perspective students. Institutes have not given importance to the research activities, sports and cultural activities, accreditation and gradation. Students 'satisfaction is more associated with the supporting services and extension services than operating services. Institutes services are directed to develop other skills rather than employability skill which make the students employable for industry. Institutes have not given ample priority to promotional activities. Students refer their program or institute when they are satisfied with the services offered by the institutes.

11 P'S AND PRACTICAL IMPLICATIONS FOR POLICY MAKERS

TE services shall be driven on Five Pillars; make it easy, make it relevant, make it fresh, manage it, measure it. Market scanning is essential for every Technical Institute (TE) institute along with government regulations and policies. The program/curriculum shall be scrutinized periodically in the line with industry demands and economic reforms of the country. The curriculum has to be broad-based and flexible to meet the challenges of the new emerging job markets. On the other hand, institute shall not ignore rising students' expectations and demands of global competition. TE institutes must become more responsive to changing labor markets and students' interests.

It is important to know institutes strongest influencers, so that the institute can create a communication strategy that incorporates them into the outreach process. All influencers are needed to work to explore all possible avenues towards the growth and development of TE by motivating the prospective students towards TE and the institutes will act a lubricant for their relationships and bonding. It is a desperate need of time to promote TE right from schooling education. However, it shall be responsibilities of society as a whole. The institutes must accept the motive of accreditation for encouraging excellence in technical institute. Since technology has become the key factor in deciding the course of development of any nation, there is a need to encourage technology up-gradation of the TE institutes in accordance to the industries, therefore enhancing the research potential of the institutes. The institutes shall tie-up with major TE like IITs and IIMs for knowledge sharing through ICT based education (E-learning). The

collaborative initiative like the Indo-US networking program though is innovative in nature shall be exploited to form Virtual University.

Every student should be given apprenticeship and on job training opportunities that is enrolled in TE. This will lead to availability of trained human resources to the industries of the region. Also, skill development in soft and technical skill and industry interaction shall be a part of curriculum rather than desirable. It is a worth enough to quote “as you sow, you reap” which means Educators and Service providers must think about employability skills as a shift from teaching to training, from after-thought to proactive action, from discretionary indulgence to mandatory and embedded services. The upgradation of such skills will widen placement opportunities for the students in the industries and service sector. The AICTE shall extend their efforts for placements through their common platform.

Technical Institutes should take the lead and play a pivotal role in inspiring and influencing all those connected (students-institutes-government-AICTE-industry-society) with TE to implement e-governance to enhance the quality of TE and to eradicate mismanagement.

An ideal state in a process of inclusion is one where minorities are totally empowered. In this case, it means that women, poor, physically disabled shall be empowered to make choices in all spheres of life and that the same opportunities available to anyone. Table 1 explains about strategy formulation with 11 p’s for policy makers

Students, Life Cycle		
Pre-Student	Student	Alumni
Program		
Place		
People		
Price		
Promotion		
Process		
Physical Evidence		
Performance		
Positioning		
Pleasure of selection		
Pointing-out for reference		

Figure 2
11 P’S INCORPORATED ACROSS THE STUDENTS’ LIFE CYCLE OF TE

Table 1		
STRATEGY FORMULATION WITH 11 P'S FOR POLICY MAKERS		
Mix	Strategic Plan	Policy
Program	TE awareness & Career counseling programs	Awareness
Place	Making convenience for rural, tribal & urban	Retention
People	Relationships through social networking, meetings, sponsored and community engagement programs	Interaction & Relationships
Price	Offering scholarships, installments, loan facilities etc.	Attraction & Retention
Promotion	Publication in Print & visual media. Social networking, Website. News publications.	Attraction & Retention
Process	Information & Communication based Technology learning. Industry & Alumni linkages. Research & consultancy. Add-on & skill enhancement programs. Placement assistance. Career guidance.	Retention
Physical Evidence	Infrastructure & amenities, Computational facilities, Safe & secured campus, Sports facilities, Technology up gradation	Attraction & Retention
Performance	Performance measurement of students experiencing services in terms of skills enhancement & knowledge, aptitude, employability skills etc.	Performance measurement
Positioning	Positioning of the institute in terms of promotional activities and services delivered. Benchmarking of services & infrastructure.	Benchmarking
Pleasure	Satisfaction in terms of selection of the institute. Satisfaction of availing services that has been perceived.	Satisfaction
Pointing-out	Reference marketing. Involving & Interaction of all stakeholders to refer services experiences to others for the program.	Referring & mouth-mouth publicity

CONCLUSION

Creating a sustainable world that provides a safe, secure, healthy, productive, and sustainable life for all peoples should be a first priority for the Indian TE profession. 11 P's of service marketing mix shall be seen beyond the source of attracting students towards retention, relationships, performance & satisfaction of TE stakeholders. The efforts shall be extended to make them employable and delivering employment for them. The marketing mix shall not be limited to the institutes/service providers, but shall be responsibility of the government, NGOs and community as a whole. The strategic marketing mix must broaden the image and vision from technical to techno-social for India to be super-power.

REFERENCES

- Agarwala, T. (2008). Factors influencing career choice of management students in India. *Career Development International*, 13(4), 362-376.
- AICTE, New Delhi. Retrieved May 16, 2017, from <http://www.aicteindia.org/dashboard/pages/dashboardaicte.php>
- All India Survey for Higher Education. (n.d.) Retrieved July 26, 2017, from <http://aishe.nic.in/aishe/reports>
- Aspiring Minds: A National Employability Report. (n.d.) 5th edition Retrieved Jan, 2016, from <http://www.aspiringminds.com/news/aspiring-minds-releases-5th-nationalemloyability-report-engineers>
- Bonnema, J. & Van der W. (2008). Information and source preferences of a student market in higher education. *International Journal of Educational Management*, 22(4), 214-227.
- Boyd, D. (2008). Why youth (heart) social network sites: The role of networked publics. *Youth, Identity, and Digital Media*, 119-142.
- Briggs, L. (2013). *Factors prospective students consider when selecting an MBA program*. Master's Thesis, University of South Florida.
- Bryan, J., Holcomb, McCoy, C., Moore-Thomas, C. & Day-Vines, N. (2009). Who sees the school counselor for

- college information? A national study. *Professional School Counseling*, 12(4), 280-291.
- Business Standards* (2017). Why are Indian engineers not employable? IIT heads blame poor infra. Retrieved July 21, 2017, from http://www.business-standard.com/article/currentaffairs/why-are-indian-engineers-not-employable-iit-heads-blame-poor-infra-117050200231_1.html careerride.com.
- Cerchione, R. & Esposito, E. (2016). A systematic review of supply chain knowledge management research: State of the art and research opportunities. *Int. J. Prod. Econ.*, 182, 276-292.
- Confederation of India Industry (CII)*. AICTE-CII Survey of Industry-Linked Technical Institutes. Retrieved Aug 6, 2017, from <http://www.cii.in/publications.aspx>
- Darrell, N. & Brain, C. (2008). Competitive marketing and planning strategy in higher education. *Academic Leadership: Online Journal*, 6(1).
- DNA* (2017). The new syllabus with addition of new subjects to bring uniformity in the curriculum in technical institutions throughout the nation will come into effect from July 1. Retrieved May 8, 2017, from <http://www.dnaindia.com/india/report-aicteto-revamp-syllabus-for-technical-courses-across-india-2430619>
- Enache, I.C. (2011). Marketing higher education using the 7 Ps frameworks: Bulletin of the Transylvania University of Brasov. *Economic Sciences*, 4(1), 23.
- Economics Times*. IIT top bosses raise concerns over Indian engineers' employability. Retrieved June 12, 2017, from <http://economictimes.indiatimes.com/jobs/employability-of-engineers-a-concern-iitheads/articleshow/58466513.cms>
- Farris, W., Neil, T., Phillip, E. & David, J. (2010). *Marketing metrics: The definitive guide to measuring marketing performance*. Upper Saddle River, New Jersey: Pearson Education.
- Financial Express*. Smart city project: Here's how to make youth employable. Retrieved Aug 5, 2017, from <http://www.financialexpress.com/economy/smart-city-project-heres-how-to-makeyouth-employable/297566>
- Gajic, J. (2012). Importance of marketing mix in higher education institutions. *Journal of Applied Sciences*, 9(1), 29-41.

- Hindustan Times. (2017, May 23). IT job prospects 'encouraging' with Digital India, Prasad says. Retrieved Aug 9, 2017 from <http://www.hindustantimes.com/business-news/it-job-prospects-encouraging-with-digital-india-prasad-says/story-vZWCb5z7Cq2mOIfCvARviJ.html>
- Howard, A. & Levine, A. (2004). Where are the poor students? A conversation about social class and college attendance. *About Campus*, 9(4), 19-24.
- Indiatoday.in. (2016, Sep 17). AICTE enters into collaboration with Wheebox to improve students' job skills. Retrieved April 22, 2017 from <http://indiatoday.intoday.in/education/story/aicteenters-into-collaboration-with-wheebox-to-improve-students-job-skills/1/766525.html>
- Ivy, J. (2008). A new higher education marketing mix: the 7Ps for MBA marketing. *International Journal of educational management*, 22(4), 288-299.
- Jacobs, J. (1999). Gender and the Stratification of Colleges. *The Journal of Higher Education*, 70(2), 161-187.
- Jansen, B., Zhang, M., Sobel, K., and Chowdury, A. (2009). Twitter Power: Tweets as Electronic Word of Mouth. *Journal of the American Society for Information Sciences and Technology*, 60(11), 2169–2188
- Johnson, W. C., & Jones, R. C. (2006). Declining interest in engineering studies at a time of increased business need. *Accreditation Board for Engineering and Technology*.
- Jump, J. (2004). A Prescription (or Reclaiming College Admission as a Profession. *Journal of College Admission*, 184 (Summer), 12-17
- Kotler, P and Patrick, E. (1981). Strategic Planning for Higher Education. *Journal of Higher Education*, 52 (September-October), 470-489
- Kotler, P., & Clarke, R. N. (2012). *Marketing for health care organizations*. New Jersey: Prentice-Hall, 1987.
- Kotler, P. and Fox, K. (1995). *Strategic Marketing for Educational Institutions*. New Jersey: Prentice-Hall.
- Laurer, L. (2006). Advancing higher education in uncertain times. Retrieved May 17, 2017 from <http://heionline.org/HOL/LandingPage?handle=hein.journals/hwlj29&div=13&id=&page=>
- Laura, P. A. (2015). Dilemmas on Student's Place in Defining the Higher Education Institutions' Marketing Strategy. *Marketing*, 1009, 4Ps. *Ovidius University Annals, Economic Sciences Series*, 15(1), 600-604
- Levine, A. E. (2000). The future of colleges: 9 inevitable changes. *The Chronicle of Higher Education*, 47(9), B10.
- Maduakolam, I. (2000). Career development theories and their implications for high school career guidance and counseling. *High School Journal*, 83(2), 28.
- Maggard, J. P. (1976). Positioning revisited. *Journal of Marketing*, 40(1), 63-66.
- Maringe, F. (2005). Interrogating the crisis in higher education marketing: the CORD model. *International Journal of Educational Management*, 19(7), 567-578.
- Morrill, R. L. (2010). *Strategic leadership: Integrating strategy and leadership in colleges and universities*. Rowman & Littlefield Publishers.
- Ostasevičiūtė, R. & Šliburytė, L. (2008). Theoretical Aspects of Product Positioning in the Market. *Engineering Economics*, 56 (1). 97-103.
- Outlook. (2017, June 5). Tech Graduates In India Have Zero Hands-On -Experience. Retrieved June 21, 2017 from <https://www.outlookindia.com/magazine/story/techgraduates-in-india-have-zero-hands-on-experience/298904>
- Pike, G. R., & Kuh, G. D. (2005). First-and second-generation college students: A comparison of their engagement and intellectual development. *The Journal of Higher Education*, 76(3), 276-300.
- Qureshi, T., Shaukat, M. and Hijazi, S. (2011). Service Quality SERVQUAL model in Higher Educational Institutions, What Factors Are to be Considered. *Interdisciplinary Journal of Contemporary Research in Business*. 2(5). 281-290.
- Kallio, R. E. (1995). Factors influencing the college choice decisions of graduate students. *Research in Higher Education*, 36(1), 109-124
- Sahu, A. R., Shrivastava, R. L., & Shrivastava, R. R. (2008, July). Key factors affecting the effectiveness of technical education—an indian perspective. In *Proceedings of the world congress on engineering* (Vol. 2, pp. 2-4).
- Sathivel, P., Rajendran, G. & Raju, R. (2005). TQM Implementation and students' satisfaction of academic performance. *The TQM Magazine*, 17(6), 573-89.
- Sharon, B. (2008). Towards a More Representative Engineering Education. *International Journal of Applied Engineering Education*, 5(2), 173-182.
- Singh, N. (2007). Higher Education for Women in India--Choices and Challenges. In *Forum on Public Policy Online* (Vol. 2007, No. 1, p. n1). Oxford Round Table. 406 West Florida Avenue, Urbana, IL 61801.
- Smith, L and Tamer, S. (1984). Marketing Planning for Colleges & Universities. *Long Range Planning*. 17(6), 104-117.

The Times of India. (2017, May 24). Employment prospects in IT Sector robust and promising. Retrieved June, 2017 from <http://timesofindia.indiatimes.com/goodgovernance/centre/employment-prospects-in-it-sector-robust-and-promising/articleshow/58821216.cms>

Tobias, S. (2000). Ideology of recruitment of women in science and math. In *National Symposium on the Advancement of Women in Science, Harvard University, Cambridge, MA*.

www.english.manoramaonline.com. (2016, March 5). Perform or perish: Clock ticks for engineering colleges. Retrieved Aug 2, 2017 from <http://english.manoramaonline.com/news/columns/straight-talk/engineering-colleges-in-kerala-lagging-behind-reasons.html>

www.makeinindia.com. (2016) (n.d.) Smart Cities. Retrieved July 19, 2017 from <http://www.makeinindia.com/article/-/v/internet-of-things>

www.wheelbox.com. (2016). (n.d.) Retrieved from <http://119.81.48.75:8503/WISR>