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"Happy New Year To All"

17TH FACULTY ENTREPRENEURSHIP DEVELOPMENT PROGRAMME

National Foundation of Indian Engineers (NAFEN) organized its 17th two weeks' Faculty Development Programme for Entrepreneurship under the aegis of The National Science & Technology Entrepreneurship Development Board (NSTEDB), Department of Science & Technology, Ministry of Science & Technology, Govt. of India from 22nd December, 2016 to 4th January, 2017 at Tecnia Institute of Advanced Studies (TIAS) New Delhi. The Program was inaugurated on 22nd Dec.2016 by Dr. S K Varshney, Adviser International Division, Department of Science & Technologies (DST). Valedictory function was graced by Prof. Dr. S K Das, Director (R&D) and Dean (Academic), NIMS University, Jaipur, Rajasthan, Sh. Ram Kailash Gupta, Chairman, Tecnia Group of Institutions, Dr. Ajay Rathore, Director, TIAS, Prof. P N Kathuria, Senior Advisor, NAFEN , Prof. (Dr.) P K Gupta, Program Director and Secretary General, NAFEN & Prof. M.N. Jha, M.R, TIAS awarded the merit certificates to all the participants

Some Pics. of the Inaugural Programme



Photographs of Valedictory Programme



Industrial Marketing: An Overview

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Abstract

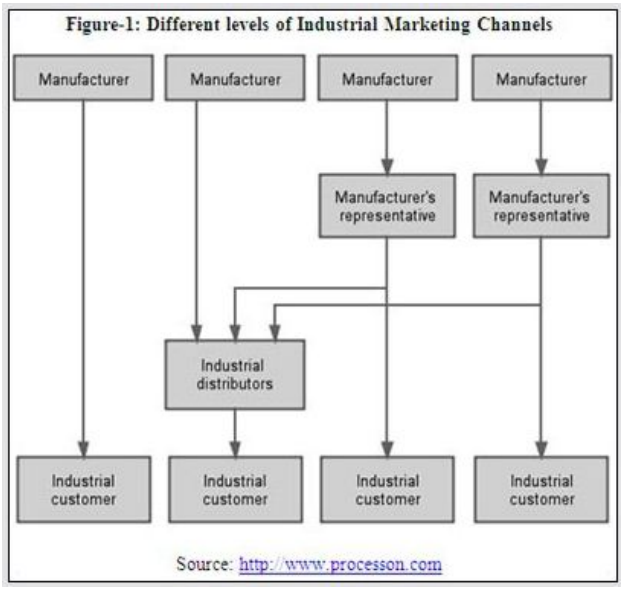
Industrial marketing is a kind of marketing, but it is not the same as consumer marketing. Consumer marketing is the marketing of goods and services by manufacturer to final consumer, but industrial marketing is from one business to another.The industrial market focuses solely on the goods and services provided for producing a separate end product. This paper explains the meaning of industrial marketing and providesthe knowledge about industrial products, industrial markets, buying situations and growth in industrial market. This paper also sheds lighton career opportunities in the field of industrial marketing.

Keywords: marketing, buying, growth, career, market

Introduction

Industrial marketing is the marketing of goods and services to industrial customers for use, in turn, in their own production of goods and services. It involves one business dealing goods or services to another business instead of a consumer base. Also known as the business-to-business market, this market encompasses three distinct variations, including businesses selling goods, businesses selling raw materials and businesses selling services. Each of these three happens in a variety of individual businesses. There are many advantages of this type of market over the traditional consumer market.The industrial market focuses solely on the goods and services provided for producing a separate end product. This is an organizational market with its own advertising, distribution and sales. From automobiles to food, clothes and more, consumer industrial products would not be available without the industrial market first being utilized. Many companies create and market products that have little to no application on the level of the individual customer, so their only clients will be other businesses. A company that makes large-scale manufacturing machinery, for example, is either unlikely or unable to sell that machinery to private individuals because those customers are unlikely to be able to afford it or won't need equipment of such size. The machinery would have to be sold to another business that has both the resources and need to produce large quantities of their own product, such as a mass-market toy factory that needs to create one million units of the same toy each year.

If we talk about the marketing channels for industrial products, they are not same as of consumer products.Industrial distributors, manufacturers' representatives, agents etc. are the members of industrial marketing channels. The figure-1 represents the various marketing channels for industrial products.



Classification of Industrial Products

Industrial products can be categorized as Raw Material and Parts, Capital Items & Supplies and Services. Raw materials are those Industrial products that customers buy for the purpose of manufacturing other goods. In other word, raw materials are those products, which process in the business operation and become the part of other goods. For example; Natural products like coal, petroleum, iron, fish etc.; Farm products like cotton, vegetables, wheat, livestock etc.Manufacturing materials are the parts of those Industrial goods, which are complete in all respect and might have gone all the manufacturing process but ultimate consumer cannot use them until when they combine with another finished product. They become the part of finished goods. For example; yarn, semiconductor, tyres, zipper etc.An

organization's major expensive, long-lived equipments (fixed assets) are called installation. For example; large generator used in Dam, large printing press, long live asset such as machinery etc. The accessory equipments are those industrial products, which are bought by the organization or individual to support the real business operations, they may be revenue nature, or capital nature. For example: typewriter, table, chairs, computer etc.Operating supplies are those products, which are essential for normal business operation. They do not become part of the finish goods. But they just facilitate the business operation. For example; oil, coal, fuel, stationary, cleaning material etc.Industrial services include maintenance and repair services and industrial advisory services. They are usually supplied under contract. For example: computer repairing, management consulting, advertising etc.

Characteristics of Industrial Market

The Industrial market consists of all the organizations that acquire goods and services used in the production of other products or services that are sold, rented or supplied to others. The major industries making up the business market are agriculture, forestry and fisheries; mining; manufacturing; construction; transportation; communication; public utilities; banking, finance and insurance; distribution; and services. More money and items change hands in sales to Industrial buyers than to consumers. Considerthe process ofproducing and selling a simple pair ofshoes.Hide dealers must sell hides to tanners,who sell leather to shoe manufacturers,who sell shoes to wholesalers,who sell shoes to retailers,who finally sell them to consumers.Each party in the supply chain also buys many other goods andservices to support its operations.Industrialmarketers, however, have several characteristics that contrast sharply with those of consumer markets:

Fewer, larger buyers: The Industrial marketer normally deals with far fewer, much larger buyers than the consumer marketer does, particularly in such industries as aircraft engines and defense weapons. The fortunes ofGoodyear tires,Cummins engines,Delphi control systems,and other automotive part suppliers depends on getting big contracts from just a handful ofmajor automakers.

Close supplier–customer relationship: Because ofthe smaller customer base and the importanceand power ofthe larger customers,suppliers are frequently expected to customize their offerings toindividual Industrial customer needs.Industrial buyers often select suppliers that also buy from them.A papermanufacturer might buy from a chemical company that buys a considerable amount ofits paper.

Professional purchasing: Industrial goods are often purchased by trained purchasing agents, who must follow their organizations' purchasing policies, constraints and requirements. Many of the buying instruments—for example, requests for quotations, proposals and purchase contracts—are not typically found in consumer buying. Professional buyers spend their careers learning how to buy better. Industrial marketers must provide greater technical data about their product and its advantages over competitors' products.

Multiple buying influences: More people typically influence Industrial buying decisions. Buying committees consisting of technical experts and even senior management are common in the purchase of major goods. Industrial marketers need to send well-trained sales representatives and sales teams to deal with the well-trained buyers.

Multiple sales calls: A study by McGraw-Hill found that it took four to four and a half calls to close an average industrial sale. In the case of capital equipment sales for large projects, it may take many attempts to fund a project and the sales cycle—between quoting a job and delivering the product—is often measured in years.

Derived demand: The demand for Industrial goods is ultimately derived from the demand for consumer goods. For this reason, the Industrial marketer must closely monitor the buying patterns of ultimate consumers. Pittsburgh-based Consol Energy's coal business largely depends on orders from utilities and steel companies, which, in turn, depend on broader economic demand from consumers for electricity and steel-based products such as automobiles, machines and appliances. Industrial buyers must also pay close attention to current and expected economic factors, such as the level of production, investment, and consumer spending and the interest rate. In a recession, they reduce their investment in plant, equipment and inventories. Industrial marketers can do little to stimulate total demand in this environment. They can only fight harder to increase or maintain their share of the demand.

Inelastic demand: The total demand for many Industrial goods and services is inelastic—that is, not much affected by price changes. Shoe manufacturers are not going to buy much more leather if the price of leather

falls, nor will they buy much less leather if the price rises unless they can find satisfactory substitutes. Demand is especially inelastic in the short run because producers cannot make quick changes in production methods. Demand is also inelastic for Industrial goods that represent a small percentage of the item's total cost, such as shoelaces.

Fluctuating demand: The demand for Industrial goods and services tends to be more volatile than the demand for consumer goods and services. A given percentage increase in consumer demand can lead to a much larger percentage increase in the demand for plant and equipment necessary to produce the additional output. Economists refer to this as the acceleration effect. Sometimes a rise of only 10 percent in consumer demand can cause as much as a 200 percent rise in business demand for products in the next period; a 10 percent fall in consumer demand may cause a complete collapse in business demand.

Geographically concentrated buyers: Different types of industries in India tend to get concentrated in specific regions of different states: The hosiery industry, for instance, is concentrated in and around Coimbatore. The diamond cutting and polishing industry is concentrated in Surat. There are a large number of automobile and auto ancillary industries in Pune and Nasik. Similarly, there is a concentration of the pharmaceutical and chemical industry in industrial townships near Ahmedabad and a large number of software companies are located in Bangalore. The geographical concentration ofproducers helps to reduce sellingcosts.At the same time,Industrial marketers need to monitor regional shifts ofcertain industries.

Direct purchasing: Industrial buyers often buy directly from manufacturers rather than through intermediaries, especially items that are technically complex or expensive such as mainframes or aircraft.

Industrial Buying Circumstances

Business organizations do not only sell, they also buy vast quantities of raw materials, manufactured components, plant and equipment, supplies and Industrial services. To create and capture value, sellers need to understand these organizations' needs, resources, policies and buying procedures. Frederick E.Webster Jr. and Yoram Wind define organizational buying as the decision-making process by which formal organizations establish the need for purchased products and services and identify, evaluate and choose among alternative brands and suppliers.

The business buyer faces many decisions in making a purchase. How many depends on the complexity ofthe problem being solved,newness ofthe buying requirement,number of people involved andtime required.Three types ofbuying situations are the straight rebuy,modified rebuyand new task.There are three common types of buying situations as given below:-

- ✓ New purchase - The industrial buyers buy the item for the first time in this situation. The need for a new purchase may be due to internal or external factors.
- ✓ Change in supplier - This situation occurs when the organization is not satisfied with the performance of the existing suppliers, or the need arises for cost reduction or quality improvement. The change in supplier may also be necessary if technical people in the buying organization ask for changes in the product specification, or marketing department asks for redesigning the product to gain some competitive advantage.
- ✓ Repeat purchase - If the buying organization requires certain products or services continuously and products/services had been purchased in the past then the situation of repeat purchase occurs.

Growth in Industrial Market

The tremendous growth and change that industrial marketing is experiencing is due in large part to three "revolutions" occurring around the world today. First is the technological revolution. Technology is changing at an unprecedented pace, and these changes are speeding up the pace of new product and service development. A large part of that has to do with the Internet. Second is the entrepreneurial revolution. To stay competitive, many companies have downsized and reinvented themselves. Adaptability, flexibility, speed, aggressiveness and innovativeness are the keys to remaining competitive today. Marketing is taking the entrepreneurial lead by finding market segments, untapped needs and new uses for existing products, and by creating new processes for sales, distribution and customer service. The third revolution is one occurring within marketing itself. Companies are looking beyond traditional assumptions and adopting new frameworks, theories, models and concepts. They're also moving away from the mass market and the preoccupation with the transaction. Relationships, partnerships and alliances are what define marketing today. The cookie-cutter approach is out. Companies are customizing marketing

programs to individual accounts. The production of Paints of all kinds, synthetic resins and printing ink during 2012-13 were 7,83,703.71 tones; 1,67,286.00 tones and 2,00,345.41 tons respectively. During 2013-14, the production have been 7,72,075.00 tones; 2,12,639.65 tones and 1,80,520.00 tones respectively.India is tenth in the world in factory output manufacturing sector in addition to mining, quarrying, electricity and gas together account for 27.6% of the GDP and employs 34% of the total workforce. Steel industry has been considered the backbone of India's industrialization programme. During 2012, India maintained its ranking as the 4th largest steel producing country in the world behind China, Japan and the US with a crude steel production of 76.7 million tons (MT) representing a 4.3% growth over 2011. Being a core sector, steel industry tracks the overall economic growth in the long term. Also, steel demand, being derived from other sectors like automobiles, consumer durables and infrastructure, its fortune is dependent on the growth of these user industries. Aluminium industry is of strategic importance in the development of the Indian economy. The electrical sector in India is the most important consumer of Aluminium products with over 50% of the offtake of total production. Cement industry belongs to the core sector of the economy. The production and dispatch figures of cement for the year 2012-13 are 251.96 Million Tones (MT) and 237.63 Million Tones (MT) respectively. The production and dispatch figures for the year 2013-14 are 256.04 MT and 248.70 MT respectively. Fertilizer industry plays a critical role in the growth of the agriculture in the country. Paper and paper products are considered basic to the development of social and general infrastructure of the economy. Besides the industry has an important role in packaging. With rising population, increasing disposable income and the spread of literacy, demand for paper will increase substantially.

Career Opportunities in Industrial Marketing

In the present scenario, world needs marketing managers and executives with competitive skills, who can readily take up the challenges in a fast-changing industrial environment. Companies are generating higher sales volume from industrial sales than from consumer sales. Therefore, it is imperative for them to have marketing experts to serve their industrial customers effectively. It indicates the emergence of a number of career opportunities. There are many different roles at managerial and executive level, which can be assumed in various organizations like; Hindalco Industries, Tata Chemicals, National Steel & Agro Industries, Kribhco Shyam Fertilizers, ACC, Jindal Steels, and many more. These roles may be at different positions as; Manager/Executive- Corporate Sales, Branch Manager-Industrial Sales Division, Manager/Executive- Industrial Marketing, Marketing Executive- Industrial Products, Sales Officer/Executive- Industrial Goods, Brand Executive/Manager, Account/Product Executive, and other related profiles.Participants would also be capable of becoming successful entrepreneurs.

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"The changing face of engineering education in Kerala - An empirical study at engineering colleges in Kerala"

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Abstract:

The engineering education in Kerala is undergoing dramatic changes. Around fifteen years back only cream students went for engineering studies. At present students are joining the course not for passion to engineering stream but as a matter of prestige and pressure from external environment. The scenario is not different among the faculty community also in terms of quality erosion. The present study aimed to find out the impact of age group, educational qualification, experience, extend of participation of faculty members and impact of career development programs on the quality of teaching. The most popular career development tool utilized by faculty members in the field of engineering is attending Seminars. It may be due to the fact that it is an easy task. The research revels that the majority of faculty members in the Engineering discipline belong to thirty five years and their basic qualification is B.Tech. Apart from that, attending workshops, faculty development program, participating in national and international conference helps a faculty to increase the quality of teaching. It is viewed that there is reluctance from the part faculty members in participating in career development programmes.

The history of education in India

The history of education in the Indian subcontinent began with teaching of traditional elements such as Indian religions, Indian mathematics, Indian logic at early Hindu and Buddhist centres of learning such as Taxila (in modern-day Pakistan) and Nalanda (in India) before the common era. Islamic education became ingrained with the establishment of the Islamic empires in the Indian subcontinent in the Middle Ages while the coming of the Europeans later bought western education to colonial India. A series of measures continuing throughout the early half of the 20th century ultimately laid the foundation of education in the Republic of India, education in Pakistan and much of South Asia.The Early education in Indian commenced under the supervision of a guru. Initially, education was open to all and seen as one of the methods to achieve Moksha, or enlightenment. As time progressed, due to superiority complexes, the education was imparted on the basis of caste and the related duties that one had to perform as a member of a specific caste. The Brahmans learned about scriptures and religion while the Kshatriya were educated in the various aspects of warfare. The Vaishya caste learned commerce and other specific vocational courses while education was largely denied to the Shudras, the lowest caste. The earliest venues of education in India were often secluded from the main population. Students were expected to follow strict monastic guidelines prescribed by the guru and stay away from cities in ashrams. However, as population increased under the Gupta empire centres of urban learning became increasingly common and Cities such as Varanasi and the Buddhist centre at Nalanda became increasingly visible.

The Education in India in its traditional form was closely related to religion. Among the Heterodox schools of belief were the Jain and Buddhist schools. Heterodox Buddhist education was more inclusive and aside of the monastic orders the Buddhist education centres were urban institutes of learning such as Taxila and Nalanda where grammar, medicine, philosophy, logic, metaphysics, arts and crafts etc. were also taught. Early secular Buddhist institutions of higher learning like Taxila and Nalanda continued to function well into the common era and were attended by students from China and Central Asia. On the subject of education for the nobility Joseph Prabhu writes: "Outside the religious framework, kings and princes were educated in the arts and sciences related to government: politics (danda-n¥ti), economics (vartta), philosophy (anv¥ksiki), and historical traditions (itihasa). Here the authoritative source was Kautilya's Arthashastra, often compared to Niccolò Machiavelli's The Prince for its worldly outlook and political scheming. The Rgveda mentions female poets called brahmavadinis, specifically Lopamudra and Ghosha. By 800 BCE women such as Gargi and Maitreyi were mentioned as scholars in the religious Upnishads. Maya, mother of the historic Buddha, was an educated queen while other women in India contributed to writing of the Pali canon. Out of the composers of the Sangam literature 154 were women. However, the education and society of the era continued to be dominated by educated male population. It is possible that later historian twisted the truth that the so-called lower castes in the society were denied the right to education only in order to pitch for better concessions and create a feelgood factor to the leaders of society so they may corner the valuable mass support. If one did not learn how to kill a wild boar without being goared or gather honey without being strung by it or sow maize and harvest or brew the fine somabanams or make tools and implements, the society would have perhaps gone without food or shelter. It is wrong to say that the teaching existed only in schools run by the upper cast teachers in their so-called Gurukuls. The society was teaching its subjects in the exact and required skills as appropriate to the time. It is widely acclaimed now that the class room education does not teach the actual required skill sets either for life as it is perceived now or add value to the humanity at large.

The Engineering education in India

The East India Company in 1806 set up Haileybury College in England to train administrators. In India, there were four colleges of civil engineering; the first was Thomason College (Now IIT Roorkee), founded in 1847. Their role was to provide civil engineers for the Indian Public Works Department. Both in Britain and in India, the administration and management of science, technical and engineering education was undertaken by officers from the Royal Engineers and the Indian Army equivalent, (commonly referred to as sapper officers). This trend in civil/military relationships continued with the establishment of the Royal Indian Engineering College (also known as Cooper's Hill College) in 1870, specifically to train civil engineers in England for duties with the Indian Public Works Department. he Indian Public Works Department, although technically a civilian organisation, relied on military engineers until 1947 and after Growing awareness for the need of technical education in India gave rise to establishment of institutions such as the Indian Institute of Science, established by philanthropist Jamshetji Tata in 1909.By the 1930s India had 10 institutions offering engineering coursesHowever, with the advent of the Second World War] in 1939 the "War Technicians Training Scheme" under Ernest Bevin was initiated, thereby laying the foundation of modern technical education in India. Later, planned development of scientific education under Ardeshir Dalal was initiated in 1944

The importance and antiquity of education in Kerala is underscored by the state's ranking as among the most literate in the country. The local dynastic precursors of modern-day Kerala as well as Catholic and Christian missionaries made significant contributions to the progress on education in Kerala. There were many sabha mathams that imparted Vedic knowledge. Apart from kalaris, which taught martial arts, there were village schools run by Ezhuthachans or Asans. Catholic missionaries brought modern school education system in Kerala. History erosion of quality of engineering education in kerala (a case of alarm for academicians, students, government and public).

At one point of time Kerala having only government colleges or college or professional bodies which are directly under the control of Kerala government .But the opening of higher education sector in Kerala to self financing pattern eroded the quality as well as credibility.

The Kerala high court observed that in order to stop the erosion of quality in higher education, the All India Council for Technical Education (AICTE) should consider revoking affiliations granted to self-financing engineering colleges in the state that had a pass percentage below 40%.The High Court made this observation after reviewing exam results of self-financing engineering colleges in the state for the past three years, and on the basis of an expert committee's report that revealed lack of qualified faculty and infrastructure in an alarmingly large number of colleges.

The qualities of teacher in a modern age

The qualities of teacher in a modern age can be summarized as a) Passion for teaching. b) Love of students. c) Love of their subject. d) A willingness to change. e) Work ethics f) A willingness to reflect. g) Organizational qualities. h) Constant effort to improve. i) Enough egos to survive the hard days. 11) Enough humility to remember it's not about you. j) A willingness to work collaboratively.

Objectives of the study

- ✓ To find out the age group, Educational qualification and experience of faculty members in teaching profession in the field of engineering.
- ✓ To find out the extend of participation of faculty members in various career development programs organized by various institutions from time to time.
- ✓ To find out the relationship between age group and faculty development program
- ✓ To find out the impact of career development programs in the quality of teaching
- ✓ To find out the most popular career development tool utilized by faculty members

Hypothesis:

H1: There is significance difference between age group with respect to overall opinion about faculty development program
H2: There is significant difference between genders with respect to overall opinion about faculty development program
H3: There is significant difference between educational qualification of faculty members and quality of teaching
H4: There is a significant difference between experience of faculty members with respect to quality of teaching
H5: There is a significant impact on career development programs over quality of teaching
H6: There is significant impact of faculty development program on quality of teaching

(Continued in Next Issue)

ARTICLES

Readers are requested to send articles for publishing in NAFEN DIGEST on the latest areas of:

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