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ENGINEERING EDUCATION AS WAY TO KNOWLEDGE SOCIETY

A group of business and university leaders, highlight innovation as the single most important factor in determining Nigeria's success throughout the 21st century. Due to them there should be national innovation initiative for engineering education promotion for the country which needs marketing solutions that will raise competitiveness of Nigeria among other African countries.

Nigerian's challenge is to unleash its innovation capacity to drive productivity, standard of living, and leadership in global markets. At the time when macro-economic forces and financial constraints make innovation-driven growth a more urgent imperative than ever before, Nigerian businesses, government, workers, and universities face an unprecedented acceleration of global change, relentless pressure for short term results, and fierce competition from countries that seek an innovation-driven future for themselves.

With the help of engineering education as marketing solution in Nigeria, the country would become one the fastest developing and growing economies in the world. Engineering education in Nigeria may create awareness and new ideas to the people of the country generally, it can reduce the unemployment rate and it will raise the manpower to high level. Engineering education will open doors to marketing to show to the people of the country where to set up small business, and to which countries export goods.

Some years back the engineering education was still very poor compared to the present generation. Today every country introduces high technologies in economic life due forming generation of engineers. As example we can take Japan, China and India. These countries show miracles in the global economy in the field of marketing development and economy growth as they centered their educational policy on knowledge society and knowledge workers. They are making huge investments in human capital where education is a part of it, and in innovation development which is not possible without highly prepared personnel. Japan, China and India manage to develop and to maintain certain economic stability in global recession by using innovative technology to improve their economies, to revive businesses environment and to make effective marketing of consumers need and preferences.

Compelling incentives exist for Nigeria to examine the quality of its engineering education. The most important reason is that engineering education is

crucial for economic growth. Current theories of long run growth identify two ways in which this process happens. One way is that skilled engineering personnel drive technological innovations through research which in turn lead to larger social productivity increases. The other way is that – even in the absence of significant research output – a country with a engineering skilled labor force has better chances of growing than one with a lesser engineering skilled workforce. It is because engineers are the most important representatives of the personnel in sphere of production.

Advertised Job Openings in the Nigerian Economy, 2011 - 2012

Sub-sector	1st Quarter 1991		1st Quarter 1993		1st Quarter 1994		1st Quarter 1996		1st Quarter 1997		1st Quarter 1998		1st Quarter 1999		Total 1991 -1999	%
Engineering	191	18	267	23	136	16	118	30	65	17	53	18	72	10	902	19
Computer Services	97	9	79	7	52	6	19	5	61	16	35	12	72	10	902	9
Administration	176	16	159	14	249	30	109	28	68	18	61	20	73	10	415	19
Accounting	147	14	173	15	139	16	44	11	87	23	49	16	80	11	895	15
Marketing	132	12	90	8	84	10	61	16	67	18	51	17	9	1	719	9
Education	96	9	71	6	74	9	10	3	5	1	20	7	1	0	439	6
Insurance	30	3	40	4	17	2	6	2	5	1	2	1	2	0	277	2
Agriculture	34	3	23	2	1	0	4	1	4	1	--	--	6	1	100	2
Health	165	15	245	21	93	11	18	5	13	4	31	10	390	56	72	20
Total	1068	10	1147	10	45	10	389	10	375	10	302	100	703	10	955	10

Source: Labor Market Quarterly Report, NISER, Ibadan

This table shows that the Nigerian economy is in great need in engineering cadres for its development as well as in IT specialists. These factors show the growing character of the Nigerian economy and strive for development of its production sphere.

The relationship between economic power and level of advancement in engineering and IT technology has long been recognized. This is evident from the fact that the technologically advanced nations wield both economic, marketing and military power. It has been suggested that the fundamental cause of the backwardness of developing nations is their low level of technological development. The technological break-through by the developed countries was not achieved by accident but by careful planning and execution of developmental programs. Engineering education plays a prominent role in achieving such break-

through. The level of economic development and marketing of any nation depends on its level of human resources development, particularly in science and technology. The level of technological advancement achieved by any nation has been found to be a function of the quality of its engineering education and not just the quantity of its natural resources. Japan, one the most advanced nations in terms of technology is known to have little natural resources. It has been reported that the difference between a developed, rich and prosperous country and an undeveloped, poor and wretched country is the difference in their levels of scientific, engineering and technological advancement. Every system of engineering education is based on some philosophy or outlook of life and every educational system reflects the dominant characteristics of the people who produce it. The educational system of a nation would therefore be expected to have relevance to the developmental needs of such society. There should be a State policy to create knowledge society and to form knowledge workers.

References:

1. Labor Market Prospects of University Graduates in Nigeria
2. Mafe, O. A.T. 2002, Refocusing Engineering Curricula in Developing countries for Endogenous Technology Development and Entrepreneurship. Proc. African Regional Conference on Engineering Education and Sub – Regional Workshop on New Engineering curriculum, University of Lagos in partnership with UNESCO, 23 – 25 September 2002. Lagos, Nigeria, pp 327 –340.
3. http://milproj.dc.umich.edu/publications/EngFlex_report/download/EngFlex%20Report.pdf
4. http://www.raeng.org.uk/international/pdf/Engineering_Change.pdf
5. http://www.ciitconsulting.com/edesk/publicfolder/us_survey.pdf