

Engineering and Operations Management Education as the Anchor to Building, Operating, Managing, Maintaining and Sustaining Good Infrastructures, Facilities and Amenities in Nigerian Universities

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Abstract

The purpose of this study is to present an alternative approach to the development, build, operations, management and maintenance of campus infrastructures, facilities and amenities in Nigerian Universities and their surrounding communities. The paper presents the strategies needed for self-help approach to infrastructures and facilities management and operations. Several studies have shown that an institution with good and functional facilities, attracts students and provide suitable learning environments. Currently, Nigerian Universities follows the traditional method of infrastructures and facilities management. Most campuses around the country have delapidated dormitories, and campus roads are in terrible and debilitated conditions. Most campuses lack running water in the dormitories, libraries, offices and laboratories. Student have to walk down two to three stories to fetch water for their use. There is chronic and persistent shortage of electricity supply on campuses. In many cases across the country, students residing on campuses and their surrounding communities experience up to five days without electricity and had to rely on kerosine lamps for studying. In a country like Nigeria, this should be unacceptable in the 21st century because it hinders student learning and impedes campus growth and improvement. The same conditions apply to faculty and staff

The study presents an alternative approach that integrates engineering and operations management education as parts and parcel of developing, operating, managing, maintaining, and sustaining campus infrastructures, facilities and amenities. The engineering and operations management students and their academic staff would become the key anchors to what I call a “Self-Help Infrastructure Development and Management”. It is a new approach to executing and maintaining campus facilities management initiatives and strategies anchored in utilizing engineering students and others for managing and maintaining campus facilities. This approach will help universities to maintain 24 hours electricity and water supply, environmentally safe dormitories, good campus roads, outdoor student centers, functional classrooms and office spaces, including better developed and maintained landscaping within the campus environment. This approach will provide a good learning and living environments for students, staff and others that utilize the campus on daily basis. Implementing this approach as part of the engineering and operations management education will provide the universities the opportunity to combine theoretical and experiential teachings using real-life applications for producing students with hands on experience prior to graduation. This approach covers new and existing facilities, infrastructures and amenities. Integrating this Self-Help approach into engineering education will go a long way in helping these institutions to manage their campus infrastructures better and build a maintenance culture that is transferable to the entire country. In this self-help approach, engineering and operations management students under the direct supervision and guidance of professors, lecturers and outside operation’s experts along with employees from the community will form the nucleus of the operations and management teams. Institutionalizing this self-help facilities management approach will be key in developing maintenance culture that is missing in the country and at the same time eliminate the persistent facility decays within university campuses across the country.

Keywords

Infrastructures, Facilities, Operations, Engineering, Education