Preparing Campus Facilities for the Future.

The recent experiences of North Carolina State University and Wake Forest University in the planning and construction of campus buildings are described as illustrations of the planning of space to meet the goals and needs of the institution in the future. At North Carolina State University, 780 additional acres were received from the state, and a formal planning process was undertaken, involving the use of a consultant and an architectural firm to develop a proposal for a research campus. At Wake Forest, an all-inclusive program and facilities plan has been in progress for over 3 years. With additional funds and the construction of new buildings, planning for the conversion of a vacated building was necessitated. Recommendations regarding the planning process are provided. (KM)
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ABSTRACT

Studies were conducted on separate campuses—one private and one public—in order to determine if the current assignment of space would best meet the goal/needs of the institutions' futures. The researchers had to establish space criteria associated with the institutional direction. And the results had to be a practical review that could be used by campus planner and academic administrators.

BACKGROUND

Space utilization studies were an influence in the early years (1958-67) of Institutional Research, (Fincher, 1985) and have returned in the context of life cycle planning for campus and system decision makers in the form of integrated models for establishing future needs (Wood and Finger, 1986). The Carnegie Commission on Higher Education (1972) concluded space utilization studies were an indispensable aspect of higher education planning and warned against attempts to establish these analyses as a simple matter. "Providing adequate physical plant facilities is one of the greatest problems of higher education today—a problem that can never be definitely and finally solved because education is not a static process" (Middlebrook, 1958). Therefore, the conceptual framework for this analysis comes from Halstead's (1974) introductory overview on "Space Management and Projection" by defining the problem of space utilization studies to include
"systematic planning of new facilities and controlled utilization of existing space."

As in all studies of institutional activities, certain guidelines and operational definitions had to be established. Much of the early methodology to study utilization came in Smith's (1954) study "College and University Space Requirements" (Duhnke and others, 1971). Many systems of higher education became involved in facility monitoring and analyses following the comprehensive collection of data in the early stages of Institutional Research and the Higher Education Facilities Act of 1963.

At this point, state government, higher education systems, the federal government and anyone else who got involved in funding education was likely to get involved with facility data review. The descriptive data was there to be reviewed and systems were under way to establish criteria to evaluate utilization. The Western Interstate Commission for Higher Education (WICHE) and the American Association of Collegiate Registrars and Admission Officers (AACRAO) took the leadership for intra- and inter-institutional studies with the publication of the seven-volume handbook, The Higher Education Facilities Planning And Management Manuals (1971).

Until Blakesley's model utilization study appeared, (Blakesley et al., 1968) most analysis was limited to traditional views of space which focuses on capital cost and raw usage data. After this Indiana investigation of space, utilization of non-residential area was accepted to be a multivariable utilization
test. The relationships between hours per rooms are scheduled per week, average percentage of occupancy per room, and the amount of area per station were viewed as variables that could be used to define utilization.

Interest of space utilization and management studies are being reintroduced as priority projects within Higher Education amid the shortage of space allocations and the scant futures for additional appropriations for new space. Since types of facility and space in general are assigned to functions by campus administrators, it is imperative that appropriate data be easily accessible, accurate, and prepared for analysis.

The North Carolina State University Experience

North Carolina State University received from the State of North Carolina a transfer of 780 acres adjoining the existing main campus in 1985. This property was part of a State Hospital and was approximately the same magnitude as the main campus. This transfer materialized during the university's 100th anniversary. The concept of this campus became part of the University's Centennial Celebration.

Since the state had already established a role and scope for the State institutions, planning had to be part of this property from the beginning. The institution would continue as a research institution with no major enrollment increase anticipated because of system limitations. Therefore, a formal planning process was initiated.
First 'use' proposals were solicited from many parts of the university community and reviewed by a campus committee. A recommendation was developed and presented to a consulting firm for their development. The firm in concert with an architectural group completed a presentation of alternatives for the university to consider. Culmination came with a proposal that was accepted by the campus for presentation to trustees, governors and appropriate state and community leaders.

This process has resulted in acceptance 'in concept' by all participants to develop a research campus with cluster to include residence, research area and recreational areas that will accommodate future State research needs. Now is the time for detailed development and progress towards the Centennial Campus--an opportunity to plan for the future. Secondary results have seen the establishment of three offices indirectly related to this process--University Relations, Planning and Space Management.

The Wake Forest Experience

With the appointment of President Thomas K. Hearn at Wake Forest in October, 1983, the Trustees mandated that Wake Forest University institute a formal planning program. In March, 1984, John P. Anderson was appointed as the University's first Vice President for Administration and Planning. Subsequently, a formal planning process was instituted at Wake Forest. Wake Forest was founded in 1834 in the town of Wake Forest, North Carolina by the North Carolina Baptist convention. In 1956, the campus moved to a new location in Winston-Salem. In that the new
campus was "built from scratch" on approximately 600 acres, the University was able to have a well planned campus in which all the buildings were built in modified Georgian architecture and Virginia brick. Thus, the University does have in its history remnants of planning.

The planning which has taken place within the past three and one half years has been all encompassing in that it has included program planning as well as facilities planning. Committees were created for program planning, mission and purpose and capital planning. As a result of the program planning committee meeting for over a year, such programs as a Masters in Liberal Studies and expanded Ph.D. programs in our sciences have been approved. The mission and purpose committee has established that the enrollment of the undergraduate schools at Wake Forest remain relatively small (3300), thus, maintaining the quality and personal touch which has existed at Wake Forest since its founding.

The capital planning committee worked diligently in evolving a "campus plan" utilizing the original campus plan. The present plan indicates where additional buildings will be located as well as parking, future landscaping, etc. The efforts of the programming committee helped the capital planning committee in prioritizing the needs of facilities for the future.

Within the past year, several major happenings have taken place enabling Wake Forest to move further than expected with its campus plan. Several million dollars have been pledged toward the construction of a University Center. The University received
a 3.7 million dollar grant from the Olin Foundation for a Physics building. R.J. Reynolds/Nabisco, Inc. donated its half a million square foot World Headquarters building valued at 40 million dollars. Both the University Center and the Physics building will have ground breaking next spring. With the work of the capital planning committee, site locations have already been chosen for these buildings. The World Headquarters building will have approximately one half of its space leased to businesses and corporations at this time.

With the construction of two new buildings and the donation of the World Headquarters building, Wake Forest was faced with the nice dilemma of "vacated space." Thus, a different type of planning took place in which studies were needed for unanticipated space being available. The donation of the World Headquarters building specifically resulted in a fast and furious study of placing our Law and Management schools in that facility. This study was all the more complicated because the building was designed as an office building and not as an academic one. Thus, structural engineering studies for reinforcing the floor for libraries were conducted as well as studies of placing tiered classrooms within a facility with 9 foot ceilings. When the study was conducted, space was not a critical factor in that the building is the equivalent of two and one half football fields long. Although the study has been completed with cost estimates made, a decision has not been made on utilizing the available space in the building. With the result of our University Center being built, Wake Forest will gain significant space within the present Administration building. Basically, the
decision has been made to utilize this vacated space for the present administration. Interviews have been conducted with major users in the present building with written plans from them indicating their short term as well as long term needs. Not surprisingly, administrative departments are requesting much more space than will be available.

At this time, Physics and Chemistry share one building in which both departments are extremely crowded. With the construction of the Physics building, there will be vacated space where the Physics Dept. is currently located. The solution for filling this vacated space is quite easy. Chemistry will take over this space.

The recent experience at Wake Forest with space gained has been quite unique. Some of the solutions have been rather simple while others complicated. However, the work which has taken place in our planning process the past three and one half years enabled our decisions to be made in a rational and realistic framework.

RECOMMENDATIONS

A planning process must be continual and part of the decision making process. Planners must understand who makes decisions and be assured that the decision maker's data and information needs are met. It is imperative that mission statements and outcomes be evaluated in order to assess alternatives. Since the college community is a complex organization and not a simple collegial model free of politics, it is suggested that campus administrators develop scenario
forecast models which allow for observation from environmental
scans to be incorporated into the model. In addition, with new
criteria for accreditation and review, it is suggested that
qualitative questions become incorporated with the quantitative
questions. It is time for campus academic administrators to go
beyond the question of 'how many' and investigate 'how well'
tasks are being accomplished.