Proposed Study of Job Satisfaction of HBCU Engineering Faculty Based on Herzberg's Motivation-Hygiene Theory

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Abstract

This paper describes a proposed study to examine the job satisfaction of college of engineering faculty members at selected Historically Black Colleges and Universities (HBCU). It is perceived that HBCU Colleges of Engineering have many concerns and these concerns have an effect on the overall job satisfaction of its faculty members. This research will be based on Frederick Herzberg's Dual-Factor Theory of Job Satisfaction in which one group of factors called motivators mostly contributes to job satisfaction, while the other group of factors, called hygienes, was found to most significantly contribute to job dissatisfaction. The motivators include job content issues such as achievement, recognition, work itself, responsibility, growth and opportunity for advancement. The hygienes are job environment issues such as company policies, supervision or relations with supervisor, peer relations, working conditions, and salary. The study will be used to determine if there are different factors that affect the job satisfaction of HBCU engineering faculty members versus those that affect faculty members on a national level. This paper includes the results of a literature review and the methodology to be used for this study.

The identification of both positive and negative aspects of job satisfaction should provide appropriate decision factors that would enable education administrators to improve the work environment of the engineering colleges. This study will be designed to examine the demographic characteristics of faculty of selected HBCU engineering colleges and the intrinsic and extrinsic sources of satisfaction and dissatisfaction. The results of this study may determine the issues that have the greatest influence on job satisfaction and dissatisfaction of the selected HBCU faculty members.

Introduction

Historically Black Colleges and Universities have played an important role in higher education in preparing young scholars for positions of leadership and increased earning potential. HBCUs, originally established during the period of legalized segregation for the purpose of educating blacks, continue to produce large percentages of the science and engineering bachelor-level degrees earned by African American students.

HBCUs' mission may be different than other universities and colleges but they have to confront many of the same facility and business challenges. The primary mission of HBCU engineering schools is to produce outstanding engineers for the work place of the future. Having faculty members that are satisfied on the job is very important in achieving that goal.

HBCUs are faced with evolving programs and aging facilities. A National Science Foundation study in 1998 reported that 74% of engineering departments of HBCUs indicated that they had inadequate research space for meeting current research commitments. The federal government has been the largest source of funds for HBCUs repair/renovation projects. However, the level of these funds has declined since 1992-1993 from 57 percent of all repair/renovation funds to 29 percent in 1996-1997 (NSF, 1998). By 1996-1997, the largest source of funds for repair/renovation projects at HBCUs was from internal sources (NSF, 1998). This change in funding sources has placed a heavy burden on all other university resources including faculty salaries. In recent years, HBCUs have struggled to fill open faculty positions with African Americans. Fields (2000) stated that the greatest stumbling block HBCUs face in competing for new faculty is finding the salary funds needed to be competitive. This lack of necessary salary funds has led many new black PhDs to seek employment with higher paying predominately white institutions. In addition, new diversity initiatives of predominately white institutions to recruit minorities have been successful in attracting some of the same potential candidates to other organizations. As a result, HBCUs are hiring many non-African American faculty members creating a more diverse staff than many other universities (NSF, 2000). These faculty members are from many different countries and their cultures, interests, and needs must be addressed by the administration. In higher education, group-organization collaboration is very important because of universities' reliance on committees and task forces as a method of getting work done. Research shows that groups that work well together are described as effective teams and they produce expected or better than expected results (Wheelan and Tilin, 1998). The diverse faculty of HBCUs must be a cohesive group to accomplish organizational wide goals, priorities, and values.

There is also a perception that HBCU faculty members are faced with many job related concerns. These concerns include salary issues, heavy workloads, institutional problems, facility needs and funding-related inequities. Many of the HBCUs' engineering faculty member's concerns are related to a perceived lack of institutional support. The administration of many universities treat their college of engineering departments and its faculty as though they are similar to any other college within the university. R. Hill (1990) noted that a university's administration should primarily be focused on institutional matters, but most are preoccupied with discipline issues. However, this can be a disadvantage for a college of engineering. Engineering departments cannot be managed and operated the same as an English department or other non-science department. A college of engineering requires more financial and institutional support to operate and meet its accreditation requirements than all other colleges at most universities. This is never more prevalent than on a HBCU campus because HBCUs traditionally have received less funding than their predominately white institution counter parts. An update on HBCUs published by *Black Issues in Higher Education* (Dervarics, 2001), reported that Black colleges received only $164 million from federal research and development efforts, which was less than 1 percent of the $14 billion the federal government awarded to all colleges and universities during 1999. A study by the National Science Foundation (NSF) found that the $164 million was a

decline from $202 million and $188 million that Black colleges received in 1995 and 1996 respectively (Dervarics, 2001).

This systematic under-funding has had an adverse effect on HBCUs and has lead to other institutional issues and faculty retention concerns. The Accreditation Board of Engineering and Technology (ABET) has indicated in several reports that HBCU's colleges of engineering do not receive adequate funding from institutional sources. This under-funding has resulted in several federally funded projects for HBCUs specifically aimed at alleviating this problem. One of these projects is the Title III Act of Higher Education of 1965 program developed to provide funds for new construction, provide faculty development opportunities and the improvement or development of new academic programs.

HBCUs are also very reliant on bureaucratic mechanisms, including compliance to specific policies and procedures, as a method of accountability. HBCU president Dr. Michael Lomax of Dillard University stated that before the year 2000 the tenure and promotion process on Dillard's campus was pretty idiosyncratic and not peer driven. In an effort to revitalize Dillard's faculty, a new promotion and tenure program was developed that greatly improved the process (Fields, 2000). Dr. Lomax also stated that if HBCUs are to increase their competitiveness in the race for faculty members and students, they must address some of their institutional problems (Fields, 2000). Additionally the director of the Office for the Advancement of Public Colleges of the National Association of State Universities and Land-Grant Colleges, Dr. Joyce N. Payne, added that HBCUs must pressure elected officials and government agencies to be observant of funding-related inequities at HBCUs. Dr. Payne also stated that HBCUs must address some of the structural impediments to their success in order to increase their competitiveness (Fields, 2000).

The aforementioned issues are believed to be sources of job satisfaction and dissatisfaction among engineering faculty members of Historically Black Colleges and Universities. The purpose of this study is to determine if different factors affect the job satisfaction of HBCU engineering faculty members more than those that affect faculty members on a national level. The identification of both positive and negative aspects of job satisfaction should provide appropriate decision factors that would enable education administrators to improve the work environment of the college of engineering.

Another objective of this study is to examine the demographic characteristics of faculty of selected HBCU's colleges of engineering and the intrinsic and extrinsic sources of satisfaction and dissatisfaction. The results of this study may determine the issues that have the greatest influence on job satisfaction and dissatisfaction of the selected faculty members. The aim of this study is to specifically determine the factors that have a negative impact on job satisfaction of the college of engineering faculty members of the HBCUs.

Literature Review

This research will be based on Frederick Herzberg's Dual-Factor Theory of Job Satisfaction that makes a basic distinction between job satisfaction and job dissatisfaction (Herzberg et. al, 1959). Herzberg's original study of job motivation included interviews of engineers and accountants to provide insights into the operation of job attitudes. Herzberg's theory classifies the causes of job

satisfaction as intrinsic factors, and that of job dissatisfaction as extrinsic factors (Herzberg et. al., 1959). These intrinsic factors or motivators that mostly contribute to job satisfaction include job content issues such as achievement, recognition, work itself, responsibility, growth and opportunity for advancement (Herzberg, 1987). The extrinsic factors, called hygienes, were found to most significantly contribute to job dissatisfaction. These extrinsic factors are job environment issues such as organizational policies, supervision or relations with supervisor, peer relations, working conditions, and salary (Herzberg, 1987).

Knoop's (1994) study of educators from Canadian secondary schools supported Herzberg's theory with the exception of job status being identified as an intrinsic value in his study. Knoop attributed this outcome to the relatively affluent geographical area of the educators surveyed, where the educators may have linked status to pay and to social position. Research by Iiacqua and Schumacher (1995), suggests the existence of some factors as described by Herzberg (1987) that can be viewed as both intrinsic and extrinsic. The results of their analysis of the factors contributing to job satisfaction in higher education also revealed that demographic factors affect job dissatisfaction, but not job satisfaction (Iiacqua and Schumacher, 1995). Applicability of Herzberg's (1959) theory in educational settings also includes a study by Truell, et. al. (1998) of part-time and full-time faculty members. This study revealed that full-time faculty members were generally satisfied with their jobs, but expressed different levels of satisfaction with the various factors of Herzberg's Motivation-Hygiene Theory (Herzberg et al, 1959).

Research indicates that faculty in the science divisions were less satisfied than others with the organizational structure element of the environment (Jackson, 2000). Soler (2000) suggests that when there is less structure in a school (lower centralization and formalization) and greater teacher participation and increased motivation from the work itself, there will be greater job satisfaction. Statistics indicated that motivation in teachers may be reduced by too much structure in a school, which was found to reduce the shared decision-making, autonomy, and also affects the work itself (Soler, 2000). The results of these researchers indicated that overall, the faculty was satisfied with their jobs and that the primary sources of job satisfaction were intrinsic in nature and dealt mostly with aspects of teaching. The sources of dissatisfaction were extrinsic in nature and dealt with salary and the studied faculty members were neither satisfied nor dissatisfied with administrative policies. Additionally, several researchers who have focused on institutions of higher education have concluded that there is a correlation between voluntary job turnover and job dissatisfaction (Cano, Miller, 1992; Glick, 1992; McBride, Munday, Tunnell, 1992). Olsen (1993) stated that these findings are relevant to faculty who must deal with excessive demands to perform too many discrete tasks, poorly defined work-role boundaries, and continuous time pressure issues as part of their daily work.

The research on job satisfaction of faculty members has mostly been regionally or nationally focused on the general faculty. None of the previous studies on job satisfaction have concentrated on engineering faculty members. Engineers are perceived to use more of their critical thinking skills than others in all facets of their jobs; therefore focusing on engineering faculty would provide previously unknown information to the field of Engineering Management.

The organizational culture of universities is complex, and individuals interpret it in different ways. Bates (1987) stated that an institution, such as a school, must have a central code of values

and beliefs that form an essential ingredient in the cultural life of that institution and that the members of the institution must be committed to these values as exemplified in their actions and behaviors. Academic sections of universities are regarded as the functional dimension of the organization because it carries out the missions of the university, teaching, research and service. Universities are complex organizations and according to Max Weber (1946/1996), the larger and more complex the organization, the greater the need for chain of command to coordinate the activities of its members. The organizational culture, hierarchical structures, and personal characteristics of the diverse HBCU engineering faculty all have an effect on job performance and job satisfaction.

The literature search did not reveal any job satisfaction studies that focused specifically on engineering faculty members. However, previous studies investigated factors that affected job satisfaction in the following broad categories that included: 1) personal and demographic characteristics (e.g., gender, nationality, educational degree, years of service); 2) professional activities and responsibilities (e.g., students and teaching, participation and influence on campus); 3) perception of and relationships with students (e.g., perceptions of student quality); 4) institutional environment (e.g. financial condition of institution, perceptions of administrative policies and support); and 5) departmental environment (e.g., perception of department and departmental colleagues). This literature provides strong support for this research on job satisfaction of engineering faculty at Historically Black Colleges and Universities. Examining the job satisfaction of this faculty is important since faculty satisfaction has been reported to directly impact student achievement (Hutton & Jobe, 1985). By exploring specific facets of job satisfaction, areas of low satisfaction can be identified and strategies implemented to improve faculty satisfaction in these areas. Further, areas of high job satisfaction can be identified and procedures to maintain this job satisfaction can be used. The results of this study can be used by university administrators to establish programs to improve the job satisfaction of their faculty in the areas where low satisfaction is identified.

Hypotheses

The hypotheses proposed for this study are based on the following. Job context issues that affect job satisfaction of individuals can be influenced by bureaucratic mechanisms used by HBCU's as method of accountability. The policies and procedures, relationship with peers and supervisors, working conditions, salary, and institution's financial condition may be a source of dissatisfaction of the college of engineering's faculty members. Job content issues such as achievement, recognition, work itself, responsibility, growth and opportunity for advancement are likely to have a positive impact on individuals job satisfaction. Additionally, organizational culture is viewed as the learned behavior that defines an organization's identity, stability and effectiveness. This includes the hierarchy of authority, impersonal rule by rules and the socialization of the faculty. This is the general basis for the hypothesis proposed for this study.

The three hypotheses proposed for this study are: 1) HBCUs engineering faculty members are less satisfied with job context (extrinsic) issues than the national norms for faculty. 2) HBCUs engineering faculty members are more satisfied with job content (intrinsic) issues than the national norms for faculty. 3) The organizational culture of HBCUs has a negative effect on engineering faculty members' job satisfaction.

Methodology

The planned research method will include the study of faculty members of the college of engineering at three selected Historically Black Colleges and Universities (HBCU). The selected HBCUs include Alabama A & M, Southern University, and Tennessee State University.

Job satisfaction data will be obtained from various sources such as the Carnegie Foundation for the Advancement of Teaching, Higher Education Research Institute, or the National Center for Education Statistics. Demographic data is available from the office of registrar and libraries of the selected universities. The Minnesota Satisfaction Questionnaire (Weiss, et al, 1977) will be adapted to assess job satisfaction of the selected faculty members. The short form of this questionnaire will be used to access the Herzberg's dual factor theory of job satisfaction. The University of Alabama in Huntsville engineering faculty will also be surveyed to determine if the college of engineering faculty follows the national norms for job satisfaction for all faculty members. The organizational culture will be assessed using a modified version of the Profile of Organizational Characteristics (Likert, 1978). The questionnaires will be distributed to all full-time faculty members in the selected colleges of engineering and additional personal follow-up interviews maybe conducted.

Acknowledgement

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