

Projected ASC Faculty Needs 2004 - 2009

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Shortages in college faculty have been predicted since the late 1980's due to the large number of anticipated retirements. This shortage is true in construction management programs. Historically, faculty teaching construction management with doctoral degrees have been those with engineering, education, or industrial technology degrees. Survey results of ASC construction programs concerning their anticipated faculty needs for the next five years verifies the projections reported in literature. The faculty members that are most desired in construction management teaching positions are those with professional work experience combined with the doctoral degree. Most colleges and universities require this degree to qualify for tenure. Changes in search procedures or requirements for faculty positions may need to occur in order to fill all anticipated faculty positions.

Key Words: Construction Management Programs; Faculty Searches

Introduction

Shortages of faculty teaching in colleges and universities have been projected since the 1980's in publications such as Business Week (Clark, 1986), and American Demographics (1992). These projections were based upon the ages of faculty and typical retirement age. Colleges and universities that banned the mandatory retirement age in 1994 could possibly have caused an increase of faculty over 55 years of age from one-fourth in 1990 to one-third (Hayes, 2000). In a publication for the American Association of Professors, Ehrenberg (2001) reported that while some institutions have developed incentives for faculty to retire, others are worried about the large percentage of faculty who are nearing retirement. Hayes (2000) found that while the number of expected retirements is growing, the projected surge of enrollments might result in a shortage of tens of thousands of professors and most colleges and universities will be forced to hire temporary faculty or adjuncts to fill the gaps in their faculty.

The current industry shortage of construction professionals in all levels from management to trades has not made it easy for masters and doctoral programs to recruit students when industry salaries are soaring. An article published in ENR magazine by Rubin, Rosenbaum, & McManamy (1991) forecasted the shortage of students and faculty in relation to the construction industry's looming labor shortage. Winn, Frederick, and Becker (2000) in an article for Professional Safety, reports on the increasing numbers of unskilled workers and the continued construction labor shortage. The article authors summarize the need for trained educators familiar with construction safety issues to supply the industry with graduates possessing appropriate training. This need for trained faculty and the rising number of construction faculty

searchers in the past few years prompted this research paper. A survey form was developed by the researchers to gather projection data for ASC program faculty searches.

The results of the survey sent to the ASC web site construction programs by the researchers were used to project the number of faculty searches in the next five years. These projections support what the literature has been stating for the last decade. The purpose of the survey was to describe the job market for construction management faculty in the coming five years and the results of searches conducted in the past five years. Descriptive statistics were used since they are an effective technique to present, summarize and describe data (Weiss, 1995). The developed survey was used to gather data for a descriptive research paper, or census and was sent to all identified ASC construction programs. The survey had eight questions focusing on the projected retirements and hires in the next five years, position requirements as well as the results of past searches and position applicant characteristics. In addition, the last question concerned the expected salary range for new hires.

2004-2009	Projected Searches		Number of Searches in Past 5 years			
	Tenure/Tenure Track	Adjunct/Instructor	Tenure/Tenure Track	Adjunct/Instructor	Failed	
Projected Retirements	45	101	29	108	28	26

Table 1. Survey Results

Of the 86 ASC construction programs listed either on the ASC web page or having advertised positions on the web page, 35 programs did not respond to the authors' survey or had positions advertised on the website. For the responding programs, 94% were expected to conduct searches for new hires in the years from 2004-2009. For Assistant/ Associate positions, 101 searches were expected to be advertised. In addition, there were plans for 27 searches for adjunct or instructor positions. Most of the remaining 6% of responding programs have a small construction program, or do not anticipate a need for new hires within five years. Based upon the 51 survey responses received, 61% of the schools expect at least one faculty to retire. A total of 48 faculty members are expected to retire in the between 2004 and 2009. This number represents 13% of the faculty members at the responding programs. If this percentage were applicable to the faculty members at the 35 non-responding programs, it could mean an additional 40 faculty searches needed to replace retiring faculty.

Several searches from 2002-03 failed and were repeated again in the 2003-04 academic year. As of December 15, 2003 there were 20 active searches for Assistant or Associate faculty and one advertisement for an instructor on the ASC academic positions web page. Note: some current advertisement programs were part of the survey results.

Different requirements for the projected open positions were noted in the surveys and advertisements. Of the Assistant/Associate faculty positions, 69% required a Ph.D. in an engineering, construction, or related field for a tenure/tenure track contract. In addition, 3 to 5 years of U. S. preferred construction industry experience or teaching experience was required.

The remaining positions required a Master's degree. Instructor and adjunct requirements varied from Bachelor degrees with significant industry experience to a Masters degree with professional experience. In addition to either required, or desired amounts of professional experience, many positions requested post secondary, college, or university level teaching experience. Many positions noted the preference for professional licenses or registration in addition to all of the previous requirements.

Salary ranges for positions ranged from a low of \$40,000 to a high of \$80,000 depending on rank and experience. It was not clear whether the ranges included instructor rates as well as Assistant/Associate rates. The average salary offered per the survey responses was \$57,000 for a nine month contract. One survey response noted the minimum expected salary of their candidates was \$70,000 per year.

The survey also inquired about searches conducted by the programs in the past five years. The authors were interested in whether the searches had failed or succeeded, and the reasons why. If the searches were successful, the authors wanted to know where the applicants had come from. Of the reported 136 searches in the past five years, 26 or 19% were failed searches. According to the survey, 38% of the failed searches were due to not having applicants meeting the position requirements. Other failure causes noted in the surveys included budget cuts, inability to meet salary requests, immigration issues, geographic location, and competition from other construction schools.

Small pools of applicants in positions requiring PhD's were reported compared to those requiring MS degrees. Eighty percent of reported applicants for positions requiring PhD's were from engineering programs. Of the reported successful searches, 37% of the faculty were hired from other schools, 49% from industry, 8% from foreign sources, and 6% other including temporary faculty already working for the programs.

Conclusions

Ciesielski (2000) reported that 61% of the 45 ASC schools responding to his survey required a Ph.D. degree for tenure. This survey has found that percentage increased to 69%. One possible solution for the shortage of construction management trained faculty needing Ph.D. degrees is to offer degrees by distance education to industry professionals in hopes that they will be able and willing to obtain the terminal degrees to meet this requirement for hire. Distance education is attractive to those individuals most desired to teach construction management students- those with professional experience. Allowing the working professional to pursue a terminal degree in their personal time enables them to keep their full time industry jobs. This allows these individuals to earn a terminal degree, continue to gain valuable work experience, and earn a salary that supports their current standard of living.

Indiana State University along with Bowling Green State University, Central Missouri State University, East Carolina University, Texas Southern University, and North Carolina A & T addressed the issue of the shortage of technology faculty in general by forming a consortium and granting doctoral degrees in Technology Management. Indiana State University, as the degree granting institution hosts the consortia home page located at <http://web.indstate.edu/ConsortPhD/>. The

web page states “The Ph.D. in Technology Management relies extensively on alternative communication technologies to deliver key components of the doctoral program.” Web based classes with few organized meeting times allows student flexibility when working full time at other jobs. One of the majors offered in the degree program is Construction Technology Management.

Distance based advanced construction degree programs are offered by other Universities; however, many of them are in engineering programs. ASC construction management programs need to evaluate whether they want the majority of their faculty to be engineers versus construction managers. Ciesielski (2000) reports that the Construction Management (CM) responses compared to the Civil Engineering (CE) program responses in his survey indicated more professional construction work experience and less teaching experience was desirable. ASC programs need to answer the question, “Do theory-based programs produce the faculty able to teach applied science and technology construction management courses?” Ciesielski also found that CM programs typically place more weight on teaching, see less need to publish, feel that the knowledge and skills imparted to the students are the primary goals of the programs, and see tenure as being outmoded. If the current conclusion of ASC schools is the same, then ASC must evaluate the requirements for future faculty hires for their construction management programs.

If the past trends continue per the researcher’s survey responses, almost 50% of the faculty positions will need to be filled from industry. Are there over 50 industry persons with Ph.D.s willing to leave industry to become faculty at ASC schools in the next five years? Alternatively, are ASC schools going to continue with the trend of hiring more instructors and adjuncts to fill open faculty positions or fail searches with Ph.D. requirements? Ciesielski’s (2000) survey responses indicated that, potentially, CM programs should have differing requirements for tenure as compared to other disciplines. This was supported by the responses from the Civil Engineering programs. Should construction management programs argue that a Masters degree is the appropriate terminal degree for faculty? The health and direction of many ASC programs will be affected by the faculty hired. It would behoove ASC members to evaluate their strategic plans for the construction programs in light of future faculty needs amongst all the ASC construction programs.

Summary

In order to supply the construction industry with the needed graduates of construction management programs, the programs need appropriately trained faculty. Rebholz (2000) cautioned that in order to get the best faculty person for a position the search criteria and required qualifications for the position should be well thought out in advance. In order to do this, Rebholz suggested a “vision of the future” or strategic plan for each program so that hired faculty meet long term goals for the program and not just the short term needs.

Until such numbers of graduates of Construction Management Ph.D. programs are produced to match the demand, the trend towards hiring adjuncts and instructors to teach classes in undergraduate construction management programs will continue. The encouragement of undergraduate students to pursue terminal degrees and the recruitment of construction industry

professionals with at least three years of applicable work experience and Ph.D.s is needed in order to be able to fill the projected faculty positions. If hiring Ph.D. engineers or Ed.D. degree holders, adjunct, or instructors to teach in CM programs is not the direction ASC schools wish to go, strategic plans for ASC construction programs faculty hires need to be revised.

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