

PAPERS PRESENTED ON GENERAL TOPICS

Do Professional Credentials Supported by ASC Member Schools Focus on Those Most Likely to Enhance a Students' Professional Development?

Darren A. Olsen, JD, J. Mark Taylor, PhD, JD and Jenna Holk
Auburn University
Auburn, Alabama

Professional credentials are desired by many in the construction industry seeking to gain specialized knowledge and to distinguish themselves from their peers. Academia has recognized the demand and incorporated professional credentials into construction curricula to provide students with in-depth and specialized knowledge in specific areas related to the industry. Both academics and industry professionals have individual perceptions concerning the value placed on certain professional certifications. This paper explores whether the certifications currently offered or supported by Associated Schools of Construction (ASC) member schools are in line with those that are valued most highly by both academics and industry professionals. This paper surveys faculty members of ASC schools along with selected industry professionals.

Keywords: Credentials, Professional Credentials, License, Licensure, Professional Licensure.

Introduction

In its 2009 Occupational Outlook Handbook, the United States Department of Labor (2009) lists the requisite education, licensure and experience necessary to be employed as a construction manager. The section begins by stating that a bachelor's degree in construction science, construction management, building science, or civil engineering, plus work experience, is becoming the norm. It goes on to acknowledge that, while no individual license is required to be involved in the industry, a current trend towards certification exists. According to the Department of Labor:

There is a growing movement toward certification of construction managers. Although certification is not required to work in the construction industry, it can be valuable because it provides evidence of competence and experience.

Many states have licensing requirements for contractors; however, individuals are not necessarily required to be licensed. In states that do require an individual to be licensed, the license may be obtained by a single employee, and that employee then serves as the qualifying agent for the entire construction company (Taylor & Olsen, 2010). Some have suggested that such a lack of individual licensing requirement for professionals within construction contributes to the industry's poor professional image (Alter & SIMS, 1997). In an effort to improve its professional image, the construction industry has turned to professional certifications (Alter & SIMS, 1997).

Professional certifications differ from a professional license in that the credentialing process is typically not subject to government oversight (Supan, 2010). Third-party entities that provide professional credentials and certification have increased in number, and the service has grown into a major industry in itself. Once an association becomes entrenched in the construction economy, a certificate of competency is likely to follow (Taylor & Olsen, 2010).

As an initial objective, this paper attempts to build upon prior research published by the same authors entitled, "Professional Credentials – What Associated Schools of Construction (ASC) Members Are Doing" (Taylor & Olsen, 2010). That study surveyed department heads at Associated Schools of Construction (ASC) member schools to determine which professional credentials were being incorporated into their respective programs. This paper

seeks to confirm those initial findings, and, further, to scrutinize whether or not ASC member schools have appropriately supported certain credentials. Our initial findings are summarized in the chart below (Figure 1):

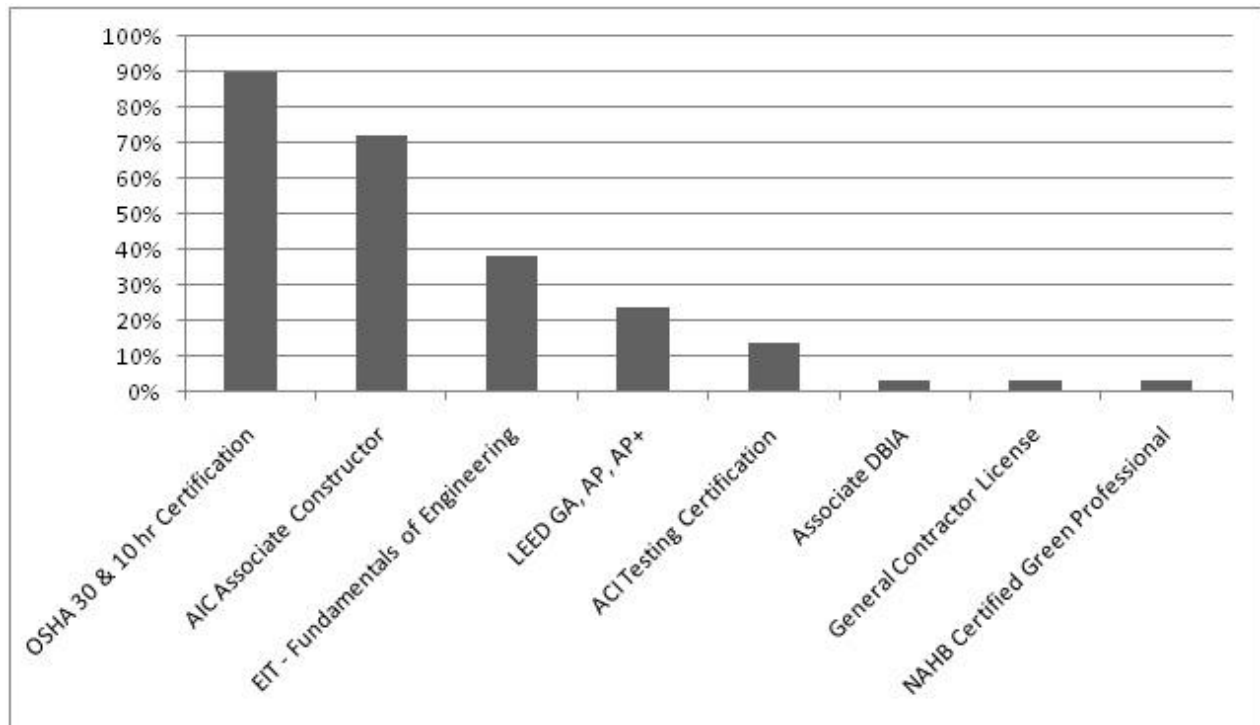


Figure 1. Third Party Credentials Offered at ASC Schools

The most common credential offered through ASC programs is the 10-hour or 30-hour Occupational Safety and Health Administration (OSHA) certification. Ninety percent of the respondents reported that their program required students to complete one of the OSHA training courses. The next most prevalent credential offered is the American Institute of Constructors (AIC) Associate Constructor credential offered at 72% of the schools responding. Somewhat surprising to the authors of this paper are the subsequent two results: 1) The Professional Engineer (PE) Fundamentals of Engineering (FE) exam was offered by 38% of those responding to the survey; and 2) The Leadership in Energy and Environmental Design (LEED) credential was offered by just 24% of survey respondents.

In a recent study by Bruce, Gebken & Strong, three professional certifications were evaluated for their positive impacts on the careers of those who had obtained them. The study surveyed the recipients of the certifications for their perspective on the value of the certification toward their career. The study examined the Certified Professional Constructor (CPC) certification, the Leadership in Energy and Environmental Design Accredited Professional (LEED-GA or LEED-AP) designation, and the Design Build Institute of America's Design-Builder (DBIA) designation. Results generally indicated that respondents felt their certifications benefitted their career. However, the LEED-AP and DBIA certifications were valued more highly than the CPC (Bruce, et al, 2010).

The next objective of this survey is to obtain information from representatives within the industry and members of academia as to how they appraise the value of the individual certifications and then to compare those results to the catalog of certifications which are receiving support from the schools. The answers to these questions may serve to steer ASC member schools as they make decisions concerning whether or not to incorporate specific professional certifications into their respective curriculum.

Methodology

The initial respondent pool for the authors' prior research was limited to department heads of ASC schools. The survey revealed some surprising results, which warranted further verification. To normalize the initial data, the same survey questions were distributed to a broader audience that included the entire faculty membership of ASC schools as well as a number of construction professionals. In addition to normalizing prior data, the subsequent survey sought additional information not collected by the initial survey.

This research was conducted by deploying an online survey. The survey focused on ASC member schools and was sent to the 863 faculty members with registered email addresses at the member schools. Of the faculty members surveyed, 110 (approximately 13%) responses were received. In addition, industry professionals were reached via local Associated General Contractors (AGC) offices and their email lists. Only ten industry professionals responded.

The survey was created using Zoomerang.com. The survey results from both industry members and ASC faculty were kept separate. The results of this survey will be compared to recently published data which seeks to evaluate the positive contribution certain professional certifications have had on industry professionals' careers.

Results and Analysis

As stated, the primary goal of this research was to verify information obtained in a prior survey and to ascertain if there is any discrepancy between what schools are requiring and what academicians and industry members think should be required. In addition the researchers inquired as to the perceived value the credential adds to the students' professional development. The researchers also inquired into who they believe is responsible for the cost of testing. The questions listed in the survey are as follows:

1. Which of the following is the applicable accrediting body for your academic program
2. Which of the following certifications does your academic program support (Check all that apply)
(Note: Support is intended to denote 1) facilitating or 2) encouraging but not necessarily requiring as part of the degree program.)
3. Which of the following are formally incorporated into a required class in your curriculum?
4. From your perspective, please rate the value of the following certifications/credentials towards students' professional development.
5. If any certification is required for your academic program and if there is a cost associated with the certification, who should bear the cost of the professional certification exam(s)?

Results and Analysis – Academic

The majority of respondents were from *American Council for Construction Education (ACCE)* accredited programs (77%), seven respondents were accredited by *Accreditation Board for Engineering and Technology (ABET)* and five respondents were accredited by both ACCE and ABET (Figure 2). Other accrediting bodies of the respondents included five respondents being accredited by Association of Technology, Management, and Applied Engineering (ATMAE), one by Royal Institute of Chartered Surveyors (RICS), one by North Central Association of Colleges and Schools (NCACS), and one unknown. In order to maintain the anonymity of the survey, respondents were not asked to identify their institution, only the accrediting body for their academic program.

Regarding certifications supported, but not required by an academic program (meaning not incorporated into the curriculum of a required class), 46% and 69% of respondents state that OSHA 10-hour and 30-hour courses are supported, respectively. The credential receiving the next highest response rate was LEED GA (or AP or AP+) with 68% of respondents and following at 60% was the AIC Associate Constructor credential. The National Association of Home Builders (NAHB) Certified Green Professional was supported by 14%, American Concrete Institute (ACI) Testing Certification by 12%, Engineer In Training (EIT) Fundamentals of Engineering by 11%, Associate DBIA by 10%, and General Contractor License by 9%. One respondent stated Construction Manager in Training (CMIT) was supported, one Association of Technology, Management, and Engineering (ATMAE), another response stated Department of Transportation (DOT)-specific technician certifications while others added Certified Professional

Constructor (CPC), asphalt specialist, and codes inspection. The Construction Specification Institute (CSI) was listed by another and one individual stated that “LEED GA as an elective and ACI exam as a requirement will be incorporated in the next academic year” (Figure 3).

For certifications formally incorporated (meaning incorporated into the curriculum of a required class) into their curriculum, respondents followed a similar trend. The majority of formally required certifications are the OSHA 10-hour and 30-hour courses with 38% and 60%, respectively. The AIC Associate Constructor was required by 37% of those surveyed, LEED was required by 16%, and ACI by 8%. EIT was required by 6% of respondents and 2% of respondents required Associate DBIA, general contractor license, or NAHB Certified Green Professional credentials. Other responses mostly claimed that no certifications were formally incorporated into their curriculum, but one respondent did state that OSHA was offered as an elective (Figure 4).

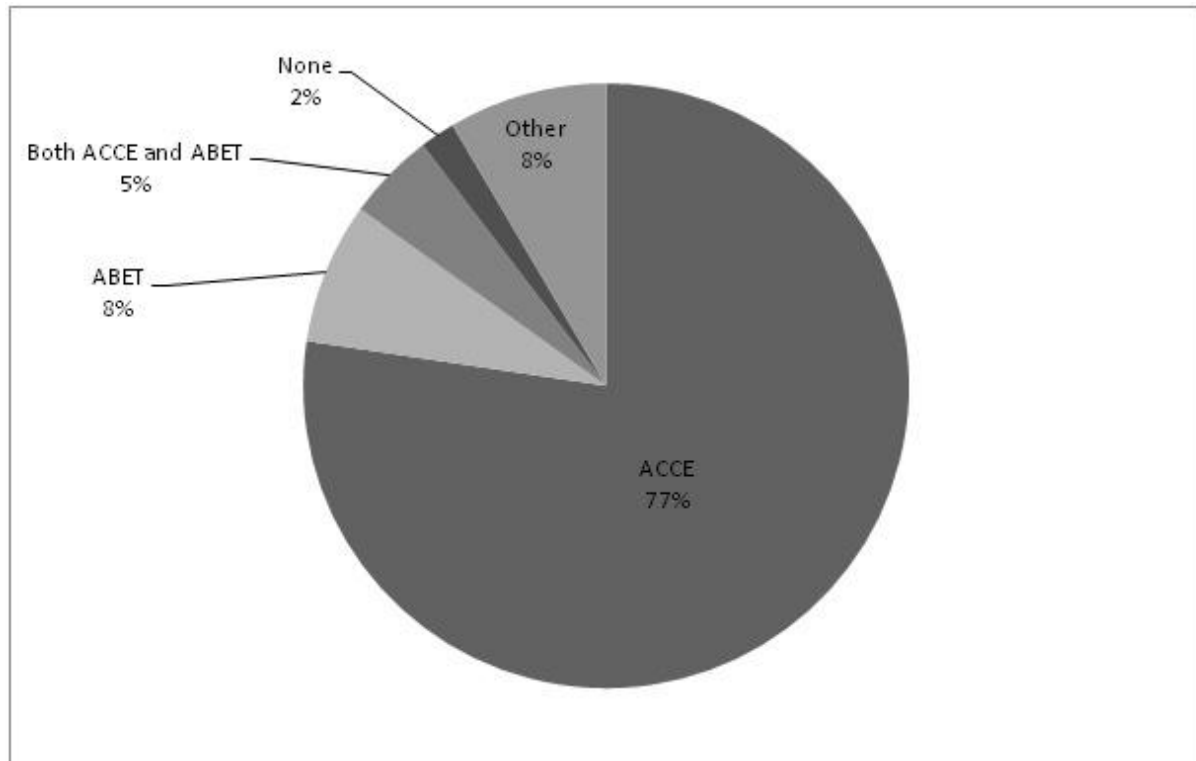


Figure 2. Accreditation of Programs Responding to Survey

Some of the most significant differences occurred between what an academic program supports and what it requires. Not surprisingly, the two credentials where this is most evident are with the AIC-Associate Constructor and with LEED GA. This is not surprising as OSHA received overwhelming recognition by both those supporting and those requiring a credential; and all other credentials received very little recognition from either group. The AIC-Associate Constructor and LEED GA groups are the only ones that are truly contentious. While 60% of the faculty supports the AIC credential only 37% of the programs report that it is required. Likewise, 68% of the faculty report that their program supports LEED GA but only 16% of the schools are currently requiring the test. These differences could result from a number of reasons; one being that they are both relatively new credentials and it takes academia a number of years to incorporate new topics into the requirements of a curriculum.

The value that respondents placed on these certifications and exams can be seen in Figure 5. The best way to read this data is to simply look at the two major groupings. Only the lower four bars in Figure 5 show that the majority of faculty place a positive value on the credential as it impacts the students' professional development. These are the OSHA certification (10-hour and 30-hour), LEED GA and AIC-Associate Constructor. All other credentials had much less than a 50% positive rating from faculty.

The questionnaire ended with a general question inquired by the researchers about who should pay for the testing, if required. Sixty-five percent of the respondents answered that students should cover the costs of the exams while 25% responded that some sort of shared cost between the institution and student is preferred.

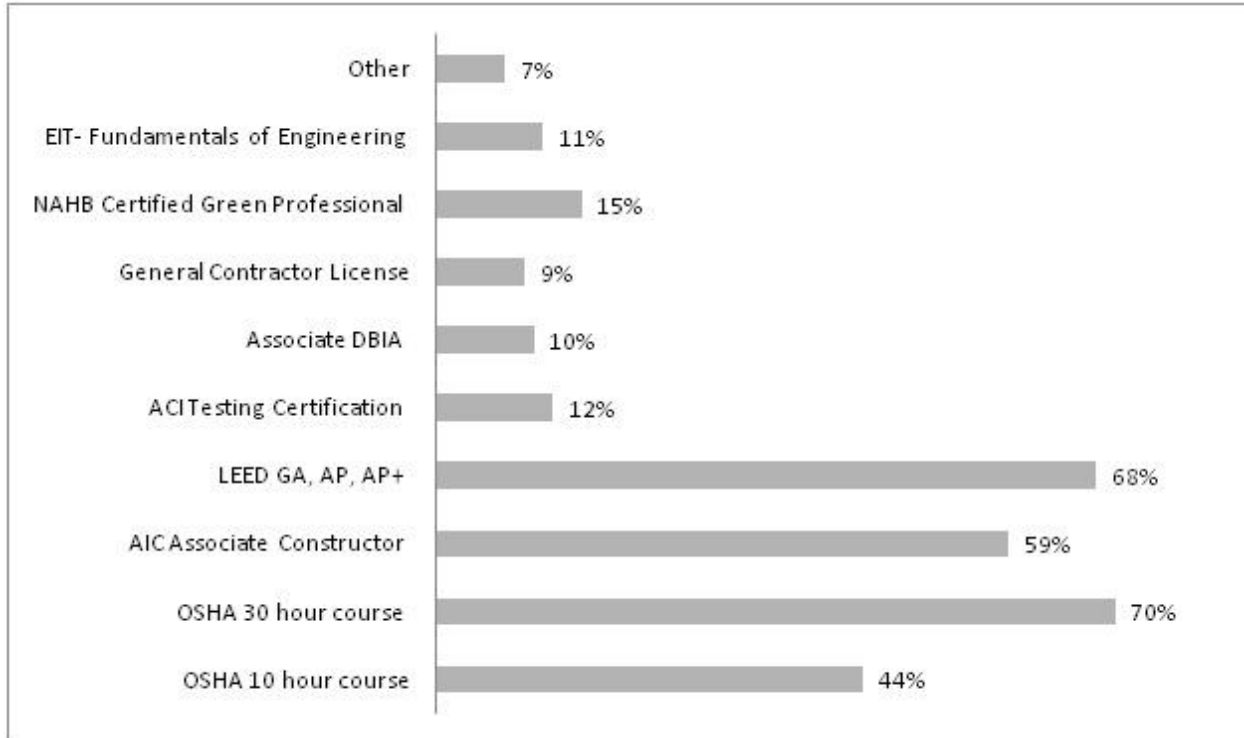


Figure 3. Credentials Supported by the Academic Program (But Not Required as Part of the Curriculum)

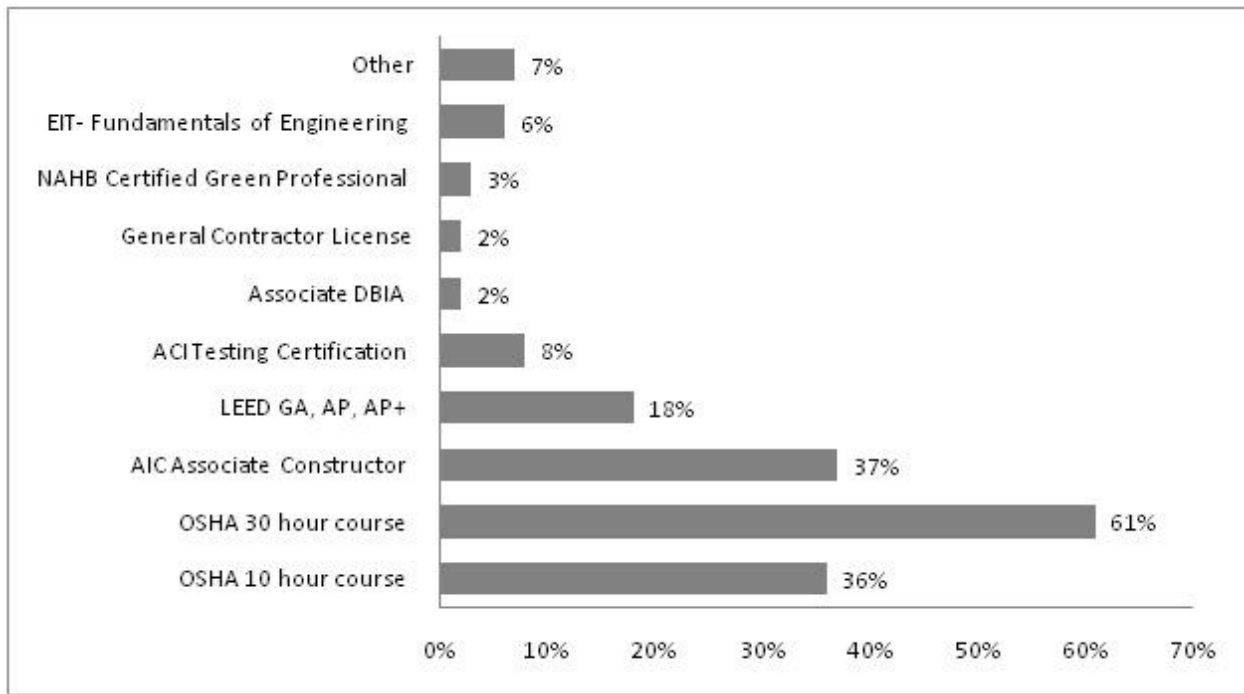


Figure 4. Credentials Formally Incorporated into a Required Class

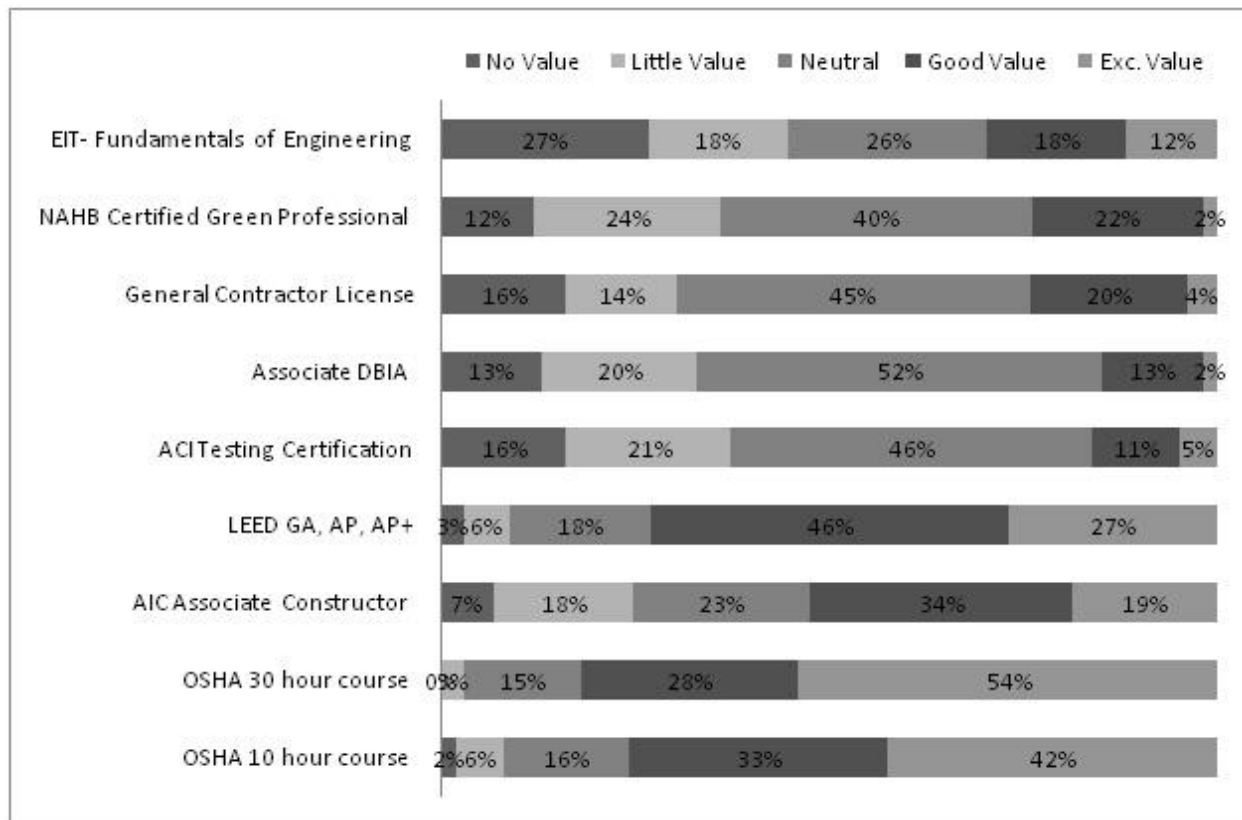


Figure 5. Value of Credential – Academic Perspective

Results and Analysis – Industry

In order to compare the results from academia to that of industry, a similar survey was sent to 172 general contractors through the AGC. Only 10 completed responses were received and analyzed. The survey was deployed online for the same time frame as the academic survey, and was composed of the following questions:

1. Which of the following professional certifications are you aware of?
2. Please rate the value of the following certifications as a distinguishing factor in relation to potential new hires.
3. Does your company require any of the following professional certifications when hiring?

Although a statistically insignificant number of responses were received, we will report the results under the guise of preliminary findings. All of the respondents were aware of OSHA 10-hour and 30-hour certification, 90% with general contractors licensing and LEED GA. Closely following, 70% were aware of AIC-Associate Constructor and EIT-Fundamentals of Engineering, only 30% aware of ACI Testing Certification and Associate DBIA, and only 20% for NAHB Certified Green Professional. Other certifications listed were CDP - Certified development, design, construction Professional (ICSC.org), and DBIA (in addition to Associate DBIA) in the open ended question.

Utilizing a broad grouping based on positive or negative responses, it is not surprising based on the above information that the most valued certifications are the OSHA 10-hour and 30-hour credential (90% and 80% positive response, respectively). LEED received a high positive rating of 90% while the AIC only had a 10% positive rating. All other credentials received negative responses as to value with the exception of the EIT-Fundamentals of engineering credential which received a positive response of 70% from the industry participants. Figure 6 illustrates the responses.

When looking to hire students (or new hires), companies only identified two certifications as requirements for consideration for employment. Not surprisingly, the OSHA 10-hour and 30-hour credentials were the certifications identified. Results of this question are not tabulated due to space constraints.

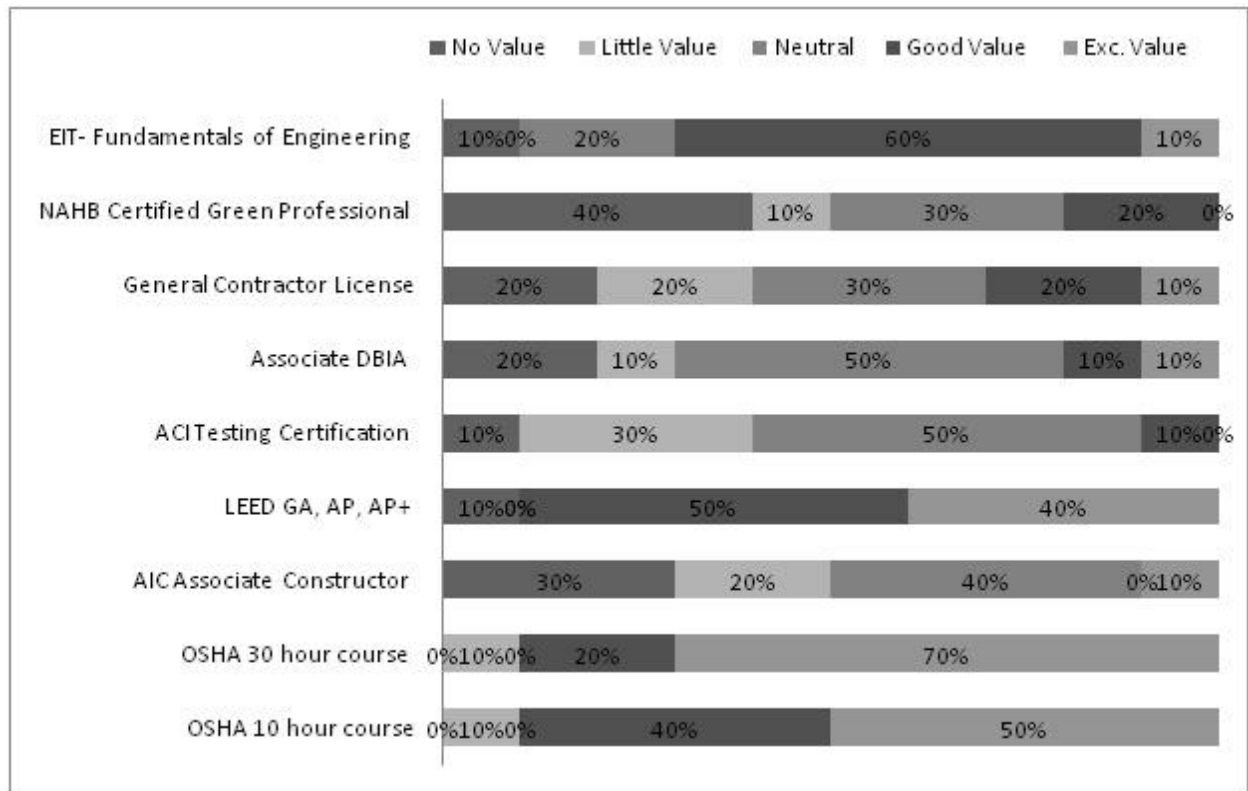


Figure 6. Value of Credential – Industry Perspective

Conclusion and Trends

As reported in our earlier paper, it seems clear from the results we received -- that ASC schools are generally conservative in the number of professional credentials they support and incorporate into their respective curriculum. It also appears, as evidenced by the marginal support for the LEED credential that ASC schools lag behind the industry in supporting a new credential and adopting it into their curriculum. There is a direct correlation between those credentials which are incorporated into a class and those credentials which are offered at ASC schools. The results also suggest that for the majority of professional credentials which are offered, students are expected to pay for the testing and certification costs.

The most striking differences were found in the differences in the value placed on certain credentials by academia and by the industry. OSHA and LEED rated high with both groups. And ACI Testing Certification, Associate DBIA, general contractor license and NAHB Certified Green Professional all rated low with both groups. The industry respondents only placed a 10% positive value on the AIC-Associate Constructor designation while academicians placed a 53% positive rating on this designation. And in a reverse fashion, academia placed a 30% positive rating on the value of the EIT-Fundamentals of Engineering designation while industry respondents gave this designation a 70% positive rating.

OSHA credentials receive high marks for value from both the academic community and the industry group; and the subject is incorporated into the curriculum in vast majority of ASC schools. On the other hand, LEED GA is also highly rated for value by both academia and industry but has yet to find its way into very many curricula (only 16%)

of ASC schools. All other designations a part of this study had mixed results as to value or received negative responses as it related to value. Not surprisingly, these are not a required part of many ASC curricula.

As stated in our earlier study, it appears that for the majority of professional credentials, ASC schools are comfortable leaving the choice and responsibility in the hands of the student and not commingling them into their respective curriculum. Maybe this is the way it should be.

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