

Comparing the Impact of the Certified Professional Constructor (CPC) Credential on the Careers of Construction Educators and Industry Practitioners

Richard D. Bruce, PhD, Aaron D. Sauer, M.S., and David W. McCandless, M.S.
University of Central Missouri
Warrensburg, MO

Since 1994, Construction Management educators have been using the Associate Constructor (AC) certification exam provided by the American Institute of Constructors (AIC) to assess their programs effectiveness in teaching such areas as communication, estimating, scheduling, safety, and surveying. Based on annual results, individual educators within these programs have been able to identify areas of weakness and improve their lessons. What was unknown, however, is if the certification provided any value to the educator designated as a Certified Professional Constructor (CPC). This study compared the impact of the credential on the careers of construction educators and industry practitioners. An electronic survey was successfully completed by 32 CPC educators and 176 CPC industry practitioners. Results showed that over 50% of both groups felt that the certification increased their prestige among individuals within and outside of their organizations. Over 40% of the respondents also felt that the credential increased their knowledge and confidence as a construction professional.

Key Words: Assessment, Certification, Construction, Construction Education

Introduction

Certification appears in many fields as a systematic process established by professional organizations whereby individuals can prove their competence in their chosen field (Bratton, 1980). Several occupations require certification for entrance and career advancement including nursing, research administration, and accounting. While trade publications and special interest groups tout the many benefits of certification, few studies were found that backup the benefits of certification with empirical data. This study set out to provide such evidence in examining the value of certification in the construction industry.

Literature Review

The authors found three empirical studies in the literature addressing the benefits of certification. First, Robinson (2004) found that nurses felt that advanced certification validated their expertise and highlighted their subspecialty skills. Second, Roberts (2005) found that certified research administrators felt that the certification process did improve their knowledge of the field. Third, Yemaneab (1998) found that 72% of employers preferred hiring certified automotive service technicians over non-certified technicians.

While these studies provide empirical evidence supporting the value of certification in the fields of nursing, research, and automotive service, no such study was found in the construction industry. There are several opinion articles (e.g. Izenson, 2002 and Ferrantella, 2002) suggesting many rewards to seeking certification in the industry including increased respect, recognition, upward mobility, and increased knowledge through preparation. However, no articles were found providing empirical evidence of these benefits to construction professionals.

Methodology

Using Roberts (2005) Certified Research Administrators Survey as a guide, the researchers developed the Perceptions of Professional Certification Survey using Survey Monkey. The survey included a total of 42 questions about the impact of the certification on the respondent's career, support they received from their employers, difficulty of the exam, and demographic information.

The researchers then forwarded the instrument to five educational experts for review and comments. Feedback from the expert panel led the researchers to reword some of the questions and to add the field of demographic data. Once the revisions to the survey instrument were complete, an electronic link to the survey was successfully e-mailed to 527 of the 665 current CPCs. The American Institute of Constructors Constructor Certification Commission forwarded the survey on to the CPCs. Of the 527 surveys that were successfully e-mailed to CPCs, 208 (39.5%) were returned.

The primary research question asked if educators and industry practitioners found the CPC certification beneficial to their careers. This question led to the development of the survey questions below. For survey question 2, respondents were given five response options: strongly disagree, disagree, no difference, agree, and strongly agree. For questions 3 and 4, response options were Yes, No, or No Difference.

2. How has being a Certified Professional Constructor (CPC) impacted your career in terms of the following:

- a. Having others more fully recognize your abilities to perform your job?
- b. Increased your professional opportunities for contributions (for example, through speaking, making presentations, writing, contributing to a related professional society)?
- c. Increased your salary?
- d. Increased your promotion opportunities?
- e. Increased your job responsibilities?
- f. Increased your prestige among superiors within your organization?
- g. Increased your prestige among individuals within your organization?
- h. Increased your prestige among individuals outside your organization?

3. Do you feel more knowledgeable as a construction professional as a result of becoming certified?

4. Do you feel more confident in your ability to do your work as a construction professional as a result of becoming certified?

The remaining 39 questions were utilized by the researchers to explore other aspects of the CPC credential. Due to a pending publication, these questions were not addressed in the current study.

Results

The following frequency tables and cross-tabulations provide some demographics on the respondents. Table 1 shows the frequency of the different position types for the 208 respondents that successfully completed the survey. Table 2 illustrates the educator type of the CPCs that responded yes to teaching construction courses at a college or university. Over 50% (18 out of 32) CPC educators were tenure or tenure-track professors.

Table 1

CPCs by position type

		Frequency	Percent
Valid	Other	72	35%
	Project Manager	74	36%
	Superintendent	3	1%
	Project Executive	40	19%
	Purchasing Manager	0	0%
	Facilities Manager	1	.5%
	University Professor	18	8.5%
Total		208	100%

Table 2

CPCs by education type

		Frequency	Percent
Valid	Part-time lecturer	8	25%
	Full-time adjunct	3	9%
	Tenure-track	8	25%
	Tenured	10	32%
	none of the above	3	9%
Total	Total	32	100%

Tables 3-7 below address how the respondent felt in regard to the impact the CPCs certification has had on their career in terms of recognition, professional opportunities, salary, opportunity for promotion, and job responsibilities. Table 3 illustrates that over 34% of teachers and 39% industry practitioners agreed or strongly agreed that the CPC certification led to more recognition in their job. Table 4 shows that 34% of teachers and 25% of industry practitioners agreed or strongly agreed that the CPC certification increased their professional opportunities for contributions. Table 5 illustrates that 15% of teachers and 20% industry practitioners felt that the CPC designation increased their salary. Table 6 shows that 21% of teachers and 30% of industry practitioners felt that certification improved their opportunity for promotion. Table 7 shows that 12% of teachers and 26% of industry practitioners felt that certification led to greater job responsibilities.

Table 3

Having others more fully recognize your abilities to perform your job?

			Do you teach construction courses for a college or university?		Total
			Yes	No	
Having others more fully recognize your abilities to perform your job?	Strongly Disagree	Count	1	3	4
		%	3.1%	1.7%	1.9%
	Disagree	Count	2	4	6
		%	6.3%	2.3%	2.9%
	No Difference	Count	18	98	116
		%	56.3%	55.7%	55.8%
	Agree	Count	8	61	69
		%	25.0%	34.7%	33.2%
	Strongly Agree	Count	3	10	13
		%	9.4%	5.7%	6.3%
Total	Count	32	176	208	
	%	100.0%	100.0%	100.0%	

Table 4

Increased your professional opportunities for contributions?

			Do you teach construction courses for a college or university?		Total
			Yes	No	
Increased your professional opportunities for contributions?	Strongly Disagree	Count	1	5	6
		%	3.1%	2.8%	2.9%
	Disagree	Count	2	10	12
		%	6.3%	5.7%	5.8%
	No Difference	Count	18	116	134
		%	56.3%	65.9%	64.4%
	Agree	Count	9	37	46
		%	28.1%	21.0%	22.1%
	Strongly Agree	Count	2	8	10
		%	6.3%	4.5%	4.8%
Total	Count	32	176	208	
	%	100.0%	100.0%	100.0%	

Table 5

Increased your salary?

			Do you teach construction courses for a college or university?		Total
			Yes	No	
Increased your salary?	Strongly Disagree	Count	2	7	9
		%	6.3%	4.0%	4.3%
	Disagree	Count	3	8	11
		%	9.4%	4.5%	5.3%
	No Difference	Count	22	124	146
		%	68.8%	70.5%	70.2%
	Agree	Count	4	33	37
		%	12.5%	18.8%	17.8%
	Strongly Agree	Count	1	4	5
		%	3.1%	2.3%	2.4%
Total	Count	32	176	208	
	%	100.0%	100.0%	100.0%	

Table 6

Increased your promotion opportunities?

			Do you teach construction courses for a college or university?		Total
			Yes	No	
Increased your promotion opportunities?	Strongly Disagree	Count	1	5	6
		%	3.1%	2.8%	2.9%
	Disagree	Count	1	8	9
		%	3.1%	4.5%	4.3%
	No Difference	Count	23	110	133
		%	71.9%	62.5%	63.9%
	Agree	Count	6	48	54
		%	18.8%	27.3%	26.0%
	Strongly Agree	Count	1	5	6
		%	3.1%	2.8%	2.9%
Total	Count	32	176	208	
	%	100.0%	100.0%	100.0%	

Table 7

Increased your job responsibilities?

			Do you teach construction courses for a college or university?		Total
			Yes	No	
Increased your job responsibilities?	Strongly Disagree	Count	2	5	7
		%	6.3%	2.8%	3.4%
	Disagree	Count	2	7	9
		%	6.3%	4.0%	4.3%
	No Difference	Count	24	117	141
		%	75.0%	66.5%	67.8%
	Agree	Count	3	37	40
		%	9.4%	21.0%	19.2%
	Strongly Agree	Count	1	10	11
		%	3.1%	5.7%	5.3%
Total	Count	32	176	208	
	%	100.0%	100.0%	100.0%	

Tables 8-10 address the impact of certification on the CPCs prestige within and outside their organization. Table 8 shows that over 40% of teachers and 51% of practitioners felt that the certification increased their prestige among their superiors. Table 9 illustrates that 50% of teachers and 52% of practitioners felt that the certification increased their prestige with peers inside their organization. Table 10 shows that over 65% of teachers and 54% of practitioners felt that the CPC designation increased their prestige among individuals outside of their organization.

Table 8

Increased your prestige among superiors within your organization?

			Do you teach construction courses for a college or university?		Total
			Yes	No	
Increased your prestige among superiors within your organization?	Strongly Disagree	Count	2	4	6
		%	6.3%	2.3%	2.9%
	Disagree	Count	1	5	6
		%	3.1%	2.8%	2.9%
	No Difference	Count	16	77	93
		%	50.0%	43.8%	44.7%
	Agree	Count	10	77	87
		%	31.3%	43.8%	41.8%
	Strongly Agree	Count	3	13	16
		%	9.4%	7.4%	7.7%
Total	Count	32	176	208	
	%	100.0%	100.0%	100.0%	

Table 9

Increased your prestige among individuals within your organization

			Do you teach construction courses for a college or university?		Total
			Yes	No	
Increased your prestige among individuals within your organization?	Strongly Disagree	Count	1	2	3
		%	3.1%	1.1%	1.4%
	Disagree	Count	3	8	11
		%	9.4%	4.5%	5.3%
	No Difference	Count	12	73	85
		%	37.5%	41.5%	40.9%
	Agree	Count	13	84	97
		%	40.6%	47.7%	46.6%
	Strongly Agree	Count	3	9	12
		%	9.4%	5.1%	5.8%
Total	Count	32	176	208	
	%	100.0%	100.0%	100.0%	

Table 10

Increased your prestige among individuals outside your organization

			Do you teach construction courses for a college or university?		Total
			Yes	No	
Increased your prestige among individuals outside your organization?	Strongly Disagree	Count	1	3	4
		%	3.1%	1.7%	1.9%
	Disagree	Count	1	4	5
		%	3.1%	2.3%	2.4%
	No Difference	Count	9	73	82
		%	28.1%	41.5%	39.4%
	Agree	Count	19	79	98
		%	59.4%	44.9%	47.1%
	Strongly Agree	Count	2	17	19
		%	6.3%	9.7%	9.1%
Total	Count	32	176	208	
	%	100.0%	100.0%	100.0%	

Table 11-12 show the results of survey questions 2 and 3 concerning the impact of certification on the respondents' construction knowledge and confidence to do their work. Table 11 shows that over 43% of teachers and over 47% of practitioners felt more knowledgeable as a result of becoming certified. Table 12 shows that 40% of teachers and 44% of practitioners felt more confident in their ability to do their work.

Table 11

Do you feel more knowledgeable as a construction professional?

			Do you teach construction courses for a college or university?		Total
			Yes	No	
Do you feel more knowledgeable as a construction professional as a result of becoming certified?	Yes	Count	14	83	97
		%	43.8%	47.2%	46.6%
	No	Count	6	31	37
		%	18.8%	17.6%	17.8%
	No Difference	Count	12	62	74
		%	37.5%	35.2%	35.6%
Total		Count	32	176	208
		%	100.0%	100.0%	100.0%

Table 12

Do you feel more confident in your ability to do your work?

			Do you teach construction courses for a college or university?		Total
			Yes	No	
Do you feel more confident in your ability to do your work as a construction professional as a result of becoming certified?	Yes	Count	13	78	91
		%	40.6%	44.3%	43.8%
	No	Count	8	32	40
		%	25.0%	18.2%	19.2%
	No Difference	Count	11	66	77
		%	34.4%	37.5%	37.0%
Total		Count	32	176	208
		%	15.4%	84.6%	100.0%

Discussion

This study set out to provide empirical data in regards to the value of certification to CPC construction educators and industry practitioners. Results indicated that certification had little impact on both group's perceived increased ability to do their job, increased professional opportunities, increased salary, increased promotion opportunities, and increased job responsibilities. However, certification did have an impact on both groups' prestige within and outside their organizations. Similarly over 40% of all respondents felt that the certification increased their knowledge and confidence as a construction professional.

Many of the respondents provided comments at the end of the survey. Several commented that there were too many certifications in the industry and that they would like to see the American Institute of Constructors team up with other associations (e.g. Project Management Institute and Construction Managers Association of America). Several also stated that they felt that the CPC and other similar credentials needed to be mandatory in the industry and count as the qualifying state licensing exam for general contractors. One of the overall themes in the comment section was that they felt the credential needed more exposure in the industry.

While this study presented positive data on the value of this certification to those holding the CPC credential, more studies need to be conducted in this area. The following are suggested areas of research:

1. Studies comparing biographical data (e.g. salary, education level, title) of certified and non-certified professional constructors.
2. Studies focused on combining the various credentials available to constructors.
3. Studies focused on promoting credentialing in the industry.

Conclusion

The results of the study indicate that many Certified Professional Constructors perceive a benefit from completing certification. The survey questions that received the highest levels of positive response were related to increased prestige among individuals within your organization, increased prestige among individuals outside of your organization, feeling more knowledgeable as a construction professional, feeling more confident in your ability to do your work. These benefits may be of little interest to the experienced construction professional with an established career. However, newcomers to the construction industry may wish to take advantage of the opportunity provided through certification.

It is important to note that this project sought only to measure perceptions related to certification. The accurate measurement of more tangible benefits would be difficult if not impossible accomplish. However, one should not overlook the real impact that positive perceptions related to prestige, professional knowledge, professional competency have on an individual's career. This is especially true for recent college graduates or any individual starting a career in the construction industry.

References

Bratton, B. Hildebrand, M. (1980, December). Plain talk about professional certification. *Instructional Innovator*, pp. 22-24.

Ferrantella, T.J. (2002, April 1). Prove Yourself: Take the Test. *Engineering News-Record*, 248(12), 55.

Izenson, K. (2002, January/February). Continuing education and certification grows throughout the industry. *Design Cost Data*. Retrieved February 10, 2007, from http://www.dcd.com/insights/janfeb_2002_dcd_insights.html

Roberts, T. (2005). *Perceptions of research administrators on the value of certification*. Dissertation. Orlando, Florida: University of Central Florida.

Robinson, E.S. Mee, C. L. (2004). Nursing 2004 salary survey. *Nursing*, 34 (10), 36-39.

Yemaneab, T. (1997). *Employers' perceptions of automotive service excellence (ASE) certification benefits (professional certification)*. Dissertation. University of Minnesota.