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ABSTRACT

The roots of certification in America date back to guild-like associations similar to those in Europe, but did not gain industry recognition until after World War II. Certification can help an industry elevate itself and be recognized as a stand-alone, autonomous profession, as long as there is validity in the certification process and impartial oversight by an accredited governing body. It is also a way for individuals to distinguish themselves from their peers by proving a technical aptitude or competence. It allows a prospective job candidate to signal to a potential employer that they have attained of higher body of knowledge held to national standards. Certification is generally not required in the automotive industry except for pockets of technical positions in the automotive manufacturing and service sectors. The certification agency in the automotive industry is the National Institute for Automotive Service Excellence which was established in 1972 as an independent, non-profit organization charged with oversight and the administration of the Automotive Service Excellence (ASE) exams. The purpose of this study was to identify and analyze the perceived benefits of earning these certifications for 4-year automotive technology graduates working in the automotive or automotive-related industry.

Keywords: Automotive Service Excellence, ASE, certification, competency, exam, perceived, benefits, credentialing, NATEF

The Perceived Employment Benefits of Automotive Service Excellence (ASE) Certifications for Graduates of Four-Year Automotive Technology Programs

Introduction

Certification is a form of credentialing that verifies competence or a level of aptitude by the individual within a subject or occupational area (Church, 2007). The history of occupational competency testing in the United States can be traced to guild-like associations, similar to those in Europe, which regulated worker training and apprenticeship. In the early 1900's, certifications and credentialing were concepts that began to emerge as alternative ways of demonstrating an individual's competency. Kaplow (2011) argued that certification ultimately exists to protect the consumer.

Consumer protection was the catalyst for certification in the automotive industry to combat increasing complaints of fraudulent practices by mechanics (Sutphin, 1994). In 1968 the federal government formed a Senate Judiciary Committee to investigate whether the consumer complaints were due to dishonesty or incompetence. Growing concerns and complaints about fraudulent or inexperienced mechanics plagued the automotive repair industry in the late 1960s, leading to congressional hearings on the matter (Rogers, 1975; Sutphin, 1994). During the testimony, it became clear that inexperience and incompetence, not fraudulent individuals, caused the bulk of the customer complaints. Those proceedings led to a partnership between the National Auto Dealers Association (NADA) and the Major Vehicle Manufacturers Association (MVMA) to establish a national certification structure. In 1972, the National Institute for Automotive Service Excellence (NIASE) was formed as an independent, non-profit organization designed to provide oversight and conduct testing and certification of the workforce. The institute offers certification exams in the form of written tests, known as the Automotive Service Excellence exams but more commonly referred to as ASE exams, which are designed to differentiate competent technicians from non-competent technicians through various test questions that require in-depth knowledge of job-related skills and competencies.

Certification and other forms of credentialing give a level of authority and authenticity for the holder to ensure that the recipient has met pre-established, industry prescribed standards of quality (Foster & Pritz, 2006). An accredited professional certification is viewed by the public as credible evidence of an advanced body of knowledge within a field or procession (Adams, Brauer, Karas, Bresnahan, & Murphy, 2004). Kolo (2006) described certification as a process by which an agency or association grants recognition to an individual who met predetermined qualification, such as graduation from an approved program, acceptable performance on a qualifying examination, or completion of a given amount of work experience.

Types of Certification

A key component of credibility to any certification is the level of authority and public trust associated with "the integrity and validity of the certification process" itself (Adams et al., 2004, p. 27). Certification without national accreditation agency oversight is limited in scope to the power it has in instilling confidence in the consumer (Barnhart, 1994). According to Barnhart (1994), certifications, which demonstrate the skill or competency at nationally recognized industry standards, can be broken down into three categories: competency-based, curriculum-based, or portfolio-based. Competency-based certifications require the candidate to pass a written exam, have full-time professional experience within the industry, and/or earn a

post-secondary degree (either an associates or bachelors). The Automotive Service Excellence certifications fall under the competency-based format. Candidates must pass a written exam, ranging from 40-80 questions, for certification in an area. Competency-based curricula require candidates to demonstrate knowledge and mastery in specific areas, in a much more robust way than what could be demonstrated on written exams (Swider et al., 2006).

The exams require synthesized knowledge of technical systems and stress knowledge of job-related skills. Candidates are required to not only demonstrate knowledge of a complete system, but also how that system affects other systems and technologies on the vehicle. The tests are designed to be difficult and are often failed the first time. In fact, according to the National Institute for Automotive Service Excellence, roughly one third of test takers fail on their first attempt. After passing at least one exam and providing proof of two years of relevant work experience, the test-taker becomes ASE certified. To remain certified, ASE-certified professionals must be retested every five years. Recertification tests are written to maintain the level of rigor and synthesis required like the initial certification exam, but they typically have fewer questions.

The ASE tests cover 13 occupational areas of the automotive industry which include: Automobile Technicians, Service Consultants, Maintenance/Light Repair Technicians, Advanced Engine Performance Specialists, Collision Repair/Refinish Technicians, Collision Damage Estimators, Medium/Heavy Truck Technicians, Truck Equipment Installation & Repair Technicians, Engine Machinist, Compressed Natural Gas Technicians, Transit Bus Technicians, School Bus Technicians, and Parts Specialist. The tests range from 60 to 70 questions for certification, and 30 to 40 questions for re-certification (ASE, 2014). Most tests require a 68% correct completion rate in order to pass. However, as with competency-based certification formats, certifications are not granted by passing a written test alone. Additional requirements to receiving a passing score include either the education or work experience, similar to the guild era. Candidates are required to also work in the industry or complete advanced training in an automotive program. ASE recognizes either two years of automotive experience or an advanced automotive degree.

Candidates may substitute the industry experience requirement with relevant formal training. High school, trade school, or community college automotive training can be substituted for up to one year of the two-year work experience requirement. One month of work experience can be credited for every two months of full-time training.

Certifications Used in Educational Programs

As a result of the demand for certification in the automotive industry, some technical and trade schools include passing national certifications as part of their overall training curricula (Banz, 2004; Daniels, 2011). The American Council on Education supports the notion as well and recommends college credit for ASE certifications (Barnhart, 1994). Automotive technology students nationally and globally are increasingly asked to validate their scholastic automotive training by passing the national ASE certification exams (VanDalsem, 2010). Phillips (2004) suggested that many professional careers are laid on a foundation of “specific graduation-education programs and passing state mandated exams” (p. 65). Elmore (2013) agreed and suggested that industry-based certifications have been the focus of many career and technical programs. In recent years, as state funding for higher education has been scrutinized by state legislatures, so have the dollars spent to support such institutions of higher

learning. In reaction, degree program coordinators and department chairs have used student earned certifications to provide evidence that the program is training students to industry standards during budget allocations and other internal, institutional accountability initiatives such as program review.

Church (2007) states,

> Business and industry consider certification as a method of verifying competence of employees as part of their hiring practices. Schools and colleges use them not only to verify student competence, but also to validate quality instructional programs. If students pass certification tests, they can be reasonably assured that their curriculum and teaching methods are sound. (p. 1)

Problem Statement

Research shows that automotive industry professionals in the manufacturing and service sectors prefer hiring technicians who are ASE certified (Banz, 2004; Church, 2007; Kolo, 2006). Additionally, studies have investigated how certification tests differentiate between the competent technician and the incompetent technician (Banz, 2004; Bartlett, 2004; Elmore, 2013; Kolo 2006; Yemaneab, 1997). However, little research has investigated whether graduates with a four-year automotive degree and who are not employed as technicians (i.e. district sales managers, district parts and service directors, product engineers, customer service representatives, etc.) perceive a benefit from acquiring ASE certifications in terms of employment opportunities, career advancement, salary potential, and self-efficacy over their non-certified counterparts.

Statement of the Purpose

The purpose of this study was to identify the perceived benefits of ASE certifications for graduates of four-year automotive programs. Specifically, the researcher examined the perceived benefit that ASE certifications play in the careers of alumni working in the automotive industry in terms of: employment opportunities, career advancement, higher salary, and self-efficacy.

Research Questions

This study sought to understand the perceived benefits of ASE certifications to automotive industry professionals in careers outside of the service department or repair shop, such as corporate sales consultants, service engineers, product support staff, trainers, and parts distributors, among others. Therefore, the research questions that guided this study were:

- What are the perceived benefits of Automotive Service Excellence (ASE) certifications for graduates of four-year Automotive Technology programs in terms of employment opportunities?
- What are the perceived benefits of Automotive Service Excellence (ASE) certifications for graduates of four-year Automotive Technology programs in terms of career advancement?
- What are the perceived benefits of Automotive Service Excellence (ASE) certifications for graduates of four-year Automotive Technology programs in terms of salary potential?

Delimitations

This study did not seek to question graduates of two-year vocational automotive programs nor did it analyze data from individuals who may have attended but did not complete

a bachelor's degree in Automotive Technology. Additionally, the study did not analyze data from individuals have not worked in an automotive or related field for a minimum of five years. This study will not analyze data from respondents who are required to become ASE certified in their career.

METHODOLOGY

This descriptive study used a quantitative research design to investigate automotive professional's perceptions of ASE certifications. The population consisted primarily of graduates from five university Automotive Technology programs located in Colorado, Illinois, Kansas, Michigan and Utah. These schools were chosen because they make up the majority of universities that offer a four-year bachelor's degree in Automotive Technology in the U.S. and have an ASE component to some extent in their degree programs. They were also chosen because they are members of the National Association of Automotive Universities (NAAU) which meets annually. These annual meetings have fostered good working relationships between the programs and faculty which increased support for contacting the alumni from the NAAU institutions as well as the amount of data collected.

Population

The population for this survey mainly consisted of graduates with a bachelor's degree in Automotive Technology from universities in the National Association of Automotive Universities (NAAU). The five primary universities participating in the study include: Pittsburg State University (PSU) in Pittsburg, KS; Southern Illinois University (SIU) in Carbondale, IL.; Weber State University (WSU) in Ogden, UT.; Ferris State University, Big Rapids, MI.; and Colorado State University, Pueblo, CO. Graduates who have earned a four-year bachelor's degree in Automotive Technology from these universities were asked to participate, however, only alumni who are currently employed or have been employed in the automotive industry in occupations other than technicians, have maintained automotive careers for a minimum of 5 years, and were not required to become certified for their position were included in the target population.

The Automotive Technology Department at PSU has long maintained close contact with many graduates through an annual newsletter and other outlets. The department has an extensive database of contact information for over 750 alumni dating back to the early 1990's so the opportunity to access the population was very good. Additionally, the Alumni and Constituents Relations unit at PSU had contact information for many of the graduates, could separate them based on the degree earned, and offered to send the emails out to prospective participants. This resulted in contact information for an additional 1,112 graduates of PSU. Quantifying the population for the other NAAU schools is more difficult. The researcher recommended that the other universities work with their respective alumni units as well. The Chairs of the Automotive Technology Departments at the participating schools all agreed to send an initial email to their alumni as well as follow-up emails every two weeks for a month. However, those emails were dispersed through listserves so actual numbers of alumni contacted by those institutions was not available.

Respondents were informed that participation in this study was completely voluntary and no risks were associated with it. Respondents also received a description of the research

and why it was conducted. Completion of the survey by the respondents acted as consent for participating in the study.

Instrumentation

The survey instrument was disseminated through the online provider Survey Monkey. The survey instrument consisted of 20 questions and the data was analyzed using the Statistical Package for Service Solution software known as SPSS. The survey instrument used in this study was adapted from the 18-item Perceived Value of Certification Tool (PVCT©) developed by the Competency and Credentialing Institute (CCI). The PVCT was developed to determine the perceived value of certification among perioperative nurses; however, since its inception in 2003, the instrument has been administered to over 25,000 subjects including nursing staff, safety professionals, and administrative assistants. The questions and statements from the PVCT were modified to fit the automotive profession and to align with the research questions addressed in this study. The survey began with a series of value statements that were developed from themes that emerged in the literature. Demographic information remained very similar to the PVCT with little modifications.

Validity

Historical data regarding validity and reliability of the PVCT cannot be assumed with this instrument because of the modifications made to it, and the fact that it surveyed a different profession. A panel of experts was formed consisting of the Vice President for Test Development at the National Institute for Automotive Service Excellence, two professors in the Technical Education program at Pittsburg State University, and five graduates of the Automotive Technology Department at PSU. Panel members were asked to read through the survey instrument, make sure the wording and the meaning of the questions were easily understood, and to make recommendations to add, delete, or modify items. They were also asked to offer suggestions to improve the instrument and return their survey within 2 weeks of receipt. Suggestions were made by five panel members and changes were made.

Reliability

Although the survey instrument used in this research was adapted from the PVCT which has reported exceptional internal consistency reliability (Cronbach's alpha) ratings greater than .90 in the past, the survey instrument was still tested for reliability since the instrument was modified. After the Panel of Experts tested the survey instrument for validity, a group of twenty PSU automotive technology graduates were asked to pilot the survey. These data were collected and used to calculate a Cronbachs' Alpha for internal consistency. A reliability of .94 for the 17 statements included in the four research questions was ascertained by the pilot group. This is in agreement with the literature regarding previous reliability findings with the PVCT and is very acceptable for this study.

Data Collection

The method for collecting data for this study was through the use of an online administrator called Survey Monkey. Prospective participants were contacted via a series of emails following the procedure developed by Salant & Dillman (1994) which calls for an initial email sent out one week before the data collection begins. The email was brief but descriptive and explained why they were sought for the study and why their input was so important. It confirmed that respondents would remain anonymous, advised how long it would take to complete the survey, and when the study would conclude. Last, it thanked the respondents in advance for their

participation in the survey. A copy of this email can be viewed in Appendix D. A second email that echoed the statements in the initial email was sent one week later and included the link to Survey Monkey. A copy of this email can be viewed in Appendix E. A follow-up email was again sent after one week and it requested a response from those who have not yet participated. A copy of this email can be viewed in Appendix F. The last email requested participation from those who had not yet completed the survey and stated that the close date for the survey was September 1, 2014. A copy of the email can be viewed in Appendix G.

Data Analysis

Data collected during the study was analyzed using the Statistical Package for Service Solution software known as SPSS. The first three questions of the survey were designed to address each specific research area. Respondents were asked to indicate their level of agreement or disagreement using a 5-point Likert scale. These data were treated as interval data and described using means and standard deviation. Demographic information including age, years in the automotive industry, years certified, and gross salary were treated as ratio data and described by the means and standard deviation. Other demographics regarding gender, ethnicity, current employment questions, education level, ASE certifications, barriers to certification, incentives for certification, and future plans were treated as nominal data and described using frequencies and percentages.

Description of Variables

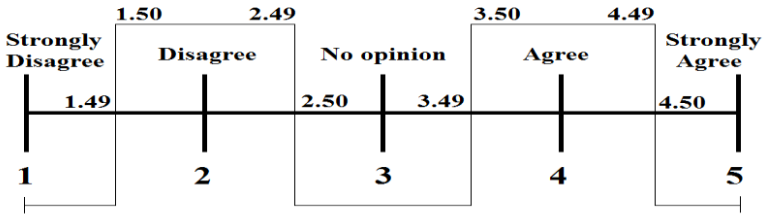
Variables that have been identified in this study include the degrees earned, certifications earned, career path, area of residence, time in the industry, salary earned, and current position. In terms of the degrees earned, it was anticipated that respondents would hold a bachelor's degree; however, there are a number of master's degrees that can complement an automotive degree such as a Master's in Science or a Master's in Business Administration (MBA). Graduate degrees often offer higher starting salaries in the automotive industry and improved career advancement. Specific certifications earned or not earned is another variable due to the range of occupations for which certifications are offered. Respondents who have never attained any ASE certification will not be included in the analysis, but will be reported as a percentage of respondents. Career path will also be a variable due to the vast array of automotive careers that exist for graduates of a bachelor's degree program in Automotive Technology. Alumni fill many positions and occupations in the automotive, diesel and heavy equipment, and agricultural profession such as corporate manufacturing, corporate sales, corporate parts and service representatives, independent service and sales dealers, product support, product engineers, and others. They also work in a number of external automotive related fields such as insurance, manufacturer and aftermarket parts, electric and locomotive industries, construction fleet managers, and other transportation related industries. Area of residence, time in the industry, and current position, are all variables that speak to employment opportunities and career advancement. Salary is the last identified variable and is expected to have a wide range due to the diverse range of opportunities.

FINDINGS

The first three questions addressed perceptions specific to the three research questions that are associated with employment opportunities, career advancement, and higher salary. Respondents were asked to indicate their level of agreement or disagreement for each question

using a 5-point Likert scale where 5 represented a strong agreement, 4 was an agreement, 3 was no opinion, 2 was a disagreement, and 1 represented a strong disagreement. The responses were treated as interval data and described using means and standard deviation. Interpretation of the data collected for questions 1-3 was based on a range of agreement/disagreement where Strongly Disagree is represented from 1 to 1.49, Disagree is represented from 1.50 to 2.49, No opinion is represented from 2.50 to 3.49, Agree is represented from 3.50 to 4.49 and Strongly Agree is represented from 4.50 to 5. The range of agreement is illustrated in Figure 4.1.

Figure 4.1. Range of disagreement/agreement



A total number of 516 surveys were collected; however, 13 incomplete surveys were removed prior to the analysis. Surveys were considered incomplete if respondents began the survey but failed to complete the majority of it. The remaining surveys were checked by the researcher for duplication by cross-checking the IP address with other personal information to ensure the same respondent was not counted more than once. All matching IP addresses were checked to verify that the respondent was not counted more than once. This was done by cross-matching other demographic information such as age, current position, years certified, etc. No matches were found to indicate that the database contained data from individuals who took the survey more than once. Filters were used to separate individual surveys that did not match the following criteria:

- Limited to alumni of four-year automotive degrees such as Colorado State, Ferris State, Pittsburg State, Southern Illinois, and Weber State universities. (NAAU)
- Limited to individuals with a minimum of five years in the automotive industry and currently employed in the automotive or automotive related profession.
- Limited to individuals who are currently or have been ASE certified.
- Limited to individuals who are not required to become certified.

In order to address the limitations and delimitations of the study, questions 8, 10, 11, 12, 15, and 23 were used as filters to include only those respondents who: (1) qualified by graduating from a university automotive technology program, (2) were currently or at one time ASE certified, (3) certification was not mandatory for their position or promotion, (4) they were not service technicians, and (5) they have been working in the automotive industry or automotive related industry for a minimum of five years. Out of the 503 surveys deemed “complete”, 359 were filtered out due to a response rendering them unqualified, or their survey included a missing value for that question indicating no response. The remaining 157 respondents fit the criteria and were included in the Target Population. Their data were analyzed separately from the overall group. As a matter of comparison and to allow a broader perspective, the Target Population analysis was reported along with All Respondents as two separate groups.

Analysis of perceptions

Each of the first three perception questions were reported separately and written verbatim as on the survey instrument followed by the analysis in a table. Each of the four research questions are discussed using this format.

Research Question One.

In terms of EMPLOYMENT OPPORTUNITIES, one or more ASE certifications…

Question 1 asked respondents about perceptions regarding ASE certifications and "Employment Opportunities". A note at the beginning of the question clarified that the term "employment opportunities" pertained to an individual getting a job with a new company in the automotive industry. This could include either first time workers entering the automotive profession or seasoned professionals taking a different automotive position with another company. The question contained five statements and respondents were asked to choose the extent to which they agree or disagree with each statement using a 5-point Likert scale. The responses for question one are summarized in Table 4.1.

Table 4.1

Employment Opportunities

Statement	Target Population			All Respondents		
	n	*M*	*SD*	*N*	*M*	*SD*
Indicates attainment of a national standard of knowledge	156	4.19	0.81	513	4.21	0.85
Indicates a level of technical competence	156	4.10	0.83	513	4.06	0.96
Increases marketability of the individual	157	4.10	0.85	515	4.17	0.89
Aids in gaining employment	157	3.90	0.86	511	4.00	0.95
Increases marketability of the company	157	3.76	0.96	509	3.93	1.00

Note: 1 = Strongly Disagree, 2 = Disagree, 3 = No opinion, 4 = Agree, 5 = Strongly Agree

Of the responses collected, both the Target Population and All Respondents indicated a higher range of agreement with the statement, "Indicates attainment of national standard of knowledge" (*M* = 4.19, *SD* = 0.81 and *M* = 4.21, *SD* = 0.85, respectively). The statement, "Increased marketability of the company" reported the lowest range of agreement (*M* = 3.76, *SD* = 0.96 and *M* = 3.93, *SD* = 1.00, respectively). However, respondents generally agreed with each of the five statements listed in question one. Variability, reported as standard deviation, was low indicating the group of respondents was clustered close together in their perceptions regarding employment opportunities.

Research Question Two.

In terms of CAREER ADVANCEMENT, one or more ASE certifications…

Question 2 asked respondents their perceptions of ASE certifications in terms of "Career Advancement". This question was directed at perceptions regarding the opportunities that ASE certifications offer to professionals who are trying to better their automotive careers. The question was predicated with a note explaining that the term "Career Advancement" pertained to promotion and the ability to improve one's career. The question contained four statements

and respondents were asked to choose the extent to which they agree or disagree using a 5-point Likert scale. Responses are summarized in Table 4.2.

Table 4.2

Career Advancement

Statement	Target Population			All Respondents		
	n	*M*	*SD*	*N*	*M*	*SD*
Aids in career advancement	156	4.10	0.83	433	3.85	1.15
Indicates professional growth	157	3.87	1.00	504	3.95	1.04
Provides evidence of professional commitment	130	3.60	1.14	502	4.11	0.96
Promotes recognition from employers	157	3.57	1.00	505	3.77	1.05

Note: 1 = Strongly Disagree, 2 = Disagree, 3 = No opinion, 4 = Agree, 5 = Strongly Agree

Respondents in the Target Population reported more agreement with the statement, "Aids in career advancement" (*M* = 4.10, *SD* = 0.83) than the others. The overall group of respondents indicated that, "Provides evidence of professional commitment" had the highest range of agreement (*M* = 4.11, *SD* = 0.96). The statement, "Promotes recognition from employers" reported the lowest range of agreement for both the Target Population and All Respondents (*M* = 3.57, *SD* = 1.00 and *M* = 3.77, *SD* = 1.05, respectively). Respondents generally agreed on the four statements listed in question two. Unlike the other questions, however, this question had a lower response rate by both groups for one of the statements, though they differ in which statement it was. The Target Population had only 130 responses for the statement, "Provides evidence of professional commitment" (down approximately 18%) while All Respondents had only 433 responses for the statement, "Aids in career advancement" (down approximately 15%).

Research Question Three.

In terms of HIGHER SALARY, one or more ASE certifications…

Question 3 is perhaps the most tangible perceived benefit examined in this study because it deals with salary and income. It asked participants about their perceptions regarding "Higher Salary" and ASE certifications. Salary and income are universally known and understood by human subjects from all walks of life so the researcher did not include an explanatory note to clarify the subject of this question in the survey. The question contained two statements and respondents were asked to choose the extent to which they agree or disagree using a 5-point Likert scale. Responses are summarized in Table 4.3.

Table 4.3

Higher Salary

Statement	Target Population			All Respondents		
	n	*M*	*SD*	*N*	*M*	*SD*
Offers one time pay enhancement once earned	156	2.95	1.12	497	3.14	1.06
Increases annual salary	149	2.93	1.03	474	3.16	1.09

Note: 1 = Strongly Disagree, 2 = Disagree, 3 = No opinion, 4 = Agree, 5 = Strongly Agree

The Target Population rated "Increases annual Salary" slightly lower than All Respondents (*M* = 2.93, *SD* = 1.03 and *M* = 3.16, *SD* = 1.09, respectively). The statement, "Offers one time pay enhancement once earned" drew similar responses for both the Target Population and All Respondents (*M* = 2.95, *SD* = 1.12 and *M* = 3.14, *SD* = 1.06, respectively). Both groups indicated no opinion regarding the matter of ASE certifications and their perceived salary benefits.

CONCLUSIONS

Research question 1: In terms of the perceived benefits of ASE certifications and employment opportunities, the Target Population and All Respondents agreed with the statements given. The standard deviations for all statements in this research area were less than 1.00, indicating that the variability of the group was very close so most respondents felt similarly. The Target Population and All Respondents agreed that certification indicates a technical competence and attainment of a national standard of knowledge. This confirms prior research regarding attainment of technical knowledge (Banz, 2004; Cary, 2001; Church, 2007; Kaplow, 2007; Williams and Counts, 2013; Yemaneab, 1997).

The majority of the Target Population and All Respondents agreed that certification aids in gaining employment. This agreement supports many studies that suggest certification helps candidates obtain employment, particularly in the automotive profession (Bartlett, 2004; Church, 2007; Karbon, 1995; Yemaneab, 1997). However, other studies from the automotive, drafting, Information Technology (IT), and nursing professions found little or no evidence that certification increases the chances of employment opportunities (Banz, 2004; Bekemeier, 2009; Cary, 2001; Elmore, 2013; Trent, 2011). The Target Population and All Respondents indicated agreement that certification increases the marketability of the recipient and the employer. Increased marketability of the certified professional and their employer was a common theme that ran throughout much of the literature (Antoniewicz, 2006; Chasse, 2014; Chichester, 2005; Elmore, 2013; Hutchison and Fleischman, 2003; Naveda and Seidman, 2005; Phillips, 2004; Vandalsem, 2010).

Research question 2: In terms of the perceived benefits of ASE certifications and career advancement, the Target Population generally indicated agreement with the statements that ASE certifications aid in career advancement and professional growth, indicate professional commitment, and they promote recognition from colleagues and employers. The majority of respondents also agreed with these statements. Standard deviation ranged from .81 to 1.00 which indicated little variance in respondents' perceptions. The findings from this research confirm prior studies which suggest that generally industry professionals view certification as a way to increase the chances of career advancement and promotion (Chichester, 2005; Foy, 2000; Hutchison and Fleischman, 2003; Lester, Fertig, and Dwyer, 2011; Nance, 1999; Prier, McCue, and Behara, 2010; Shirey, 2005). Literature regarding career advancement within the automotive industry in terms of career advancement was limited. Research from other fields did not always find certification to be a means for improving career advancement. For example, Roberts (2006), who studied professionals with careers in research administration, found low agreement that certification enhances career opportunities. Ferndon (2009) reported similar results in a study of oncology nurses where just 31% felt it aided in promotion.

Research question 3: In terms of the perceived benefits of ASE certifications and higher salary, the Target Population and All Respondents confirmed literature that suggests that an increase in salary does not result from gaining certification. Standard deviation again stayed very close to 1.00 so variability in the respondents was low. The Target Population indicated less agreement to the question, exemplified by the lower mean scores compared to the other three questions. The analysis revealed that the majority of respondents indicated no opinion with statements provided in this area. Since salary drew the lowest mean of the four research areas then it can be interpreted that respondents tended to not have experienced a higher salary in their careers as a result of being ASE certified.

Over two-thirds of the Target Population (66.9%) and over one-half of All Respondents (56.1%) reported no incentives for certification by their employer including no one-time bonus. This aligns with the research of Cary (2001) and Byrne, Valentine, and Carter (2004), who used the Perceived Value of Certification Tool (PVCT©) to survey nurses and administrators. They also found that less than one-third of respondents agreed that certification increases salary or offers some type of salary benefit. Similar findings were reported by Ferndon (2009), Roberts (2006), Wierschem, Zhang, and Johnston (2010), and Woods (2002). However, this contradicts the findings of Kolo (2006) who studied professionals in the automotive service industry, and Mee (2006) who studied nursing. They reported significant increases in salary for certified individuals. It could be interpreted that respondents felt no direct link to pay increases once certified.

Summary

This quantitative, descriptive study was designed to identify perceptions regarding the benefits of earning ASE certification for automotive professionals outside of the occupation of technician. The survey instrument was administered from July 18, 2014 through September 1, 2014 primarily to graduates of automotive technology programs at Colorado State University, Ferris State University, Pittsburg State University, Southern Illinois University, and Weber State University.

Generally, ASE certifications are perceived to be beneficial to automotive professionals, particularly technicians in the automotive service sector. They are also perceived to be beneficial to automotive technicians and non-technicians. They are perceived to benefit the recipient in terms of getting a job and being promoted. However, they are generally not perceived as a way to improve salary unless the recipient is a technician. Many comments supported ASE certifications for corporate automotive professionals in specific roles such as training and technical support. Yet, while the perception of a benefit does exist, nearly three-fourths of the Target Population studied were not currently certified. Categories of employment opportunities, career advancement, and higher salary had mostly mixed reviews in the literature.

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