

Techniques

CONNECTING EDUCATION AND CAREERS

The Certification Advantage

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By John C. Foster and Sandra G. Pritz

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Certification—the very word rings with authority and promise. The authority stems from respect for the group granting the certification. The promise is that persons who earn a certificate have achieved according to pre-set standards.

Certificates have become an important career credential for students and employees, and an important indicator of one's ability to get the job done. Many types of certificates exist, and the number of people seeking them and organizations offering them are both growing rapidly.

In a time of such growth, it is helpful to review some of the basics about certification—the principles that make it meaningful and some examples of the certificates that apply those principles. The examples will be drawn from the experience and assistance in certification initiatives by the nonprofit National Occupational Competency Testing Institute (NOCTI) and its sister company, the Whitener Group (WG). NOCTI and WG are regular providers of the assessments on which many certifying bodies depend for measures of applicants' standards-based knowledge and skills. They serve as the "back office" for a number of certifying agencies.

Diplomas, Degrees and Certificates

Various types of credentials help make individuals' knowledge and skills more marketable. The high school diploma and the Graduate Educational Development (GED) proxy for a diploma are commonly understood to signal general education achievement at the secondary level and readiness for further education and training.

Enrollment in a program for an associate's degree, offered primarily by community and technical

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Certification not only offers a means for communicating standards required and standards reached, it gives students an advantage when they enter the workplace.

colleges, is usually for the purpose of employment or advancement in a specific career of a technical nature. Enrollment in a college or university to obtain a bachelor's degree is often for the purpose of qualifying for degree-requiring jobs and/or post-baccalaureate options.

Certificates differ significantly from diplomas and degrees, a fact that helps to explain why holders of those credentials may want to, and are sometimes required to, seek certificates. Rather than depending on time spent or credits gained, most certificates signify achievement of a set of very specific competencies in relation to benchmarks or standards set by experts in that field. The competencies are almost always measured by an independent assessment.

The various options offered through credentialing allow for choice. Applicants can select and work toward the credentials that align with their career goals and the pathways that progress toward them. Their investment of money, time and effort is dictated by their value to the individual.

Serving Individuals

Certification has many benefits for individuals. If it is the competency-based outcome of a career-technical program—many of which offer an opportunity to gain a certificate—the certificate gives students a specific goal. If it is not attached to a program, it offers flexibility in certifying competence. With a certificate obtained, students are reinforced and realize a sense of accomplishment. The certificate may also be transferable to credits in a degree program. The certificate is a professional credential, of high value in business and industry, which helps make individuals more employable. Often that means that those who hold certificates will be paid higher start-

ing salaries, and it may reduce the time they spend looking for a position.

Serving Companies and Institutions

Employers benefit from having a systematic process for recruiting, screening and quality improvement. Certifications show employers that applicants have acquired specific skills. Employers can determine the amount of training on this basis. Sometimes a series of certifications provides a career path that can lead to advancements and even higher certification ratings. The status of having certified staff can also lead to higher sales and customer satisfaction.

Companies may have their own certifications, or they may be involved with setting the certification standards for industry associations, which often serve as certifying bodies. Both usually depend on an independent testing agency to provide an agreed-upon assessment as a means of ensuring industry-relevant competency. Two industries offering well-established occupational certification as well as programs leading to certification are automotive service and information technology. However, in many cases, certification is based on assessment without concern for where or how the skills were attained. As industry certifications continue to gain importance in the work world, more and more are added to the thousands of certifications available.



Students enrolled in a CAD/CAM program take a NOCTI precision machining assessment before taking the test to earn a programmer certificate.

Principles of Meaningful Certification

Certification must be based on certain principles to be recognized as meaningful and useful. These principles include quality and currency. Further, the assessment on which the certificate is based must be valid, reliable and fair. As certificates proliferate, not all of them can be guaranteed to meet quality assurance criteria.

It is important to point out the wide range of types of certification and their intended outcomes for recipients. The range can best be described with the aid of examples. The following sections will address examples of certification programs.

NOCTI cooperates with a number of partners to offer certificates of various types connected to its standards-based assessments. These range from

Certification must be based on principles
on which the certification is based

Quality means that the certificates are tied explicitly to industry standards that are recognized and valued by employers. Industry experts develop and validate the standards, which specify tasks and the level at which they should be performed, based on critical knowledge and skills. Then, an assessment must be developed that closely reflects the standards, that is, its content validity. The numbers of items for each work function of the occupation must reflect the percentage weights that the tasks represent in the whole occupation. Organizations that facilitate this process for industry follow a specific process to assure that performance on the assessment is closely tied to performance in the field. The stability and consistency of such performance, which is called reliability, may be gauged for the test as a whole. Fairness is assessed by a trained bias review evaluator to ensure that the test is free of gender, ethnic and racial bias. Procedures for test administration are reviewed to assure that all applicants will take the test in the same manner.

Although not all assessments are designed specifically for mathematics, science and language arts assessment, each typically requires proficiency in these areas. Organizations like NOCTI identify test items that match national standards in these academic areas. This match also lends increased credibility to certificates if benchmarks for the certificates are related to more than one set of measures. This ensures that multiple facets of qualification are considered.

In today's dynamic workplace, required competencies change continually, so it is important that some provision be made to keep the assessment current or it will lose meaning. The standards should be revalidated periodically and the related assessment revised according to the changes revealed.

Range of Types of Certificates

Although the essential characteristics of meaningful certificates have been discussed, it is equally impor-

tant to point out the wide range of types of certification and their intended outcomes for recipients. The range can best be described with the aid of examples. The following sections will address examples of certification programs.

Two state-level competency certificate examples: Pennsylvania has incorporated statewide technical testing and industry-based standards into its career and technical education (CTE) programs and has mandated third-party assessment of all CTE completers. Students who complete the NOCTI Job Ready assessments get a certificate of completion. However, students meeting the "advanced" level, a level established by Pennsylvania employers on both performance and written test components, are eligible for the Pennsylvania Skills Certificate (PSC). The PSC is an additional certificate signed by the governor, and is sometimes called the "Governor's Certificate."

The State Board of Education in Virginia has approved 30 NOCTI assessments plus other industry certification exams for many different CTE courses/combinations. These approved exams can be used to award student-selected verified credit and to earn a CTE seal on students' high school diplomas. For students to earn a CTE seal, they must fulfill requirements for either a standard or advanced diploma, complete a prescribed CTE concentration or specialization sequence of courses, maintain a B or better grade in CTE courses, and pass a board-approved certification exam or acquire a professional license in a CTE field. The state of Virginia believes the industry certification exams offer several benefits to students, including evidence that students have completed advanced educational preparation, increased job opportunities for advancement in a career pathway, and increased self-confidence and self-worth.

Certificate of Achievement in workplace readiness: Last year, NOCTI announced its partnership with the National Technical Honor Society (NTHS) to encourage and reward excellence. A joint

certificate is awarded to all those who score in the excellence category on both their CTE program written assessment and the Workplace Readiness Assessment. This gives administrators and teachers a tool for motivating students to strive for excellence in both areas. This Certificate of Achievement is a valuable asset to students as they prepare applications for postsecondary institutions and/or the workplace.

ment was developed through the A*S*K Institute and mirrors the standards of the Marketing Sales and Service Career Cluster as well as standards developed as core to all business-related clusters. A recognition package is available through the A*S*K Institute to those who attain a pre-set score.

In addition to these two cluster certificates, achievement on the foundation skills of all the career

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An additional incentive this year is a \$1,000 scholarship jointly awarded by the two organizations for post-secondary education.

Certificates with a cluster focus: Although not all 16 of the national career clusters have assessments yet that could be used as the basis for a certificate, two cluster core assessments exist that lead to certificates, sometimes with additional requirements, for those whose scores exceed that set by the cluster leadership group.

The National Consortium on Health Science and Technology Education has partnered with NOCTI to deliver the Health Care Foundation Skill Standards Assessment. The assessment, which is based on nationally recognized industry standards, is administered via an online testing system. With both pre- and post-testing options available, this assessment can provide critical information to students, educators and employers within the health care fields. A dual-level target was set, with students earning a "Proficient" certificate for a score of 70 percent and a "Mastery" certificate for 80 percent and higher.

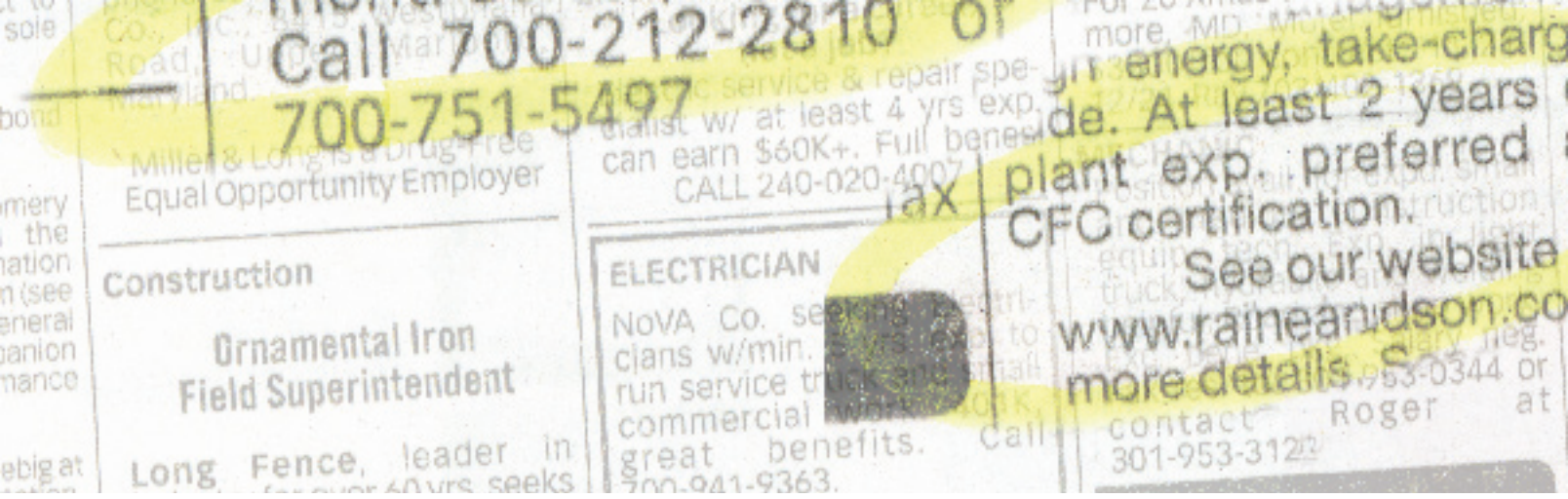
The assessments for core business concepts, core marketing concepts and several specialized pathways are offered online by both NOCTI and the A*S*K Institute, a joint initiative between MarkED and DECA. MarkED is a nonprofit organization that supports marketing education, and DECA is a national association of marketing students. The assess-

clusters is recognized by a Workplace Readiness Certificate offered by SkillsUSA through its partnership with the National Association of State Directors of Career Technical Education Consortium and NOCTI. With the aid of a study guide with practice tests and Web site resources, students can prepare for the assessment of key employability skills in these eight target areas:

- communications;



Experts work at revalidating a NOCTI Experienced Worker Written Test, which is a test used in industry and to certify instructors to teach in career and technical education programs.



Industry certification are meaningful to employers and employees seeking upgrades, to new applicants seeking positions as well as to students. The following examples represent the diversity of certification characteristics.

- problem solving and critical thinking;
- information technology applications;
- business and organization systems;
- leadership, management and teamwork;
- ethics and/or legal responsibilities;
- safety, health and environment; and
- employability and/or career development.

Students who pass the assessment qualify for the SkillsUSA Workplace Readiness Certificate, which is endorsed by 36 well-known companies, among them Toyota and Cisco Systems. Such endorsements add value to a certificate that students present to either potential employers or postsecondary institutions.

Verification of special sets of competencies:

An example of a type of crosscutting verification of sets of skills that students can earn is provided by the youth safety initiative known as CareerSafe(R). Safety is a critical factor of every job, so it is also a key ingredient of all CTE programs. NOCTI and other CTE proponents partner with CareerSafe(R), an Occupational Safety and Health Administration (OSHA) 10-hour online safety training program. CareerSafe(R) consists of 10 interactive modules that can be implemented in a CTE program covering the most common safety concerns in the workplace. Students have one year to complete the program, after which they receive a wallet card from OSHA to verify that they have the fundamental safety knowledge needed in the workplace. Students can include this safety certification in portfolios for postsecondary or employment applications.

Certification with a Single Industry Focus


Sometimes certification for students is connected to program certification in a single industry. As mentioned, industry associations are the certifying bodies for many of the skill sets that are meaningful for

their industry. Their certifications are meaningful to employers, to employees seeking upgrades, to new applicants seeking positions as well as to students. The following examples represent the diversity of certification characteristics.

American Culinary Federation (ACF): The ACF has represented foodservice and culinary professionals in the U. S. since 1929. In 1984, the ACF Foundation Accrediting Commission (ACFFAC) was created to provide quality assurance and oversee accreditation of culinary arts programs. It requires that curriculum, faculty, facilities, resources, support staff and organizational structure all substantially meet the standards set by the Accrediting Commission, which were set by industry leaders in both culinary arts and culinary arts education. Students passing the assessment can apply for certification through ACF.

Manufacturing Skills Standards Council (MSSC): In 1998, the National Skills Standards Board recognized MSSC as the first voluntary partnership, consisting of all sectors in manufacturing. Since then, MSSC has worked to develop a nationwide system of skill standards for manufacturing workers. The goal of this system is to enhance productivity and global economic competitiveness of U.S.-based manufacturing companies. MSSC aims to raise the standard of living and economic security of American workers by improving their access to high-skill, high-wage employment and to encourage the use of world-class academic, occupational and employability standards to guide continuous education and training for current and future workers.

In 2003, MSSC began creating an assessment and certification process for all individuals who reach the standards. As a result, MSSC launched a Production Technician Certification program last November. An individual who passes four modules (safety, quality practices and continuous improvement, manufacturing processes and production, and maintenance



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awareness), which contain written and simulated performance components, receives the Production Technician Certification. The tests are administered at certified test sites that form a national assessment center network.

Graphic Arts Education and Research Foundation (GAERF): One certification strategy is to accredit the instructional program first and then certify successful completers. GAERF, an education and research foundation representing three national graphic arts industry associations, administers the PrintED national accreditation program of graphic communications courses of study at the secondary and postsecondary levels.

As explained by Eileen Cassidy, director of GAERF, “Employers in our industry, which accounts for the third highest employment in the country, know that those we certify are employable and that they know what is needed to work effectively.”

PrintED works through the identification by educators and industry representatives of competencies within nine standards that encompass the elements of a solid training program. An accredited course of study must meet these standards in at least two areas; almost 200 programs, mostly secondary, are doing so.

Students must successfully complete 80 percent of the competencies in an area of accreditation in order to receive a certificate of completion. Graduates of the program bring an equivalent of six-months on-the-job training to the workplace, and they can command varying numbers of credits through articulation agreements with postsecondary institutions. Plans are underway to increase the number of areas in which tests are available and also to increase the ways tests are used.

According to Cassidy, “We want schools to use test results to improve their teaching strategies. Our program was created in response to the need for skilled entry-level workers in the printing industry.”

Recreation Vehicle Industry Association

(RVIA): RVIA offers dual-level recreational vehicle technician certification with recertification required every five years. Candidates must achieve a score of 74 percent to become a certified technician, whereas a score of 85 percent, along with five years of experience as an RV service technician, qualifies them as a Master Certified Technician. Those who pass receive a mounted plaque, a patch to place on their uniform and a wallet-size card identifying them as a certified technician. Candidates recertify either by completing prescribed continuing education or by retaking the test.

Mastercam: Mastercam is an example of an organization that uses passage of a related industry assessment to qualify students for their certification test. Mastercam wants their programmers to have basic technical knowledge in precision machining in addition to programming skills. Therefore, students enrolled in a CAD/CAM program using Mastercam software first take a precision machining assessment, which is customized to their needs. Those who score 70 percent or better can then take the Mastercam Test to earn a Mastercam programmer certificate.

American Boat and Yacht Council (ABYC): The ABYC certification is an example of a way to attract consumers. Several years ago, a survey of boat owners discovered that 30 percent were leaving the boating industry because of dissatisfaction with dealer repair and warranty service. Industry members decided to join their efforts to make boating a pleasant option for consumers spending their recreational dollars. ABYC, an established nonprofit group setting safety standards for building or repairing boats, was asked to certify technicians.

ABYC offers courses leading up to certification, which is available by exam in six areas, with another under development. Marine technicians who earn three or more certifications are considered “Master Technicians.” When technicians earn a certification in any area, they receive a certificate, a patch for their

Obtain your certification from a reputable source.

uniform, a camera-ready certification logo for their letterhead or business cards, and a sample press release should they want to advertise their designation. In addition, they are listed on the ABYC Web site. Recertification is required after five years.

International Recognition of the Value of Certification: Countries other than the United States also see value in occupational assessment and certification. For example, industry certifications for many professional roles in information technology are recognized internationally as valuable assets.

Conclusion

A wide variety of types of certification have been shown by example. They testify to the ingenuity of those in education and in business and industry who have created the specifications and processes to ensure that their certification system will represent them accurately. For those seeking certification, two important lessons stand out:

- Select a suitable target certification for the outcome desired.
- Obtain the certification from a reputable source that follows suitable principles.

Certification can and should be a means of mutually beneficial communication of standards required and standards reached. ■

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