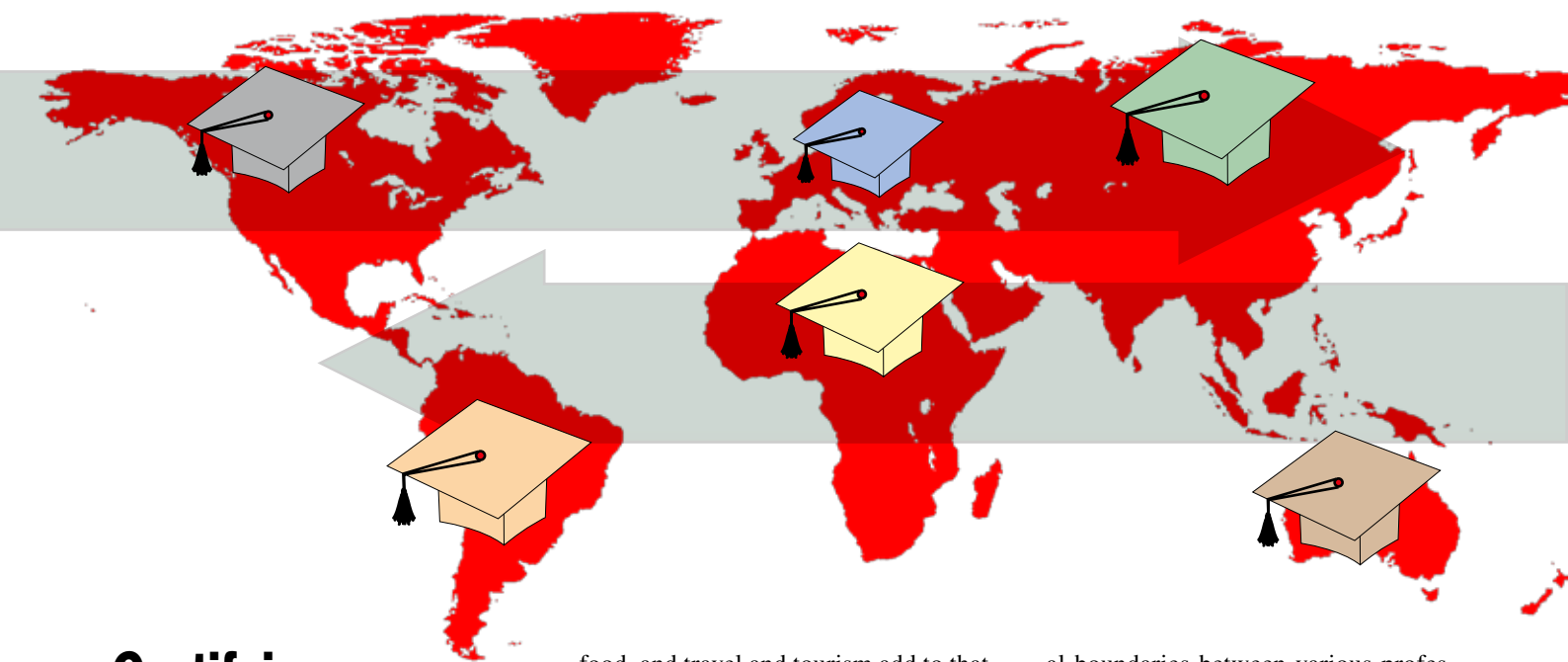


Main Focus



Certifying a global workforce

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persons

Gone are the days when individuals entered a profession in their hometown or village, lived in the same homes and worked in the same jobs their entire lives. Today's workers are likely to change employment several times during their careers. They will be by necessity multi-skilled, lifelong learners, constantly acquiring new competencies to meet the needs of a rapidly changing job market.

More recently, the growing interdependence of the world's economies has created an environment ripe for the globalization of professions. In addition to multiple job changes, workers are now less likely to stay in their hometowns, or even in their native countries. Many professionals move to meet job requirements. The technology field alone is responsible for the relocation of thousands of workers around the world. Other multinational industries such as aerospace, automotive,

food, and travel and tourism add to that number by regularly transferring workers from country to country to accommodate workplace shortages.

When workers cross borders and businesses hire foreigners, how do employers ensure that individuals are indeed qualified? With wide variations in educational systems, how does an employer know that a worker trained in one country has the knowledge and skills to competently work in another? How can consumers know that a physician who has been educated abroad has the equivalent training to provide quality professional services? How can the standard of human capital be guaranteed? Answers to many of these questions may be found in professional certification or national licensure by governments according to ISO/IEC 17024:2003, *Conformity assessment – General requirements for bodies operating certification of persons*.

ISO/IEC 17024, which is now undergoing its first revision, has already impacted the way personnel certification bodies develop and manage their programmes for the benefit of workers, employers and consumers.

New professionalism

Demands for greater accountability, interdisciplinary competencies, managerial skills and consumerism are challenging and reordering tradition-

al boundaries between various professions and occupations. The need for a new professionalism is evolving as an adaptive response.

Professional certification and national licensure, which aim to secure and elevate professional status and enhance employment opportunities, are increasingly seen as a response to these pressures. "Certification" refers to a credential awarded by the profession or industry, while "licensure" refers to documentation bestowed by a governmental body. In both cases, the purpose is the same.

Certification and licensure verify that professionals and workers possess the requisite knowledge and skills for a particular job. Although some critics have argued that certification can create monopolies and social closure in professional labour markets, it is more likely to provide objective identification of valid competencies than other alternatives. Certification and licensure are therefore expected to remain the primary mechanism for entering, and moving through, the labour market, reducing many of the barriers to mobility of the global workforce.

Personnel certification and licensure provide independent, third-party verification of the knowledge, skills and attributes (KSAs) of an individual, as differentiated from evaluations conducted within training programmes. Therefore, nurses or physicians trained in India would



be subject to an independent examination and subsequently awarded a professional certification credential before they would be allowed to practice their profession in Canada (and vice versa).

In many countries, including the USA, even those educated domestically are subject to third-party verification of knowledge through professional certification before they can practice their profession. Regardless of where they were educated, the rigour of their training, or any examinations they may have been required to pass before they graduated, certification and licensure are designed as a final check providing objective assurance that the individuals learned what they were supposed to learn.

Reliable process

Unfortunately, as the market for professional certifications grows, it is possible on occasion that an unreliable certification body enters the market and awards credentials. Often, the shortcomings of these bodies are not intentional, but are caused by a lack of understanding of the characteristics that must be in place to ensure a valid, reliable and fair programme.

If a credential, such as a certification or a licence, is issued to an incompetent individual, doubt is cast on the entire world of certification and licen-

sure. Employers and the public risk losing faith in credentials if they are awarded to unqualified individuals. This is why standards such as ISO/IEC 17024 are important.

By closely adhering to ISO/IEC 17024, personnel certification bodies decrease the potential for error that could lead to an unqualified individual receiving a credential. ISO/IEC 17024 outlines requirements for the development and management of certification programmes, which may be more comprehensive than the industry average. Some of the key components of ISO/IEC 17024 that differentiate it from other standards include:

- An emphasis on impartiality
- Attention to the validity and reliability of the assessment processes
- Separation of training from testing (impartiality and independence).

Validity and reliability

Validity and reliability are two of the most important measurement concepts required of a certification scheme.

In order to be useful, a test must provide inferences about people by differentiating between desirable and undesirable personal characteristics in a given situation. In other words, the test must be able to correctly establish that an individual has the necessary competencies for the job. This requirement is known as validity. Although validity is a prime consideration, a good test must also be reliable. This means that it must measure a person's abilities in a consistent manner.

Validity consists of the evidence that supports the interpretation or outcome of examination scores. Since the objective is to prove that an individual is prepared to practice safely and effectively, the evidence for validity should establish a relationship between the issuance of a credential and readiness for practice.

Reference to the validity of an assessment says that the process measures what it is intended to measure. For example, if an examination uses lengthy written questions with detailed scenarios to measure knowledge of welding con-

cepts, is it instead measuring the subject's reading skills? How does the personnel certification body know that the assessment instruments in use indeed measure the KSAs required for competent performance of the job?

The criteria for the interpretation of examination scores may take many forms, including content validity, criterion validity or construct validity. An explicit description of the intended interpretation is required if it is to be matched to the validation approach. The first component requires evidence that the abilities covered by the examination are critical for practice. The second requires evidence that the test scores reflect competence in the domain of the critical abilities defined in the first. Without validity, it does not matter if the test is reliable because it does not measure the correct skill sets.

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Reliability is the consistency with which the examination measures something. For example, if a group of candidates is asked to sit an examination one day and then retested a week later without having learned anything in the interim, would they achieve the exact same scores? If the examination is reliable they would.

There are many methods by which reliability estimates can be calculated. For example, if an assessment process involves a performance examination which is graded by raters, how consistent are the raters, both across candidates and among themselves? This is referred to as inter-rater reliability. Certification organizations with performance examinations that are judged (this includes essay questions) must calculate this rater reliability if they are to meet the requirements of ISO/IEC 17024.

About the author



Dr. Cynthia D. Woodley is Vice President and a psychometrician with Professional Testing Inc., in Orlando, Florida, USA. For more than 20 years, Dr. Woodley has

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Main Focus

Trainer impartiality

The concepts of impartiality and conflicts of interests are encountered throughout ISO/IEC 17024. This includes provisions for the separation of training from testing. Strict controls are required in these areas because it is easy to unconsciously assist a candidate in passing. For example, if a trainer both teaches a course and scores the examinations, (s)he may unwittingly emphasize content that will be in the test. Since examinations are designed to be a “random sample” of knowledge, the candidate should not know exactly what will be tested. If a trainer is “teaching to the test”, then (s)he is not covering all of the content equally, and the candidate might pass the exam without possessing full competence.

ISO/IEC 17024 is also unique in its focus on organizational structures and management systems. It requires that the certification body be structured to give all interested parties and stakeholders input into the process without any interests predominating. This is particularly important to ensure that the scheme is being developed to meet all needs. If a scheme for a certification programme is developed without consulting stakeholders such as employers and consumers, it is unlikely that the certification programme will fulfil its mission.

“Professional certification of persons aims to secure and elevate professional status and enhance employment opportunities.”

Among the other requirements are recertification, security of data, sub-contracting, records, use of certificates, logos and marks, the development of the scheme, and the certification process. Each of these requirements addresses an important component that, if neglected, may contribute to the failure of a personnel certification body to provide valid and reliable credentials that stakeholders can trust.



In addition to contributing to a better certification programme, ISO/IEC 17024 results in other benefits, including external recognition of personnel certification programmes. This levels the playing field among similar personnel certification bodies that operate in the same industry sectors and in the same market space, and provides an advantage to accredited certification bodies over those not in conformance with the standard.

An early goal of ISO/IEC 17024 was to develop an International Standard to serve as the “basis for recognition of personnel certification bodies and their certification schemes in order to facilitate their acceptance at national and international levels.” The introduction to ISO/IEC 17024 states that “only the harmonization of the system for developing and maintaining certification schemes for persons can establish the environment for mutual recognition and the global exchange of personnel.”

Industry sectors

ISO/IEC 17024 is appropriate for all types of personnel certification programmes in all sectors. An important consideration in the exchange of personnel or the mutual recognition of certification

schemes is whether the KSAs associated with a particular job are transportable among countries. For example, because monetary systems and economies vary between countries, it would be difficult for a person certified in financial planning in Argentina to move to the United Kingdom and resume working. Organizations and companies, however, are likely to intensify efforts to standardize work disciplines in order to reduce costs and increase control.

There are many industry sectors in which the KSAs already transfer smoothly, including those based on International Standards (such as welding, food safety, non-destructive testing or auditing) or sectors (such as chemistry or brain surgery) where the knowledge and skills are the same regardless of location.

ISO/IEC 17024 is being revised to make the standard even more user friendly and minimize any risk of ambiguity. The new standard is expected to contribute even further to facilitating a smooth global exchange of personnel. ■