The Role of Credential Evaluation in Educational Assessment

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ABSTRACT

As student mobility increases throughout the world, and the competition for students increases, the process of evaluating the formal and non-formal educational credentials of international student applicants becomes more and more important.

In the first portion of this paper, the author will briefly discuss the basic principles of applied comparative education and the process of evaluating educational credentials, using examples to demonstrate the principles and process applied regardless of a student’s country of origin or country of destination.

In the second portion of this paper, the author will discuss ways in which the credential evaluation process affects educational assessment, citing examples including changes in grading practices in China over the past two decades, as well as discussing the ways in which assessment has become more unified in recent years. One of the outcomes of increased student mobility is a greater homogenization of grading practices. The author will cite exceptions to standard practices that have proved effective in assessing learning outcomes, as well as various assessment practices as they relate to admission into higher education. Examples such as “narrative transcripts” will be shown.

Key words: student mobility, credential evaluation, grading practices

**A. Five basic principles form the foundation for evaluating educational credentials:**

1. *In every geographic area, the range of human intellectual ability, from the very bright to the very dull, can be described by the standard bell-shaped curve of normal distribution.*

There are intellectually brilliant people and intellectually dull people in every country. There are high achieving students and low achieving students in every country. Socio-economic factors can affect the educational opportunities open to people but they do not increase or decrease native intellectual ability.

2. *Completion of one year of full-time study at one educational institution is the equivalent of completion of one year of full-time study at another educational institution at the same level of education.*

One year of full-time primary or secondary or tertiary education in one country is the equivalent of one year of full-time primary or secondary or tertiary education, respectively, in any other country.

Each educational system determines for itself what constitutes full-time enrollment at the primary and secondary levels. Each tertiary institution determines for itself what constitutes full-time enrollment in its degree programs.

It does not matter how many weeks there are in the school year, or how much time a student spends in formal instruction and how much time is spent on out-of-school preparation. Nor does it matter how an educational system or institution divides a student’s time between lectures, laboratory experiments, library reading and research, writing research papers, engaging in practical training, and other educational activities. All of these kinds of activities are valid teaching methods.

In the educational system of the United States, one year of full-time university study represents a total of 30 to 32 semester hours of credit. Therefore one year of full-time university study in South Africa represents the equivalent of 30 to 32 semester hours of credit. Similarly, one year of full-time study at a university in the United States represents the equivalent of one year of full-time university study in South Africa.

3. *There are significant differences between primary and secondary education, and between secondary and tertiary education.*

For example: Physics may be studied at all levels of education. Wherever it is studied, physics includes mechanics, heat, sound, electricity, magnetism, and light. The study of physics differs from one level of education to another because differences in the educational and experiential background of the students result in differences in the depth and breadth of the information that can be covered.

Because the same subject can be taught at different levels of education, and can be described at each level with the same or similar terminology, it is not possible to determine the level of an individual course solely by reading a course description or syllabus.

4. *One educational program can be considered to be the equivalent of another educational program even if the two programs are not identical.*

Different educational systems are based on different philosophies of education. In the educational systems of most European countries, and in the educational systems of countries that adapted a European system, the majority of the courses in a bachelor’s degree program are in the major field of study and in supporting fields. In the educational system of the United States, and in the educational systems of countries that have adapted the U.S. system, usually less than half of the courses in a bachelor’s degree program are in the major field of study and in supporting fields.

European and European-patterned educational systems emphasize specialization at the secondary and tertiary levels. U.S. and U.S.-patterned educational systems emphasize general education, requiring secondary and tertiary students to study all major fields of human knowledge: humanities, languages, mathematics, natural sciences, and social sciences. This is a difference in educational philosophy, not a difference in the value of education.

A Bachelor of Arts degree in History awarded by a university in Egypt can be the equivalent of a Bachelor of Arts degree in History awarded by a university in China even if the two degree programs have no courses in common. However, it is important to note that in some fields of study there are significant course components that must be included in a degree program. For example, a degree program in engineering must include calculus-based physics as a foundation for all technical courses; a degree program in physiotherapy must include a course in kinesiology; a degree program in medicine must include university courses in biology and chemistry.

5. *Experienced, conscientious people can reach differing conclusions concerning the equivalence or lack thereof between two educational programs.*

In most cases the educational systems of any two countries are not identical. In most cases, the information reported on educational credentials is not identical. Determining the equivalence of an educational program in one country to an educational program in another country requires judgment.

It is each credential evaluator’s responsibility to reach conclusions that are logical and reasonable and neither arbitrary nor capricious. Two well-qualified credentials evaluators can evaluate the same educational credentials, using the same resources, and reach different conclusions. That does not mean that either is wrong. There are no scientifically correct or incorrect conclusions.

**B. Grading**

There are two basic philosophies of grading: criterion-referenced and norm-referenced.

Criterion-referenced grading uses an external standard of performance against which each student’s performance is measured. In criterion-referenced grading, a professor who gives an examination may determine in advance the percentage of correct answers that will be required for each possible grade; for example: 95 to100 percent merits the grade of excellent, 85 to 94 very good, 70 to 84 good, and 60 to 69 sufficient. In criterion-referenced grading, a professor does not take into consideration what percentage of the students taking the examination fall into each grade range, or even how many meet or exceed the minimum passing requirement of 60 percent. It is possible for every person taking the examination to get the same grade, as well as for every student to pass, or to fail.

Norm-referenced grading measures a student’s performance against the performance of the other students taking the same examination. The professor considers the results attained by each of the students before assigning grades. If the highest level of performance achieved was 75 percent, the range of correct answers from 70 to 75 could be considered excellent achievement. Conversely, if many students were able to get 75 percent or more of the answers correct, the professor could consider that only the 95 to 100 range represents excellent achievement. In other words, in norm-referenced grading the difficulty or simplicity of an examination is taken into consideration when determining the level of performance represented by each part of the grading scale.

Some educational systems use both criterion-reference and norm-referenced grading, depending on the field of study involved. In fields such as mathematics and natural science that may have only right or wrong answers, examinations are likely to be criterion-referenced. In fields such as humanities and social sciences, in which opinions and judgments can vary and grading is more subjective, examinations are likely to be norm-referenced.

Conversion of the grading system of one country to that of another is impacted by differences in educational systems.

Some educational systems are pyramidal, with progression from primary to secondary to tertiary education based upon the quality of a student’s performance. In pyramidal educational systems, students with average or below average performance usually cannot proceed to the next level of education. Other educational systems are cylindrical, with progression from primary to secondary to tertiary education based upon completion of the previous level of education without regard to the quality of a student’s performance.

Tunisia has a pyramidal educational system. Major examinations administered at the end of the ninth year of primary-intermediate education and at the end of secondary education determine which students can proceed to the next level. Only students with superior performance are permitted to continue to the next level. England also has a pyramidal educational system. Examinations administered after the eleventh year and the thirteenth year of education determine who can proceed to the next level.

Japan, the Philippines, and the United States are examples of countries that have a cylindrical educational system. These systems do not have national examinations that are used to determine progression from one level of education to another. Each educational institution sets the requirements for admission to the next level of education. Even students whose performance is at the lowest level of the grading system can continue their education.

In many countries, a distinction is made between the quality of performance required to pass an individual course and the performance required to complete a series of courses (one semester of study, one year of study, or an entire educational program). In France, a grade average of at least 50 percent (10 out of 20) is required to pass the examination for a semester or a year, but a grade of 35, 40, or 45 percent can be considered passing for an individual subject. In the United States, a grade of D is sufficient to pass an individual course, but, with a few exceptions, a grade average of at least C is required to complete a degree program.

**C. Credential Evaluation Procedures**

Credential evaluators find answers to the following questions when evaluating educational credentials from other countries:

1. What is the level of the institution that offered the educational program (primary, secondary, or tertiary)?

2. If it is a tertiary institution, is it officially recognized as a degree-granting institution by the authorities who have jurisdiction over tertiary education in the country in which the student was educated?

3. Are the educational credentials authentic? Or have they been altered, counterfeited, forged, or falsified in some other way (e.g., obtained through bribery)?

4. Do the educational credentials represent completion of academic work in a degree program? Or do they represent completion of the equivalent of non-credit adult education courses or continuing education courses or supervised practical training?

5. What is the level of the educational program, and what is its role in that country?

6. Did the applicant complete the program?

7. What is the equivalent in my country of the quantity of education represented by the educational credentials? Is it the equivalent of a diploma or degree? Or does it represent a level of education in between two of our qualifications?

8. What is the credit equivalent in my educational system of the quantitative data reported in the educational credentials?

9. What is the grade equivalent in my educational system of the qualitative data reported in the educational credentials?

10. Are there any quality clues about the educational institution that might modify my interpretation of the qualitative data reported in the educational credentials?

**D. Credential Evaluation and Quality Assurance**

In many countries, quality assurance is a function performed by the Ministry of Education. In the United States, there are private accrediting agencies that insure the quality of institutions through their accreditation process. While an important role of any quality assurance body is to evaluate and maintain the quality of public institutions, the evaluation of private institutions becomes more and more important with the global increase in demand for higher education being met by not only traditional institutions, but also distance learning institutions, franchise institutions, and branch campuses overseen by parent institutions that are sometimes based in other countries. In some countries quality assurance is done by the evaluation of programs rather than institutions. In addition, the quality of programs at non-university institutions leading to external examinations have a separate accreditation process; in many cases the external examining body serves the function of quality assurance by the examinations themselves. If students from a particular institution are not successful in the examinations, the program preparing the student may not be of sufficient quality.

Universities themselves are responsible for maintaining the quality of programs and research that lead to degrees and publications with their names on them. A successful quality assurance body provides guidelines to institutions, both those that have met the minimum requirements, and those that haven’t.

In addition to the role of the government in quality assurance, this vital function is performed on a regular basis by those admitting students, particularly foreign students. The role of the credential evaluator in meeting quality assurance goals is a significant one. The quality of an institution is comprised in part by the quality of the student body. It is important that the credential evaluator accurately evaluate the education of the applicant so that he or she may be placed correctly in an educational system. If students who are not at the graduate level in their own countries are placed at the graduate level in another country, and are unprepared for graduate work, the quality of the program and graduate school suffers. If a credential evaluator is vetting a student from another country for admission to a program at a university, he or she must be prepared to answer the question, “Did this student, having graduating from secondary school in his or her home country, having successfully completed examinations or coursework in a particular subject, achieve the same level of knowledge as would be expected of a student in that subject in the country to which he or she is applying?” If not, and that student is admitted directly to a degree program, the quality of education for all students in that program is affected. As international student mobility increases, the role of the credential evaluator in quality assurance becomes more and more important. Without rigorous credential evaluation, institutions run the risk of compromising quality in order to expand access.

**E. Grading Trends**

From 1966 to 1976 (the timeframe of the Cultural Revolution), the following grading scale was typically used at Chinese universities: Excellent (85-100), Good (75-84), Passing (60-74), and Fail (0-59). However, from 1976 through the mid-1990s, a fourth passing range was added, and the scale became: Excellent (90-100), Good (80-89), Fair (70-79), Marginal (60-69), and Fail (0-59). Now, however, the ranges at most universities include only three passing grades, and have a range defined as excellent that again goes down to 85%. The result is that most students applying to universities outside of China for post-graduate programs now have grade averages almost exclusively in the excellent range.

In the Moroccan educational system, which is derived from the French system, having a 20-point grading scale and the “baccalaureate” examination as the benchmark credential confirming completion of secondary school, the overall passing grades for students applying to Educational Credential Evaluators, Inc, for the purpose of entering undergraduate university programs have increased significantly over the last thirty years. The grades recorded on the graduation document are as follows: Très bien (Very good), Bien (Good), Assez Bien (Fairly Good), Passable (Passing), and Sans Mention (No overall grade given). In the 1980s, only 10% of the grades were Très bien, Bien, or Assez Bien; in the 1990s that rose to 19.5%; and in the 2000s, it was 34.8%.

As student mobility increases, the trend appears to be an adjustment upward of grades in order to make students more competitive in the global education market. Clearly, a wider sample is necessary to draw further conclusions.

**F. Admission to Higher Education**

Countries have different ways of determining whether or not a person is eligible for post-secondary study. As mentioned previously, systems with a pyramidal structure tend to have national examinations at various points (often after basic and secondary education) designed to be difficult, and to ensure that only the top students continue on to the next level of education. Systems with a cylindrical structure tend to have the philosophy of promoting the greatest number of students on to the next level.

In the Tunisian educational system prior to the 1990 reforms, the main national examination before the end of secondary school was taken upon completion of the sixth year of school. A high percentage of students did not pass, and therefore did not continue to academic secondary school. In 1990, the reforms to the system included a change of the first benchmark examination to the end of the ninth year of school, known as “basic education.” The reasoning was that if students were being removed from the academic track at that point, there were three more years in which to teach them basic skills than if they were taken out after only six years. Of those students who succeeded in the examination at the end of basic education and continued on to the four years of secondary education culminating with the baccalaureate examination, only approximately 40% passed that examination and were eligible to continue to university. In 1995, the pass rates for the three most popular streams of the baccalaureate examination were 34.9 (letters), 51.2 (experimental sciences), and 58.4 (mathematics). In addition, approximately 10 percent of students drop out during the final three years of secondary school. It is worth pointing out that while some countries (the US and China, for example) have a benchmark credential confirming completion of secondary school and a separate examination to determine eligibility for university, many countries have one credential, like the baccalaureate in French-based systems, that serves both purposes. Often the eligibility for post-secondary study, while based on examination results, is competitive; that is, the percentage cut-off for continuing to university can change based on the overall scores of a particular cohort.

In countries like Egypt, a minimum overall score on the secondary certificate examination is required (70 percent). In Libya, the percentage changes depending on what the student wishes to study in university: 65 percent overall, but 75 percent for medicine and engineering. In China, the percentage required on the university entrance examination is dependent on several factors, including requirements set by the individual university. Finally, in Ethiopia and South Africa, the subjects to be sat in the examination, and the level, determine whether one is eligible for non-university or university level post-secondary study. Success in the Ethiopian General Leaving Certificate Examination (grade ten) is required for non-university technical programs; for university, the requirements include an average of 50 percent in secondary school, and 50 percent on the Ethiopian Higher Education Entrance Examination. In South Africa, for non-university higher education, a Senior Certificate is required; for university-level studies, the Senior Certificate with four Higher Grade subjects (including two languages), an additional Standard Grade subject, and a minimum of 45 percent overall for six subjects is the requirement.

**G. Alternative Grading Practices**

A concern with the homogenization of grades is that the meaning is lost, or is different for different institutions that use letter grades, or divisions, or the twenty-point Francophone scale. Therefore, while signatory countries to the Bologna agreement, China, some Middle Eastern and African countries, and others are moving to letter grades (typically A through E or F) at the university level, some institutions have found that traditional letter grades do not accurately represent a student’s academic achievements. Most US institutions use letter grades; however, there is no clear agreement on what those grades represent, even within a particular institution. Some professors will equate a percentage range to a letter (i.e. 90-100 = A, or 95-100 = A); others, especially in the humanities, will be less specific, and assign letter grades based on their definitions (Excellent = A, Very Good = B, or Very Good = A, etc.). The letter grades can be represented by a final overall grade point average based on numerical representations of the grades (some institutions include plus and minus ranges, which typically are assigned specific numerical representations as well; in some countries only “plus” grades are given, thus skewing upwards the overall grade point average).

An alternative to the US practice of letter grades is the narrative grading system in which ability-based learning outcomes are defined and assessed. An institution that uses this approach is Alverno College in Milwaukee, Wisconsin. Before a degree is awarded, the student must demonstrate levels of competence in eight abilities or intellectual skills: communication, analysis, problem solving, valuing in decision making, social interaction, developing a global perspective, effective citizenship, and aesthetic engagement. Within each of these abilities six levels of achievement are defined. General education is included in levels one through four, and specialized work in the majors and supporting areas of study are levels five and six. However, Alverno’s grading philosophy includes the caveat that “it would be a fundamental misperception to see students’ development and demonstration of these eight abilities as the primary outcome or end of an Alverno education. Our ultimate goal is the development of each student as an educated, mature adult…” This grading process relies on faculty to write performance criteria for specific courses that are related to the college-wide criteria. A fundamental basis for this grading philosophy is formative grading; students are given opportunities throughout courses as well as their college careers to demonstrate achievements. In addition to course-based assessments, there are “integrative assessments” that take into account student learning from several courses. Finally, it is important to note that the abilities and their definitions are reviewed and revised on an on-going basis, based, in part, on student development.

In conclusion, with the increase in international student mobility, the role of the credential evaluator in understanding educational systems and applying basic principles to students from all countries becomes more and more significant. While grading trends show a homogenization of grading practices, individual countries continue to develop practices that serve their needs, with, in some cases, individual institutions breaking from an established norm to develop a new system for demonstrating a student’s achievements.

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