Assessing Scholastic Learning Outcomes of Independent Higher Learning:
Twenty-Year Experience of NIAD-UE

非大学型高等教育機会を通じた学習の成果の評価
——学位授与事業20年の経験——

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Assessing Scholastic Learning Outcomes of Independent Higher Learning: 
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Abstract

This paper aims to present a model for degree awarding based on the assessment of learning outcomes conducted by the National Institution for Academic Degrees and University Evaluation (NIAD-UE) in Japan. It also seeks to raise questions about, and make contributions to, the discussion of development of common scales for measuring students’ learning outcomes that is now on the agenda of higher education internationally in the context of evidencing quality of higher education.

Keywords

learning outcomes, standardized test, evidence, assessment, credits

1. Background of Discussion

Demand for evidenced learning outcomes

The current global trend emphasizes the importance of learning outcomes of higher education. Higher education institutions are being asked to show that their students’ learning outcomes as evidence of the institution’s proper contribution to education. Other parties such as governments or accreditors are also being claimed to support or to direct higher education institutions in evincing students’ learning outcomes. Everyone might agree, in principle, that a higher education institution should be accountable in ensuring students’ success in learning because education should always be the focal point of its mission. Recently, interest in students’ learning outcomes has increased abruptly for various reasons: a growing knowledge-based society, the global labor market, expansion of higher education, the increasing demand for accountability and the prevailing value of neoliberalism.

Responding to this demand, several kinds of tools have been developed to examine learning outcomes. The emergence of the now famous Bologna Process itself can be found in the context of the effort to ensure the transferability of credentials within the European area by certifying the quality of learning outcomes, and the Process is now proceeding into Latin American countries and the United States as the Tuning Project (Adelman, 2009). Another international attempt to objectify learning outcomes has been launched by the OECD: This new project, called Assessment of Higher Education Learning Outcomes (AHELO), is now proceeding as a feasibility study that is being conducted in several member countries of the OECD including Japan (OECD, 2009). The research focuses on the viability of introducing common standards that can measure higher education learning outcomes internationally in terms of abilities in analytical reasoning and two selected disciplines: engineering and economics.

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Discussions on the measurement of learning outcomes are going on in individual systems and countries, as well (Nusche, 2008).

Assessment of experience

While most of these measuring methods or standards are still in the stage of discussion or development, some measurements of learning outcomes have been developed, for example, in the US as attitudinal self-examining questionnaires, e.g., the Cooperative Institutional Research Program (CIRP), which is now conducted by the Higher Education Research Institute at UCLA (Astin, 1993), and the National Survey of Student Engagement (NSSE) at the Indiana University Bloomington (Kuh, et al, 2005). These student surveys have been developed based on objective research in higher education and have provided reliable information on students’ attitude, value and engagement for many years.

Similar approaches for student survey can be observed being newly employed in some other countries: In 2005, National Student Survey (NSS) started in the UK as a part of Quality Assurance Framework focusing on student satisfaction (Surridge, 2006), and in the same year, Japanese Cooperative Institutional Research Program (JCIRP), which was modeled after CIRP of UCLA and focused mainly on “college impact” of students, was launched in Japan (Yamada, 2009). These surveys intended to find out student development in psychology, cognition, personality, and/or engagement (Kuh et al, 2002). In other words, they intend to discover how students view themselves in their college environment.

Assessment of scholastic ability

In terms of measuring scholastic ability, however, there are limited numbers of examples of measurements for assessment of learning outcomes in use on a large scale and over a considerable time period. It is true that numerous approaches have attempted to measure students’ scholarly achievements using a uniform scale. But most of these are end-of-program assessments provided at the institutional level, and students are required to go through them in order to demonstrate that their proficiency in a particular field of study meets the standard prescribed by the course professor or the department.

There are also, especially in the U.S., attempts to assess students’ scholastic learning outcomes at the multi-institutional level. Area Concentration Achievements Tests (ACAT), College Basic Academic Subjects Examination (College BASE), Collegiate Learning Assessment (CLA), Measure of Academic Proficiency and Progress (MAPP) are examples (Millet et al, 2007). Some U.S. states have stipulated that all students at state institutions take a standardized test before reaching a given level of an educational program (Astin, 1993). Some of these examinations are limited to a specific field of study and the others are general education or based on students’ learning at a particular institution.

2. Assessment of Individual Learning Outcomes

Unlike the above examples of measuring tools, the assessment of learning outcomes conducted by NIAD-UE is designed to assess learners’ innate scholastic ability, not their performance in one program/institution.

This model is unique in at least six ways: It confers degrees only on assessment; it serves learners not from a single institution but nationwide and the international general population; it assesses learning outcomes of individual learners while requiring accumulation of credits in accordance with prescribed standards; it focuses not only on general cognitive skills but also on scholastic ability in a specific discipline with slight emphasis on the latter; its assessment of learning outcome is directly related to an individual’s earned degree; and it has a history of almost two decades.
Establishment of NIAD-UE

Before starting a discussion about the assessment model of NIAD-UE, let us look at the socio-historical context that required the establishment of such a system in Japan.

The modern history of higher education in Japan started with the establishment of the University of Tokyo, and its first forty years of it is deemed to be the time of “institutional buildup” (Kaneko, 2004). When the University of Tokyo was formally established in 1877, this highest institution of learning of the country had an elitist culture. For reference, in 1893, the number of graduates from high schools in Japan was 513: Unlike the current system, at that time high schools were viewed as institutions for liberal education or preparatory education for upcoming specialized higher education at the university. Therefore, it was reasonable to assume the number of high school graduates would be equal to the number of freshmen enrolling in the university, and in 1893 university students represented just 0.13% of the 20-year-old male population (Takeuchi, 1999). (Women were not allowed to be admitted to the university then.) Obviously, modern higher education in Japan was originally only for the elite, as was the case in many East Asian countries (Altbach, 1999; 2004).

115 years later, the participation rate in colleges and universities (including two- or three-year junior colleges and colleges of technology) was 55.3% in 2008 among 18-year-olds (Figure 1). And if we include enrollment in special training colleges which do not confer any degrees including associate, the rate goes up to 76.8%. So higher education in Japan is distinctly no longer just for the elite, reflecting the global trend.

To return to our main subject, NIAD-UE, nee NIAD, was established as a national governmental organization in 1991, but discussion about its establishment originally started in the 60s, when university admission was becoming a more major goal for Japanese students. Throughout its history of higher education, Japanese universities have held individual entrance examinations that measure scholastic ability of prospective students, and in many cases the competition has been severe for admission, especially to top institutions. There has been a long-established belief that being admitted to a selective university promises success for the rest of one’s life: Another way of putting it is that lifetime success (or failure) is

![Figure 1: 18-year old population and access rate to the post secondary education](source: Ministry of Education, Culture, Sports, Science and Technology, School Basic Survey, 2009)
determined at an age as young as 18. On the other hand, it has been claimed that the experience of such severe competition in adolescence would spoil the sound development of youth (Mori, 2000). Selective entrance examination based on scholastic ability and the related promise of a successful life shows the influence of Chinese *Keju*, the Imperial Examination for civil service system. Miyazaki (1963) points out that the severe entrance examination system in modern Japan emerged to feed the demand from the feudal society for a labor market with little mobility. He indicates that this social structure in Japan had much in common with ancient China, where *Keju* served to guarantee life-time employment for bureaucrats.

When the establishment of NIAD first became a topic on the political agenda in the 60s, what was primarily intended was not the assessment of learning outcomes itself but a cooling down of the severe competitiveness by introducing an alternative way to earn academic degrees. The creation of a system to allow people to get at least a bachelor's degree by accumulating credits without being matriculated at a university was the result of a long discussion that aimed at promoting the routes to earn academic credentials anytime in one's life, and eventually easing the overheated competition at the age of 18. It also aimed to enforce the signaling function of degrees by introducing a system of degree-awarding which was apart from fixed and expanded school education system (Hamanaka, 2008). Furthermore, it was thought that such a system was needed in an era of life-long learning, and that a more flexible route to a degree would promote higher learning among people who had not been exposed to collegiate education before. Inside NIAD, assessment methods for learning outcomes were developed in order to carry out this work of enlarging access to higher education, and the system is still being modified. We will come back to this point later.

### 3. Assessment of Learning Outcomes at NIAD-UE

**Design of the scheme**

NIAD was established after long discussion among people in both political and academic spheres. For example, in 1977, during a discussion on the creation of a system of academic degree awarding based on the accumulation of credits, the Minister of Education said that he thought the new system needed deliberate research, since the creation of such a new concept would be influential on the entire system of higher education (The House of Representatives, 1977). He also noted that the new system would need to be approved and accepted by existing universities beforehand. In 1991, NIAD became the first entity with degree-awarding authority other than university or college, in the history of education in Japan. At that point, it became possible for independent learners to earn academic degrees in 26 disciplines.

NIAD was reorganized in 2000 as NIAD-UE in order to play an additional role in university evaluation. And today it continues to be responsible in degree awarding to independent learners. Figure 2 shows the flow chart of the system of degree awarding conducted by NIAD-UE from preliminary qualification through the acquisition of a bachelor's degree. As mentioned above, the central idea of this scheme is based on credit accumulation. The system is supported, as seen in Figure 2, by two items: the preliminary qualification requirement and the learning outcome requirement.

**Preliminary Qualification**

Applicants are required to satisfy the preliminary qualification. One way to do so is by completing a junior college or a college of technology. In Japan, junior colleges provide two or three-year programs in principal, and colleges of technology provide five year-programs that include the last three years of secondary
education and the first two years of higher education, resulting in an associate degree. While special training colleges do not confer any degrees, under certain conditions education at a special training college allows graduates to transfer to four-year colleges and universities as third-year (junior) students. Another way to fulfill the preliminary qualification is by matriculating at a university or a four-year college for at least two years and earning 62 credits or more. In Japan, minimum credit requirement for baccalaureate degrees at university is 124, so we can see that this preliminary qualification of NIAD-UE application requires applicants to complete the first half of university.

In other cases — completing a program that leads to an associate degree or completing a four-year program — the school can be located in a foreign country as long as it has legitimate status in that country. However, applicants must leave the institution before they apply for NIAD-UE.

As we have already noted, the creation of NIAD-UE was a realization of the social need to tone down the severe competition of higher education admission and to provide opportunities of higher learning for citizens with less exposure to university education by offering a route to academic degrees with flexible structure. In reality, though, the current system of NIAD-UE requires at least two years at an institution of higher education. One reason for this change in policy may be the demographic change in Japan: As can be seen in the Figure 1, the 18-year old population started to decrease about the time of the creation of NIAD, so the difference between the number of university applicants and the seat openings at a university has decreased, with an equivalent lowering of competition for university admission, especially at the lower end of the hierarchy of the university prestige.

However, another reason for the introduction of this kind of preliminary qualification was related to political manipulation. As the Minister of Education pointed out in 1977, creation of a new system of degree awarding required careful management, after more than a century of

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**Preliminary Qualification:**
- Completion of a junior college, a college of technology or a special training school; or
- Matriculation at a four-year institution (in any country) for more than two years with acquisition of at least 62 semester credits.

**Requirement of Application:**
- Acquisition of prescribed number of credits at: university as a non-matriculated credit-based student, advanced program of junior college or college of technology (NIAD-UE-approved), or graduate school; and
- Submission of learning outcomes in the form of a thesis or an art work/musical performance.

**Assessment at NIAD-UE:**
- Inspection of applied credits; and
- Assessment of the learning outcome based on submitted work and written examination/interview.

**Bachelor’s Degree**

*Figure 2  Flow Chart of the Scheme of NIAD-UE Degree Awarding System*
monopoly of the authority by colleges and universities: Impetuous changes could harm the establishment of a new system. Thus, the scheme of NIAD was designed to require applicants to complete two years or more at a traditional institution of post secondary education, fulfilling both the traditional and non-traditional parts equally (Tachi, 2001).

Considering the original idea of creating an alternative route to academic degrees, the current scheme of NIAD-UE has not accomplished the primary concept of providing an accessible route to higher learning. Reconsiderations of this preliminary qualification have been a long-standing topic of research of NIAD-UE, but no significant change has occurred so far: The new degree-awarding scheme is still at the stage of experiment.

**Requirement of Application**

Despite the shortcoming mentioned above, the degree-awarding system of NIAD-UE still provides a unique opportunity that very likely enhances independent learning.

Note that applicants are required to demonstrate their own “learning outcomes” in a form of theses or artwork, as is shown in Figure 2, in addition to accumulating a fixed number of credits in accordance with the type of preliminary qualifications (Table 1), and the specific credit requirements in each specific major among 27 disciplines (Table 2). These disciplines include Literature, Education, Theology, Sociology, Liberal Arts, Social Science, Law, Political Science,

### Table 1 Required Credits by Type of Preliminary Qualifications

<table>
<thead>
<tr>
<th>Types of Preliminary Qualifications</th>
<th>Minimum Requirement of Semester Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of:</td>
<td></td>
</tr>
<tr>
<td>• A two-year program at a junior college;</td>
<td></td>
</tr>
<tr>
<td>• A college of technology; or</td>
<td></td>
</tr>
<tr>
<td>• A special training college equivalent to two-year short term higher education</td>
<td>62</td>
</tr>
<tr>
<td>Completion of:</td>
<td></td>
</tr>
<tr>
<td>• A three-year program at a junior college; or</td>
<td>31</td>
</tr>
<tr>
<td>• A special training college equivalent to three-year short term higher education</td>
<td></td>
</tr>
<tr>
<td>Two years or more of study at a university and the acquisition of 62 or more credits including credits acquired at a university as a matriculated student</td>
<td>124</td>
</tr>
</tbody>
</table>

### Table 2 Example of Credit Requirements in Specific Major (Chinese/Chinese Literature)

<table>
<thead>
<tr>
<th>Curricular Items</th>
<th>Number of Sem. Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major-Central:</td>
<td></td>
</tr>
<tr>
<td>• Chinese Language</td>
<td>40 in at least 3 curricular items including “Chinese Language”</td>
</tr>
<tr>
<td>• Chinese Linguistics</td>
<td></td>
</tr>
<tr>
<td>• Chinese Literature</td>
<td></td>
</tr>
<tr>
<td>• Chinese Culture/ Philosophy</td>
<td></td>
</tr>
<tr>
<td>Major-Secondary:</td>
<td></td>
</tr>
<tr>
<td>• Asian Literature and Culture other than Chinese</td>
<td>4</td>
</tr>
<tr>
<td>• Japanese Literature and Culture</td>
<td></td>
</tr>
<tr>
<td>• Foreign Language other than Chinese</td>
<td></td>
</tr>
<tr>
<td>• Linguistics and Language education</td>
<td></td>
</tr>
<tr>
<td>• Comparative Culture</td>
<td></td>
</tr>
<tr>
<td>• Area Studies other than Chinese</td>
<td></td>
</tr>
<tr>
<td>• International Relations</td>
<td></td>
</tr>
</tbody>
</table>

An applicant would need to submit credit transcripts that certify two kinds of credit requirements shown in Tables 1 and 2, along with an essay of 10-17 pages as their “learning outcomes.” Learning outcomes may be art works or musical performance when applying for a bachelor’s degree in the discipline of Art.

**Assessment at NIAD-UE**

As of 2009, NIAD-UE had appointed some 350 faculty members from universities in all over the country as members of commissions that are responsible for the inspection of proper accumulation of credits and learning outcomes. When a “learning outcomes” is submitted in the form of an essay, the applicant is required to sit for an examination based on the contents of their own “learning outcomes,” so examinations are prepared individually. A member of the committee for assessment reads the essay and creates one examination for one “learning outcomes”/applicant. An examination is designed to require answers in a form of two-three pages narrative composition in which an applicant is able to and required to display his/her proficiency in a selected majoring field along with ability in writing, inquiry, analysis, and reasoning in one occasion.

In 2008, NIAD-UE attracted 2,955 applicants for this scheme of degree awarding and 2,723 of them earned degrees (Figure 3). In other words, 2,955 kinds of examinations were prepared, after two occasions of application in April and October. A bachelor’s degree is conferred when an applicant successfully satisfies the credit requirements plus the assessment of learning outcomes, along with the examination.

About 2000, talk began about the possibility of giving up individual examinations and introducing a standardized test system for applicants in same major of discipline such as Mechanical Engineering in the discipline of Engineering or Chinese/Chinese Literature in the discipline of Literature. There is no doubt that rapid growth of the number of applicants, which is seen in the steep curve in Figure 3 was the reason for that discussion. In fact, scholarly assessment of learning outcomes is costly in terms of money, time, and manpower. A rough and non-official calculation suggests that it costs approximately 800 US dollars to award a bachelor’s degree to an applicant while the application fee is 250 dollars. This means the more applicants NIAD-UE
attracts, the further it spends public money. This situation might seem to be ineffective, and introducing a standardized test might be a wiser choice.

But almost a decade later, no standardized examination has been introduced. The main reason NIAD-UE does not (and cannot) introduce such a standardized examination system is that, unlike elementary and secondary education, there is no current consensus on the national curriculum for higher education. If the idea of “learning outcomes” of higher education implies one’s proficiency in a specific field of study, combined with ability in writing, inquiry, analysis, and reasoning, giving individual examinations of essays based on learners’ theses seems to be almost the only way to assess it in this situation.

Another way to putting it is that a common examination, which may be given as a multiple-choice test or a simple quiz, is believed to be too inflexible to truly assess the learning ability of a wide variety of learners. In other words, one size doesn’t fit all if you want to give meaningful assessments of learning outcomes of higher education.

These issues of cost and significance should be always included within the scope of discussion, and it is almost sure that significant assessments are costly. The question is if they are ready to pay the cost in money, time and manpower enough to realize a fair, sustainable and comprehensive assessing system.

As to the assessment implemented by NIAD-UE, it is true that its method is costly. However, it has been believed that its mission of degree awarding to independent learners deserves that cost. The cost has been regarded, so far, to be a reasonable price for a welfare country to expend in order to provide a widen opportunity for higher education in a learning society.

4. Why Learning Outcomes: A Suggestion

As Figure 2 suggests, requirements for the total number of credits are designed to make them equivalent to the degree requirements at a university: 124 semester credits. Here is a question: Is NIAD-UE gilding lilies? If a credit functions well enough as the smallest credential of academic acquisition, extra assessment of learning outcomes might be redundant. In fact, assessing learning outcomes by requiring a thesis and giving an examination demands tremendous work for both applicants and NIAD-UE, but NIAD-UE has maintained this policy of individual evaluation based on individual learning outcomes even after the expansion of applicants. This model of assessment may indicate a clue to the current global debate over learning outcomes.

NIAD-UE assesses individual learning outcomes because it does not fully trust the fundamental function of credits as representing learners’/students’ scholastic ability in given academic courses, just like the currency represents objective economic value (Wellman and Earlich, 2003). Presumably, this distrust of the function of credits was growing worldwide when discussion began about the assessment of learning outcomes in higher education. The lack of an agreed common curriculum, which we have just discussed, might be another focus of contention. This issue of the standardization of curriculum is deeply related to the issue of academic freedom, a classic question of higher education: Who teaches, what, to whom?

Though the outcomes of current discussions and researches happening in many parts of the world is not yet clear, there can be seen a trend in the discussion that focuses on macroscopic structures such as governments, collegiate associations, labor markets and/or industry. Also, the discussion has been tempted to spotlight the development of standardized examinations. In assuring the quality of world higher education, the roles played by such larger entities can not be disregarded. At the same time, however, NIAD-UE’s twenty years of experience suggests that we may need to go back to the basics: the function of
credits and the mission of university faculties responsible for issuing individual credits based on the evaluation of students’ day-to-day learning outcomes. It also implies that process of evaluation of learning outcomes that are not directory affiliated with individual academic course work tend to consume more money, time and manpower than those based directly on course work. This issue of cost must not be ignored in the process of discussion on the introduction of “significant” ways to assess learning outcomes. It is a good time to re-consider the feasibility of notional/international standardized learning outcome assessment.

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[要旨]

非大学型高等教育機会を通じた学習の成果の評価
—学位授与事業20年の経験—

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高等教育の大衆化と、それに伴う質保証への要求の高まりは、学生の学習の成果の評価方法の議論を巻き起こしている。とりわけ2000年から2010年にかけて、高等教育における学習の成果を測定するための大学横断的あるいは国際的な共通試験の開発と導入が、大学側からも政策側からも提案され、AHELO のように実現の可能性の調査が遂行されつつある例もある。

いっぽう大学評価・学位授与機関は、1991年の創立以来、わが国では唯一の教育課程を持たない高等教育機関として、非大学型の高等教育機会を通じて獲得された学習の成果を評価することによって、学位を授与してきた。その20年の経験は、上述したような学習の成果の評価に関する議論のリアリティ・チェックをおこなう機能が期待できる。本稿は、まず学習成果の評価に関する議論と実践について整理を試みる。その後、大学評価・学位授与機関が遂行している、教育課程に直接には基づかない学力の評価とその結果に基づく学位の授与の実態を学士の学位授与に限って解説する。次いで、その理解をもとに、現在起きている学習の成果を評価する国内的・国際的なシステムに関する議論の問題点を、実効性と経済性の点から指摘することによって、議論そのものの有効な展開に資することを企図している。

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