Assessing an Assessment Tool of Higher Education: Progress Report on Generic Skills (PROG) in Japan

Hiroshi Ito

Departement of Management, Nagoya University of Commerce and Business

Article Info	ABSTRACT		
Article history:	Assessment of learning outcomes of college students has been at iss		
Received Dec 21, 2013 Revised Jan 20, 2014 Accepted Feb 26, 2014	around the world in recent years. Given that grade point average (GPA) may not be a reliable indicator for learning, some organizations have developed new types of assessment tools that measure generic skills, such as the Assessment of Higher Education Learning Outcome (AHELO) and the Collegiate Learning Assessment (CLA). In Japan, an assessment tool called		
Keyword:	the Progress Report on Generic Skills (PROG) has been introduced to measure college students' generic skills. However, the validity of this test has		
Generic skills Assessment tools Higher education CLA PROG	hardly ever been studied. This paper thus provides an opportunity to analyze the validity of PROG through statistical analyses of the correlation between PROG scores and GPA as well as interviews with students and instructors. The findings show a gap between PROG scores and GPA. Three possible reasons are put forth as explanations for such a gap: 1) PROG does not test generic skills properly; 2) the university does not nurture and/or assess students' generic skills that PROG measures; and 3) students make different levels of efforts for PROG and college course work. The findings of this research suggest using the results of PROG only as a reference tool that needs to be triangulated with other assessment tools.		
	Copyright © 2014 Institute of Advanced Engineering and Science. All rights reserved.		
Corresponding Author:			
Hiroshi Ito, Departement of Management, Nagoya University of Comme	rce and Business,		

4-4 Sagamine, Komenoki-cho, Nisshin-shi, Aichi 470-0193.Email: hito@nucba.ac.jp

1. INTRODUCTION

Assessment of learning outcomes of college students has been at issue around the world in recent years [1]-[6]. Grade point average (GPA), which has been traditionally used for measuring students' academic performance at college, does not seem to be a reliable indicator for learning as grading varies according to instructors or majors [7] and does not explicitly measure generic skills demanded in the job market [8].

Some organizations have developed new types of assessment tools that measure generic skills. Since 2008, for example, the Organization of Economic Cooperation and Development (OECD) has been testing the feasibility of a new assessment tool called the Assessment of Higher Education Learning Outcome (AHELO) based on the Collegiate Learning Assessment (CLA), an open-ended, value-added, performance assessment of generic skills such as critical thinking, analytical reasoning, problem-solving, and written communication skills through analytical writing and performance tasks.

In Japan, a similar assessment tool called the Progress Report on Generic Skills (PROG) has been introduced to measure learning outcomes of college students and has been gaining popularity. As with CLA, PROGis designed to test generic skills. However, the validity of this test has not critically been examined except by the organizations that administer the test (i.e., Riasec, Kawaijuku).

1

This paper thus provides an opportunity to analyze validity of PROG. It first introduces and explains the CLA before turning to examine PROG in comparison with CLA, explaining what kinds of generic skills these exams assess and how they assess them. Testing a hypothesis drawn from existing literature that suggests that there is a weak correlation between PROG and GPA, the paper then calculates statistical correlations between various elements (variables) of PROG and academic performance (i.e., GPA) by examining the PROG and GPA scores of 166 students who took PROG at the Nagoya University of Business and Commerce. In order to try and make better sense of the findings, interviews are conducted with both instructors and students of the two courses with the highest and lowest correlation to explore whether classroom activities have an impact on PROG scores. The findings of these interviews are presented before the paper closes with a discussion identifying, examining, and explaining possible reasons for the results.

Generic Skills, CLA, and PROG

CLA from the Council for Aid to Education has become one of the most popular assessment tools in higher education [9]. CLA is becoming a gold standard in the US and drawing attention from all over the world as OECD has been developing AHELO based on CLA [10],[11]. Unlike the Collegiate Assessment of Academy Proficiency (CAAP) and the ETS Proficiency Profile (ETSPP) that are based on multiple choice exams, CLA is an open-ended, value-added, performance assessment tool that measures generic skills such as critical thinking, analytical reasoning, problem solving, and written communication through analytical writing tasks, make-an-argument tasks, critique-an-argument tasks, and realistic, albeit artificial, performance tasks [12]. These tasks are "derived from a domain of real-world jobs suggested by activities found in education, work, policy, and everyday practice" [9].

Wagner, co-director of the Change Leadership Group at the Harvard Graduate School of Education, states that the generic skills measured by CLA have a great deal in common with what he calls the Seven Survival Skills. According to Wagner, these generic skills are essential for students to seek decent employment and become active citizens in democratic societies. The Seven Survival Skills that Wagner identifies are as follows: 1) Critical Thinking and Problem Solving, Collaboration Across Networks and Learning by Influence, Agility and Adaptability, Initiative and Entrepreneurialism, Effective Oral and Written Communication, Accessing and Analyzing Information, and Curiosity and Imagination [13].

Among these generic skills, CLA mainly measures skills in critical thinking, problem solving, written communication, and analyzing information.

Given that CLA employs open-ended essay tasks, some critics question whether CLA scores are as reliable as those from multiple-choice tests such as the CAAP and the ETSPP because they suspect that openended essays cannot be objectively graded [14]. Nevertheless, there is a strong correlation between CLA and the multiple-choice tests with a correlation coefficient greater than 0.85, indicating that individuals and institutions with "a high score on one test tend to get high scores on the other tests, regardless of what the tests were designed to measure" [14]. Although this result may imply that CLA is as reliable as other exams, it may also imply that the CLA fails its intended purpose of measuring elements of generic skills such as critical thinking, analytical reasoning, problem solving, and written communication that may not by captured by the multiple-choice tests. It is noteworthy that while the validity and transferability of GPA has been called into questions as an effective assessment of college students' generic skills, college GPA is positively correlated to CLA scores as well as SAT score [10]. This correlation suggests that GPA may actually be a reliable indicator of generic skills, or conversely, that CLA and SAT are not measuring the generic skills that they claim to measure. However, as will be demonstrated and discussed later, PROG, somewhat similar to CLA, does not strongly correlate to GPA.

In Japan, PROG has emerged as a popular assessment tool of generic skills of college students. PROG intends to measure two elements of generic skills: *literacy* and *competency*. Drawn from three key competencies in the Definition and Selection of Competencies (DeSeCo) developed by OECD, *literacy* is defined to use tools interactively (e.g. language, technology) while *competency* is defined to interact in heterogeneous groups and to act autonomously. Following these definitions, *literacy* includes the aforesaid generic skills such as critical thinking, analytical reasoning, problem solving, and written communication while *competency* is described as intellectual competence and *competency* is described as communication competence [15]. This usage of the terms *literacy* and *competency* is confusing and can be problematic. OECD's literacy—using tools interactively (e.g. language, technology)—is one of its DeSeCo's key competencies. As Matsushita puts it, these tools include non-cognitive elements such as social and emotional elements that are part of *competency* [16] (See Figure 1).



Figure 1. DeSeCo's Competencies vs PROG's Literacy and Competency

In Japan, however, *literacy* is separated from *competency* [16]. Despite weaknesses in the terminology, this paper follows PROG's usage of the terms *literacy* and *competency* but uses them in *italics* to differentiate them from OECD's use.

The PROG exam has two parts: one is named *Literacy* and the other *Competency*. 45 minutes are allocated for the *Literacy* section and 40 minutes for the *Competency* section. *Literacy* is composed of data collection, data analysis, problem solving, and conceptual thinking skills. Critical thinking skills, which are considered important generic skills, are partially integrated into the data analysis skills. PROG's *literacy* assessment also involves a few short essays to measure written communication and other skills. These elements are similar to what CLA examines. *Competency* is composed of skills in general communication, collaboration, networking, leadership, negotiation, and stress management as well as problem solving that is also included in *Literacy*. There are some notable differences between CLA and PROG. CLA is composed of open-ended essays while PROG is based on a combination of short essays and multiple-choice questions. Also, CLA is designed to produce results at the institutional level such as school average scores and value-added scores while PROG is designed to produce results at the individual level, that is scores for each individual who takes the exam. PROG also provides feedback sheets after the test with suggestions of how to improve generic skills.

The PROG score ranges from 1 to 7 in *Literacy* and *Competency*. Score 4 is the level desired to be reached by the end of the first year of university. Students with this score are expected to be able to adequately understand and rephrase information from documents and graphs. Score 7 is a level desired to be reached at the time of college graduation. Students with this score are expected to be able to organize data and demonstrate information derived from the data in academic writing and graphs. Students at this level are able to establish arguments logically [15]. The following question intends to test conceptual thinking skills in PROG's *Literacy section*.

You are going to do a group presentation about globalization for a university seminar. Each group has 10 minutes, including questions and comments. Each group can decide the aspects of globalization on which to focus. You have 20 days until the presentation. Please make a plan, showing the process of how you would proceed with the preparation, taking the following elements into consideration:

- a. Preparing a presentation
- b. Collecting information and selecting ideas
- c. Deciding a group theme
- d. Analyzing information
- e. Deciding the content
- e. Practicing and modification
- g. Reviewing the presentation
- h. Deciding the roles

Students are expected to draw a flowchart that illustrates what they would do and when they would do it [15]. How does PROG address *competency*? The following question is an example from the *Competency* section. You are a project leader of developing a new product at a company. One of your subordinates came up with an interesting idea about a new product. However, it is difficult to develop the idea into a

product. In order to do so, it is necessary to deal with X, a major company with a marketing network,

- A. I would tell my subordinate that it is difficult to develop his idea into a product though his idea is interesting
- B. I would encourage my subordinate to think of a realistic method of developing his idea into the product
- C. I would tell my subordinate that we would keep the idea and wait for an opportunity to arise
- D. I would think of how to communicate with X and Y through acquaintances
- E. I would contact Y immediately to see if we could collaborate with each other to develop the idea into a product

Apparently, there is no right or wrong answer for this question. How does PROG score *Competency*then? Kawaijuku and Riasec explain that they administered the test to the young leaders that are currently active in societyand collected sample data. They then analyzed the patterns of their answers to each question [17]. That is, PROG's *Competency* section attempts measures students' *competency* by comparing their answers with the young leaders' answers and how similar students' answers are to those of the young leaders. Similar answers to young leaders' answers score higher in *competency* while dissimilar answers score lower.

As with CLA, one may question how reliable PROG is. Above-stated criteria for *literacy* and *competency* (e.g., being able to establish arguments logically, being able to behave and communicate as young active leaders do) may be difficult to quantify objectively.

Several case studies on PROG published by Riasec examine the validity of PROG's *literacy*. Riasec reported correlations between GPA and PROG's *literacy* scores in some universities [15]. In University A, for example, the correlation between PROG's *literacy* scores and the university students' GPA was 0.30. In University B, the correlation between PROG's *literacy* scores and the freshman students' GPA was 0.24 (p<0.05). In both universities, the correlations between PROG's *literacy* and GPA were weak.

Nogami, Professor of Tokyo University of Science, found a very weak correlation between PROG's *literacy* scores and his university students' GPA while there is a strong correlation between PROG's *literacy* and placement tests (PT) that measure academic skills of new university entrants nurtured at high school. PT takes place at the beginning of university to place new students in appropriate level courses. The content varies according to each university, but usually consists of math, Japanese, and English) [15].

Yamamoto, Professor of Kyusyu International University, also found a weak correlation between PROG's *literacy* score and his university students' GPAs. "There are many students who scored more than 3.00 in GPA but scored only 1 in PROG's *literacy*." He believes that his university does not nurture and assess students' *literacy* properly. He argues that "PROG tests how students can apply their knowledge into practice. We do not teach students how to apply knowledge, and we consider other elements such as class participation and students' attitudes in measuring academic performance." He continues, "If students with high GPAs cannot score high in PROG's *literacy*, the validity of GPAs will be in question" [15]. The reliability of GPA has been debated. This is precisely why tests such as CLA and PROG have been introduced to measure generic skills of college students.

Yamamoto, however, states that PROG's *literacy* and students' academic performance at the point of entry into higher education are positively correlated. The first-year students who scored more than average in PT in Japanese and Math tend to score high in the PROG's *Literacy* section and vice versa. The cases from Tokyo University of Science and Kyusyu International University show a strong correlation between PROG and PT coincides with the relationships between CLA and multiple-choice tests such as CAAP, ETSPP, and SAT. For instance, the correlation between CLA and SAT is very strong at 0.96 [9]. As detailed later, this figure may be noteworthy because these exams are supposed to measure different skills.

With regard to *competency*, Yamamoto reported that there is also a correlation between PROG's *competency* and PT: those who did well in PT tend to do well in PROG's *competency*. Imaizumi, Professor of Toyohashi Sozo University, however, argues that there is a notable gap between PROG's *competency* scores and instructors' perceptions of students' communication competence. For instance, students who do well in class and whom their instructors consider communicative and responsible scored low in PROG's *competency*. He thus suspects that PROG's *competency* does not measure students' communication skills properly. Manabe, Professor of City University of Northern Kyusyu, also warns that we should be precautious of how much PROG can measure generic skills accurately [15].

2. RESEARCH METHOD

In this research, I test correlations between variables of PROG and GPA and identify, examine, and discuss possible reasons for the result. I first intend to confirm that a correlation between PROG and GPA is weak. Although the literature review indicates that the correlation is weak, the number of the cases cited is small and applies to only a few universities. Since GPA standards can differ from university to university and individual grades can differ from professor to professor, correlating PROG to GPA in more universities will further substantiate whether PROG has a weak correlation to GPA at a wider scale.

If GPA is actually questionable as a metric for comparing university students' generic skills, then a weak correlation between PROG and GPA hints that PROG might be better than GPA as a standardized assessment metric of generic skills. As already mentioned, however, CLA has a strong correlation with university GPA. Providing that both CLA and university GPAs measure students' generic skills properly, it may be that a weak correlation between PROG and GPA shows that PROG has inadequacies at measuring such skills. This position is adopted to offerpossible reasons for the gap between PROG and GPA: 1) PROG does not test generic skills properly; 2) GPA and PROG test different skills and the university does not nurture and/or assess the generic skills that PROG measures; and 3) students make different levels of efforts for PROG and university course work.

In order to deepen analysis, I calculate correlations between each variable of PROG (i.e., data collection and analytical skills, problem solving skills, conceptual thinking skills, communication skills) and GPA. I also calculate a correlation between PROG's *Literacy* score and GPA per subject to identify which subjects are more correlated with PROG's *Literacy* score. I compare two of these subjects, one of which is the most highly correlated and the other the most weakly correlated with PROG's *literacy*. Through unstructured, open-ended interviews with students and the instructors, I attempt to understand how the instructors teach and how the students learn and whether there is any noticeable differences in the classrooms that might correspond to the PROG scores.

I examined the PROG scores of 166 first year students including 29 female students at the Nagoya University of Business and Commerce (NUCB) in Japan. This research targets them because NUCB considers "the first year experience" a top priority and has introduced PROG to test their generic skills. They took the PROG test in April and May 2013, approximately one month after their entry to university. I also interviewed a few instructors and 35 students who took PROG to help analyze the results.

3. RESULTS AND ANALYSIS

Statistical Analysis of PROG and GPA

Table 1. Descriptive statistics of PROG and GPA				
Variables	Ν	Mean	SD	
GPA	166	2.39	1.02	
General Education Subjects	166	2.12	1.25	
Discipline Specific Subjects	166	2.51	1.05	
Literacy	166	2.84	1.36	
Data Collection Skills	166	2.14	1.32	
Data Analytical Skills	166	2.21	1.32	
Problem Solving Skills	166	3.10	1.65	
Conceptual Thinking Skills	166	2.39	1.44	
Language Processing Skills	166	2.08	1.41	
Non-language Processing Skills	166	2.41	1.42	
Competency	166	3.00	1.48	

For GPA, the highest score was 4.00 and the lowest was 0.20 out of the maximum possible score of 4.00. The mean score was 2.39 and the standard deviation was 1.02. For PROG's *Literacy*, the highest score was 6 and the lowest was 1 out of the maximum possible score of 7. The mean score was 2.84 and the standard deviation was 1.36. For PROG's *Competency*, the highest score was 7 and the lowest was 1 out of the maximum possible score of 7. The mean score was 3.00 and the standard deviation 1.48.

I will now turn to calculate a correlation between *Literacy* and GPA. In order to conduct more detailed analysis, I also calculate a correlation between *Literacy* and each of *Literacy* component: data collection skills, data analysis skills, problem solving skills, conceptual ability, language processing skills, and non-language processing skills, and *Competency*.

Assessing an Assessment Tool of Higher Education Progress Report on Generi Skills (PROG) (Hiroshi Ito)

Table 2. Correlation of PROG scores and GPA			
Variables	N	Correlation	Sig. (two-tailed)
Literacy	166	.296**	.000
Data collection skills	166	.160	.056
Data analytical skills	166	.084	.162
Problem solving skills	166	.336**	.000
Conceptual thinking skills	166	.120	.971
Language processing skills	166	.073*	.026
Non-language processing skills	166	.025	.541
Competency	166	026**	.000

* (p<0.05) ** (p<0.01)

I found a 0.296 correlation between *Literacy* and GPA, which is weak. None of PROG's *Literacy* elements show a strong or even a moderate correlation with GPA except for problem solving skills, which are moderately correlated at .336. Among those who scored 4 or above in PROG's *Literacy* and are supposed to have desired skills to be acquired at the end of first year (Riasec, 2012), 25 out of 50 students received less than 3.00 (or not even a B average) in GPA. One student who scored 6 in PROG's *Literacy* received only a 1.89 in GPA, and three students who scored 5 in PROG's *Literacy* received 1.00 and 1.10, and 1.50 in GPA. On the other hand, four students who got only 1 in PROG's *literacy* received more than 3.00 in GPA. For instance, three students who scored only 1 in PROG's *literacy* received 3.90, 3.22 and 3.20.

Students who scored more than 5 in PROG's *Literacy*, however, tended to get more than 3.00 (or a B average) in GPA. Among the 22 students who scored 5 in PROG's *Literacy*, 17 got more than 3.00 in GPA. Also, those who scored 1 in PROG's *Literacy* tended to get less than 3.00 in GPA. Among 33 the students who scored 1 in PROG's *Literacy*, five scored more than 3.00 in GPA. This result indicates that there is a certain positive, albeit weak, correlation between PROG's *Literacy* and GPA.

There is a negative correlation of -0.026 between PROG's *Competency* and GPA: those with higher *Competency* scores tend to get a lower GPA. This result contradicts Yamamoto's statement that identified a positive correlation between *Competency* and GPA at his university in the literature review section.

This research goes on to analyze correlations between PROG's *Literacy* and GPA per subject (Table 3), and *Competency* and GPA per subject (Table 4). I selected six general education subjects and eight discipline specific subjects that at least 30 students had enrolled in during the semester.

		~ · · ·	~
Variables	N	Correlation	Sig. (two-tailed)
General Education Subjects	166	.202**	.000
Introduction to Intellectual Property	32	.247	.079
Introduction to Psychology	50	.237**	.000
English for Business	63	.200	.152
Constitutional Law	47	.235**	.005
Basic Mathematics of Business	35	.196	.063
Knowledge and Society	54	.353	.146
Discipline Specific Subjects	166	.322**	.000
Introduction to Economics	163	.238**	.000
Information Literacy	164	.262**	.000
Introduction to Marketing	78	.007**	.008
Introduction to Accounting	154	.142**	.006
Introduction to Management	163	.299	.000
Perspectives on Global Society	112	.328**	.003
Fundamental Mathematics	30	.184*	.044
Introduction to Financial Theory	47	.482	.168

Table 3. Correlation of PROG's *literacy* score and GPA per subject

* (p<0.05) ** (p<0.01)

The correlation between *Literacy* and general education subjects is 0.202 and the correlation between *Literacy* and discipline specific subjects is 0.322. The correlation between general education subjects and discipline specific subjects is .680. Among these subjects, Introduction to Financial Theory shows the highest correlation with PROG's *Literacy* scores at .482.

Tuble 1. Contention of 1 ROO 5 completency score and Of R per subject				
Variables	Ν	Correlation	Sig. (two-tailed)	
General Education Subjects	166	.015**	.000	
Introduction to Intellectual Property	32	365*	.017	
Introduction to Psychology	50	.024**	.000	
English for Business	63	.082**	.000	
Constitutional Law	47	.002**	.008	
Basic Mathematics of Business	35	.009	.085	
Knowledge and Society	54	.013	.831	
Discipline Specific Subjects	166	048**	.000	
Introduction to Economics	163	.029**	.000	
Information Literacy	164	113**	.000	
Introduction to Marketing	78	.018**	.001	
Introduction to Accounting	154	.031**	.003	
Introduction to Management	163	007**	.000	
Perspectives on Global Society	112	043**	.000	
Fundamental Mathematics	30	111	.275	
Introduction to Financial Theory	47	158**	.002	
* (p<0.05) ** (p<0.01)				

Table 4. Correlation of PROG's *competency* score and GPA per subject

I found a weak 0.15 correlation between general education subjects and PROG's *Competency* scores, and a negative correlation between PROG's *Competency* scores and discipline specific subjects at -.048. While only one out of six general education subject is negatively correlated, five out of eight subjects are negatively correlated. At any event, PROG's *Competency* and GPA are unlikely to be correlated.

I find it important to explore the teaching methods of the courses that are the most highly correlated (i.e., Introduction to Financial Theory: IFT) and the most weakly correlated (i.e., Introduction to Marketing: IM) with PROG scores. I interviewed the instructors of these two courses about their teaching methods. I also interviewed 35 students who took or are taking both courses and asked them about how they were/are taught.

Comparative Analysis of Introduction to Financial Theory (IFT) and Introduction to Marketing (IM)

The correlation between PROG's *Literacy* scores and the GPA of IFT is .482. The course content includes banking systems or national monetary policies. The instructor believes that his course is rather theoretical, teaching the mechanisms of micro- and macro-economics. He evaluates students based on their mid-term report and the final exam. The course is lecture-based and about 200 students take his course. He cannot spare time to ask students many questions or write much. He finds it impossible to nurture the creativity and/or imagination of students in his course. Many of the students who took IFT informed me that the course was challenging. The instructor uses Power Point Presentations with some relevant questions for each section. Students fill in the blanks to answer these questions. Without some knowledge of financial systems and terminologies, they said, it is quite difficult to keep up with the course.

The correlation between PROG's *Literacy* scores and IM is .007. The professor uses his original texts with cases studies to teach basic concepts of marketing such as SWOT analysis and 4P. As the instructor of IFT does, he evaluates students based on their mid-term reports and their final exam. While the instructor intends to improve practical and logical thinking skills and asks as many questions as possible, he told me that he teaches about 160 students and is unable to engage in group work or discussion. Students told me that the course was interesting as the instructor uses real cases such as Seven-Eleven and Häagen-Dazs. The instructor uses his original textbooks with plenty of room for students to write in what he says. Thus, students are required to write a lot. As is the case with IFT, students are provided with a relevant question in each session. They are also required to write their own analyses after watching advertisements.

This comparative analysis tells us that the teaching methods of IFT and IM seem similar; therefore it may not be reasonable to conclude that IFT, the course that is the most highly correlated with PROG's *Literacy* scores, particularly nurtures generic skills such as critical thinking, problem solving, analytical reasoning, and written communication while IM, the course that is the most weakly correlated with PROG's *Literacy* scores, does not. Both IFT and IM are lecture-based with 160-200 students. While both instructors ask some students relevant questions and encourages them to write a lot through reports and in textbooks, and the instructor of IM asks students to examine advertisements and write their analyses down, which arguably helps improve critical thinking and analytical reasoning, they both find it almost impossible to drastically improve these skills during their course work. The instructor of IFT told me that the sampling selection of my research may be biased. If his students GPA is more highly related with PROG's *literacy*, he argues, it may not be because he teaches and assesses the generic skills that PROG measures in his course, but relatively competent students took his course in the first place.

DISCUSSION

Overall, the findings illustrate a weak correlation between PROG's *Literacy* scores and GPA, which resonates with the literature review. Three possible reasons for this result are discussed: 1) PROG does not test students' generic skills properly; 2) universities do not assess the generic skills that PROG assesses; and 3) students make different levels of efforts for PROG or GPA.

PROG

As indicated in the literature review, there is a strong correlation between PROG and PT (as was the case between CLA and SAT). A high correlation between the PROG and PT (that indicates students' academic performance at the start of university) and a weak correlation between PROG and GPA (that indicates students' academic performance at college) would lead to an odd hypothesis: high schools provide students with generic skills that PROG measures and universities do not. If so, technically speaking, to improve PROG (or CLA) scores, universities should provide high school-like education, or rather be replaced by high schools (or Princeton Review). Although the language and math skills that PT measures arguably serve as a foundation for nurturing generic skills that PROG assesses, the added/residual value of PROG that is being able to measure generic skills that PT is unable to measure is uncertain.

Universities

Universities may not nurture and assess generic skills that PROG assesses; however they may nurture and assess generic skills that PROG does not assess such as agility and adaptability, initiative and entrepreneurialism, effective oral communication, and curiosity and imagination in Wagner's Seven Survival Skills. Yet, universities have been unable to show evidence that they nurture these generic skills. Although there is a sign of improvement such as an increasing popularity of active learning that supposedly helps students acquire these generic skills [18]-[22], many universities still struggle to define generic skills, let alone to nurture them [23] and to assess them [24].

Students

Students may make different levels of efforts for the PROG test and college course work. A few students with 1 in PROG's literacy scored over 3.5 in GPA. A lack of commitment of students for PROG may be attributed to the fact that although they received briefing of PROG before the test, they may not have been convinced of why they would have to take the test. Some students that I interviewed in the previous section complained that they would not like to take it again because they found it meaningless because they were not well informed of any implications of how the test and its result could affect their futures futures. Other students also informed me that their instructors in charge of PROG told them not to be too serious about the test. This is an instructional issue rather than students' problem. Some students with 5 or 6 in PROG's literacy received low GPAs (less than 2.00) and 25 out of 50 students with 4 in PROG's literacy received less than 3.00. What is the implication of this result? It is infeasible that students make more efforts for the one-time PROG than for college course work that directly relates to GPA. In addition to the issue that some students with high score in *literacy* failed to pass many courses or were absent from attending them for some reasons, it is plausible that PROG and GPA simply measure different elements. The tests as opposed to long-term course work are such different methods of assessing students. Some people scoring high on the PROG but not well on their GPA might be decent at sitting for an hour and completing a test but not so good at the long-haul of attending courses over and over and putting in the work for extensive projects and papers. Such dedicated work, however, can be a better sign of having those generic skills than doing well on a test.

4. CONCLUSION

This paper confirmed a weak correlation between PROG and GPA, and identified and discussed three possible reasons for the result. As reiterated in the literature review, some Japanese scholars seem to believe that universities are responsible for such a gap because, according to them, universities do not provide college students with quality education that nurtures generic skills that PROG assesses. However, measuring and nurturing generic skills based solely on PROG may be risky, as there is little evidence that PROG measures generic skills properly by demonstrating its added/residual value: its difference in value from PT. The same may go for CLA because although it is designed to measure different skills from those of CAAP, ETSPP, and SAT, the scores of all these tests are highly correlated. In other words, any tests can generate similar results despite their purposes to measure different skills.

Universities should demonstrate some evidence of nurturing generic skills that PROG may or may not measure. Many Japanese universities attempt to nurture generic skills through active learning and use PROG to test them. We now know that a gap exists between what PROG measure (i.e., PROG's generic skills) and what universities measure (i.e., *their* generic skills). Many Japanese universities are still in the process of defining generic skills and determining what generic skills they would like students to acquire and elaborating on how to provide them with quality education to nurture these generic skills. Eventually, universities will have to compare *their* generic skills with PROG's generic skills and analyze whether PROG can measure *their* generic skills properly.

In the meanwhile, this research suggests using the results of PROG only as a reference that needs to be triangulated by other assessment techniques. The other assessment techniques used to evaluate generic skills will vary depending on the reviewer. For instance, university administrators may employ self-evaluation surveys, involve peer review, consider university transcripts (GPA), and request references from former professors while human resource personnel in the job market may conduct interviews, observe individuals in group activities, analyze written samples, request other test scores similar to PROG, and contact personal references.

ACKNOWLEDGEMENTS

I would like to thank Mr.HirotakaNishioat Nagoya University of Commerce and Business for providing data on students. I also would like to thank Mr. Ezra Anton Greene for editing this paper.

REFERENCES

- [1] Brooks P. "Outcomes, testing, learning: What's at stake?", Social Research, Vol/Issue: 79(3). Pp. 601-611, 2012.
- [2] Chun M. "Taking teaching to (performance) task: Linking pedagogical and assessment practices", *Change*, Vol/Issue: 42(2). Pp. 42-47, 2010.
- [3] Clouder L, Broughan C, Jewell S, Steventon G. Improving student engagement and development through assessment, London and New York: Routledge, 2012.
- [4] Kushimoto, T. "Outcome assessment and its role in self-reviews of undergraduate education: in the context of Japanese Higher Education Reforms Since 1990s", *Higher Education*, Vol. 59. Pp. 589-598, 2010.
- [5] Rhodes TL, Finley A. Using the value rubrics for improvement of learning and authentic assessment, Washington DC: AAC&U, 2013.
- [6] Macpherson K, Owen C. "Assessment of critical thinking ability in medical students", Assessment & Evaluation in Higher Education, Vol/Issue: 35(1). Pp. 45-58, 2010.
- [7] Shavelson R. *Measuring college learning responsibility: Accountability in a new Era*, Palo Alto: Stanford University Press, 2009.
- [8] UNESCO. Graduate employability in Asia, Bangkok: UNESCO, 2012.
- [9] Klein S, Benjamin R, Shavelson R, Bolus R. "The collegiate learning assessment: Facts and fantasies", *Evaluation Review*, Vol/Issue: 31(5). Pp. 415-439, 2007.
- [10] Arum R, Roksa J. Academically adrift: Limited learning on college campuses, Chicago and London: The University of Chicago Press, 2011.
- [11] Douglas J, Thomson G, Zhao C. "The learning outcomes race: The value of self-reported gains in large research universities", *Higher Education*, Vol/Issue: 64(3). Pp. 317-335, 2012.
- [12] Council for Aid to Education. Architecture of the CLA Task, 2013. [cited 2013 Nov 6]. Available from http://www.collegiatelearningassessment.org/files/ Architecture _ of _ the_CLA_Tasks.pdf
- [13] Wagner T. The global achievement gap, New York: Basic Books, 2008.
- [14] Steedle J,Kugelmass H, Nemeth A. "What do they measure?", Change, Vol/Issue: 42 (4). Pp. 33-37, 2010.
- [15] Riasec. Measuring generic skills, Tokyo: Riasec, 2012.
- [16] Matsushita K. Atarashii Nouryokuwakyouikuwokaeruka. [Will New Skills Change Education?], Academic Performance, Literacy, and Competency. Tokyo: Minervasyobo, 2010.
- [17] Kawaijuku, Riasec. PROG: Progress report on generic skills, Tokyo: Kawaijuku and Riasec, 2013.
- [18] Adler R, Milne MJ. "A day of active-learning: and accounting educators' symposium", Accounting Education, Vol/Issue: 6(3). Pp. 273-280, 1997.
- [19] Kern BB. "Enhancing accounting students' problem-solving skills: The use of a hands-on conceptual model in an active learning environment", *Accounting Education*. Vol/Issue: 11(3). Pp. 235-256, 2002.
- [20] Kawaijuku. Active learning de nazegakuseigaseichousuru no ka [Why do students learn from active learning?] Tokyo: Toshin-Do, 2011.
- [21] MalikS, Janjua F. "Active learning: An effective pedagogic approach", International Journal of Academic Research, Vol/Issue: 3(2). Pp. 963-967, 2011.
- [22] Rutherford P. Active learning and engagement strategies, Alexandria: Just AKS Publications & Professional Development, 2012.
- [23] Hager P, Holland S, Beckett D. "Enhancing the learning and employability of graduates: The role of generic skills", *B-Hert Position Paper 9*, 2002.
- [24] Benjamin R, Klein S, Steedle J, Zohner D, Elliot S, Patterson J. "The case for generic skills and performance assessment in the United States and international settings", *CAE Occasional Paper 1*, 2012

BIBLIOGRAPHY OF AUTHORS



Dr. Hiroshi Ito is an Associate Professor in Management at the Nagoya University of Commerce and Business (NUCB). Before NUCB, he worked as an education expert for UNESCO's Education for All Global Partnerships Team in Paris, France. He also worked for UNICEF (Manila, the Philippines), JICA (Quito, Ecuador &Caaguazu, Paraguay), an educational NGO (Santa Rosa, Guatemala), and an educational service company (New Jersey, USA). His research interests lie in Nonprofit Management and Marketing, International Development, Education for All, and Monitoring & Evaluation. Dr. Ito received his M.A. in International Educational Development from Teachers College, Columbia University and his Ph. D. in International and Comparative Education from University of California, Los Angeles (UCLA) as well as MBA from Université Paris I Panthéon-Sorbonne.