

THE ROLE OF RESPONSIVE EDUCATION

Highly skilled graduates are being recognized as key inputs for successful industrial development. In India and China, large numbers of graduates in science and engineering were critical to meet the growing industrial demand. In Ireland and Finland, professional institutions were created as an alternative to conventional university education, which was viewed as unresponsive to industrial needs. The development of the software industry was greatly facilitated by an early establishment of computer science as a new discipline in American universities; indeed, the American universities created and legitimated computer science as a new field, an ability unparalleled by European or Japanese universities.

COOPERATIVE EDUCATION/STUDENT PROJECTS

An emerging literature describes roles that students can play through their work-study programs. For instance, the co-op education program in the University of Waterloo serves three critically important functions: the program helps identify appropriate graduates for recruitment; students help firms acquire new skills and knowledge from the universities; and students help “circulate” knowledge across local firms and the university. The impact is not limited to developed countries; in Bolivia, a majority of academic staff rated student internship as one of the most relevant contributions to industry.

ENTREPRENEURSHIP EDUCATION

Today, many programs, from isolated courses on entrepreneurship to comprehensive practical programs, support the development of entrepreneurs. One Web-based review of 66 universities in sub-Saharan Africa found that over 80 percent offered some course in entrepreneurship, while four universities had specialized entrepreneurship centers. The Global Entrepreneurship Monitor, an international group of researchers who have been conducting an annual survey of entrepreneurship since 1999, introduced entrepreneurship training as a special topic in 2008. The findings generally involved positive relationships between entrepreneurship training and entrepreneurial attitude, aspirations, and activities. However, a wide variation was found in the proportion of 18-to-64-year-olds who received voluntary entrepreneurship training at colleges and universities—from 1 percent in Turkey or 4 percent in Korea, 13 percent in Chile, 16 percent in Finland, to 20 percent in Columbia.

EXECUTIVE EDUCATION AND PROFESSIONAL DEVELOPMENT

Executive education constitutes a critical activity in many business schools in North America (and increasingly elsewhere), and many universities also offer short-term, often tailored education programs for working adults. However, this part, rather like consultancy, represents another category of activity usually not monitored. In the United Kingdom, university incomes from this type of contracted activities significantly produced 62 percent of contract research incomes.

CULTURE-RELATED DEVELOPMENTS

Universities can play a less direct but still effective economic role, by setting the social, cultural, and intellectual tone of a locality, as highlighted by a recent OECD review. Universities in the Northeast of England worked actively to create a cultural quarter in Newcastle city center. The University of Pennsylvania embraced community development as part of its strategic mission. It is today engaged in a wide array of community development initiatives ranging from economic development plans in collaboration with local communities, extensive support to local schools, and a variety of “service” programs including student projects and volunteering.

Korea and China showed high proportions of industry funding, because of limited government funding of university research.

CONCLUSION

If different institutions are to play varied sets of roles, how should such roles be determined? External stakeholders are ill-positioned to define them. Internal stakeholders alone are often too complacent to define their roles. Further topics concern how institutions are developing their boundary spanning functions and how these in turn are helping them define their roles. ■

Measuring Learning in Higher Education in a Globalization Era

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Higher education is coming under increasing scrutiny, spurred by growing enrollments and rising college costs. In particular, stakeholders are increasingly asking whether students are learning and whether institutions are providing a quality of service that justifies their cost. Although little agreement to date has been reached on how to assess learning or even on the utility of imposing a single standardized measure

of learning across higher education institutions, the need for developing some standard of assessment is apparent.

These concerns have recently led to the launch of a pilot project by the Organization for Economic Cooperation and Development (OECD). The OECD has moved forward with an ambitious feasibility study called the Assessment of Higher Education Learning Outcomes (AHELO). The AHELO study seeks to test “the science of assessment” as well as the practicality of implementation, to consider various methods of measurement and their validity in an international context (www.oecd.org/edu/ahelo). To contribute to the conversation about assessment of learning in higher education, we describe two of the most common approaches currently used in the United States.

CONTEMPORARY US MODELS

The National Survey of Student Engagement (NSSE) is a widely used assessment of student learning and personal development in tertiary education (<http://www.nsse.iub.edu>). NSSE is built on the premise that what students do in higher education is crucial for their learning and personal development. Consequently, it focuses on measuring students' engagement in college, including participation in activities inside and outside of the classroom, experiences in courses, and interactions with faculty. With respect to learning, students are asked to rate (on a 4-point scale from “very much” to “very little”) how much the experiences at their institution have contributed to their development of different skills such as “thinking critically and analytically” and “writing clearly and effectively.” Schools use this survey to get an indication of how student experiences can be improved upon to optimize learning.

To contribute to the conversation about assessment of learning in higher education, we describe two of the most common approaches currently used in the United States.

One of the key critiques of NSSE has been that the assessment of learning is based on students' self reports. Can students accurately identify or define learning or critical thinking skills? Moreover, are students able to objectively report their gains in learning, and in particular how likely are self-reports to inflate the gains in acquired skills? On the other hand, because NSSE is based on students' responses to multiple-choice questions, it is relatively simple and cheap to administer, leading to widespread use and large sample sizes. Student self-reports can be a valuable and relevant, although not necessarily a definitive, source of data on students' educational experiences at a particular institution. Data from NSSE have been explored by George Kuh and others to provide useful insights on institutional practices so as to improve student learning and personal development.

In contrast to NSSE, the Collegiate Learning Assessment (CLA) attempts to measure learning directly and does so through open-ended prompts (www.cae.org/cla). CLA has three components: make an argument (in which students need to support or reject a position on some issue), critique an argument (in which students are asked to evaluate the validity of an argument made by someone else), and a performance task (in which students are asked to use different materials such as memos, articles, news clips, etc., to respond to an open-ended question regarding a hypothetical but realistic situation). Through these approaches, the CLA aims to measure broad skills such as critical thinking, analytical reasoning, problem solving, and writing communication.

The CLA is seen as an exemplary model of what is called a value-added assessment—an assessment strategy that focuses on institutions rather than students and aims to provide a summative evaluation of the school's contribution to student learning. The CLA attempts to accomplish this in two ways: 1) by measuring how well an institution's students perform relative to similarly situated students at other institutions (i.e., those with similar admissions test scores); and 2) by assessing the improvement of students' skills over time at a given institution (usually by comparing the level of skills and knowledge of students when they enter higher education and right before they graduate).

The CLA is currently based on a voluntary sample of schools and students. As a consequence, student participation is not consistent across institutions, which raises questions about students' motivation and effort in taking and performing well on this instrument. Critics of the CLA have also worried that schools using this tool will put too much emphasis on training their students to outperform other schools on the assessment while neglecting important skills that might not be measured by the CLA. Proponents of the CLA have noted that incorporating the types of questions used on the CLA in the classroom should strengthen skills that universities claim are important to their missions, such as critical thinking, analytical reasoning, and writing. Advocates of the CLA do not suggest that this instrument should be imposed on institutions or that it can measure the entire university learning experience. Rather, it is an assessment that should be used with other indicators like the NSSE.

For the past two and a half years, Richard Arum and Josipa Roksa, with the support of the Council for Aid to Education, have been conducting a study using the CLA as well as supplementary data collected from student surveys, college transcripts, and secondary sources of institutional data to generate a Determinants of College Learning longitudinal dataset. The study, so far, has yielded a set of intriguing findings on individual and institutional factors associated with learning in higher education. In order to learn more about the findings, an initial report can be accessed at: http://programs.ssrc.org/ki/pathwaystocollege/CLA_Report.pdf.

FUTURE CONSIDERATIONS

Current challenges surrounding the measurement of learning in higher education are not novel. Throughout the history of education, educators and other stakeholders have often labored to develop a set of common outcomes that can be measured and evaluated. Given the challenges of this endeavor, commensuration—or the process of finding a common metric to measure characteristics that normally have different units—would undoubtedly be a necessity. Doing so offers a standardized way to compare values that might initially seem incomparable.

On the issue of commensurability, however, sociologists Wendy Espeland and Mitchell Stevens have highlighted the influence of such efforts on changing behaviors, molding expectations, and altering the very values of things. In education, regardless of what experts might know to be true about the inherent limitations of assessment indicators, quantification influences the behavior of students, parents, schools, administrations, and governments. This is evident in school rankings and high-stakes testing (i.e., testing situations that have important consequences for students, such as admission to colleges, or for schools, such as funding). Although the dangers of misuse are there, Espeland and Stevens remind us that it is a necessary part of life. Hopefully, the recent studies that have ventured to find a valid and reliable measure of student learning will be used to inform the search for proof that our institutions of higher learning are fulfilling their role of shaping a promising future. ■

Indian Higher Education: Time for a Serious Rethink

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Barely 11 percent of the relevant age group were enrolled in higher education in India in 2007. The Indian state has been so underinvested in education as a whole since independence in 1947, that higher education was bound to arrive at this juncture. During the 11th-plan period (2007–2012) the objective is to increase that enrollment rate to 15 percent. The government of India has raised allocations for higher and technical education to five times the allocation made during the preceding five-year plan period. However, major constraints remain toward the achievement of this otherwise laudable objective.

NARROW PYRAMID

The first problem involves the narrowness of the education pyramid in India. Primary school enrollment has only been universalized earlier this decade, and enrollment at the upper-primary level itself is not yet universal. Worse still, school education quality is so low and learning outcomes so poor, that dropout rates at the end of the primary cycle remain significant, and by the end of the upper-primary cycle the dropout rates are 52 percent. Not surprisingly, secondary enrollment rates (grades 9–10) are only 57 percent, and higher secondary (grades 11–12) only 23 percent. With such a narrow pyramid, the possibility of rapidly expanding enrollment at higher education levels seems difficult.

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These problems of a narrow education pyramid have risen from historical neglect of public education in government budgets. In India's federal constitution, education was for many decades a state subject, and although since the mid-1970s it became a subject on which the central as well as the state governments can legislate, 85 percent of total education expenditure is still accounted for by state governments. Most universities are controlled by state governments, although there are a small but growing number of central universities.

A HIGHLY SEGMENTED SYSTEM

Nevertheless, education as a whole and school education for the masses were neglected for 40 years (until about 1990), which has created a highly segmented higher education system. Students who come to the higher education system from the high-quality, relatively expensive, private English-medium schools join the elite higher education institutions of the country—the globally known Indian Institutes of Technology, the Indian Institutes of Management, and good medical schools. The remainder of the higher education system, especially the degree colleges linked to universities, consist merely of degree-awarding bodies with little monitoring of quality of education by the overseeing universities.

LOW-COST RECOVERY

Quality is also affected by the fact that most of these degree colleges and universities recover less than 20 percent of their per student costs from fees levied on students. After 1990, with governments turning their attention seriously to elementary education, public funding for higher education tended to stagnate. Thus, an already highly skewed higher education system—with elite institutions at one end of the spectrum and low-quality, degree-awarding mass colleges on the other—became even more inefficient as a provider of skilled manpower.