ISSN 1682-3451 Higher Education Management and Policy Volume 22/1 © OECD 2010

The state of learning outcomes assessment in the United States

by

George D. Kuh and Peter T. Ewell

Indiana University Center for Postsecondary Research, United States, and National Centre for Higher Education Management Systems, United States

Worldwide, economic and other factors are pressing institutions of higher education to assess student learning to insure that graduates acquire the skills and competencies demanded in the 21st century. This paper summarises the status of undergraduate student learning outcomes assessment at accredited colleges and universities in the United States. Three-quarters of institutions have established learning outcomes for all their students, a necessary first step in the assessment cycle. Most schools are using a combination of institution-level and programme-level assessments. Quality assurance requirements in the form of regional and specialised accreditation, along with an institutional commitment to improve, are the primary drivers of assessment. While there is considerable assessment activity going on, it does not appear that many institutions are using the results effectively to inform curricular modifications or otherwise to enhance teaching and learning. The paper closes with recommendations for various groups that can advance the assessment and institutional improvement agenda.

État de l'évaluation des résultats de l'enseignement aux États-Unis

par

George D. Kuh et Peter T. Ewell Indiana University Center for Postsecondary Research, États-Unis et National Centre for Higher Education Management Systems, États-Unis

À travers le monde, des facteurs, notamment économiques, poussent les institutions de l'enseignement supérieur à évaluer la formation des étudiants afin de garantir que les jeunes diplômés acquièrent les compétences et les savoirs exigés au XXI^e siècle. Cet article résume l'état de l'évaluation des résultats de l'enseignement des étudiants de premier cycle dans les universités et les collèges accrédités aux États-Unis. Trois-quarts des institutions ont établi des résultats sur la formation de tous leurs étudiants, ce qui constitue une première étape nécessaire en vue du cycle d'évaluation. La plupart des écoles associent des méthodes d'évaluation au niveau de l'institution et au niveau des programmes. Les exigences d'assurance de la qualité sous la forme d'accréditations régionales et spécialisées, ainsi qu'un engagement institutionnel visant à l'amélioration de l'enseignement, sont les éléments clés de l'évaluation. Tandis qu'une activité d'évaluation significative est en cours, il semble que seules de rares institutions utilisent les résultats de manière efficace en vue de la modification des cursus ou d'une autre forme d'amélioration des processus d'enseignement et d'apprentissage. Cet article se conclut par des recommandations à destination des différents groupes sur la question de l'évaluation et de l'amélioration des institutions.

Introduction

The recent world-wide economic downturn threatens both affordability and quality in higher education everywhere. In the United States, rising enrolments, coupled with reductions in public and private support, make meeting these challenges even more difficult. This means, among other things, that colleges and universities must become smarter and better at assessing student learning outcomes, at using the resulting data to inform resource allocation and other decisions and at communicating to their constituents how well they are performing.

Courses, credits, certificates and degrees are important proxies for student accomplishment, but they are only proxies. It is the broad range of intended outcomes that students attain during college that yields the personal, economic, and societal benefits promised by higher education. How well are colleges and universities in the United States delivering on this promise? In this paper, we provide a partial answer to this question by reporting the results of a recent survey of academic leaders undertaken by our organisation, the National Institute for Learning Outcomes Assessment (NILOA).

Learning outcomes assessment in the United States in a worldwide context

Systematic assessment of student learning outcomes began in the United States about three decades ago and has progressed steadily in extent and sophistication. Before situating the topic in a worldwide context, we need to note that the term "assessment" in the United States generally refers to the systematic process of gathering evidence of the extent to which *groups* of students – for example, those enrolled in a particular institution or programme of study, or those sharing a similar characteristic such as gender, age, or socio-economic class – perform in the aggregate in attaining particular levels of knowledge or skill, in order to judge effectiveness or improve provision. This contrasts with common usage elsewhere in the world, in which the term "assessment" is frequently used to refer to the process of examining individual students in order to award degrees, marks, or grades.

As in other countries, assessment of learning outcomes in this sense of the term in the United States is undertaken for two occasionally divergent purposes. The first is accountability. As part of our national approach to quality assurance in higher education, institutional accrediting organisations all require institutions to undertake assessment, and institutional assessment approaches are examined as part of the process of external review. This, to some extent, mirrors the growing trend toward accreditation as a quality assurance approach in much of the world, and the increasing emphasis on competency attainment in many of these processes (Santiago et al., 2008). As one of many examples, successive rounds of quality review in Hong Kong have examined learning outcomes more deeply in each round (University Grants Committee of Hong Kong, 2005). Similarly, the Quality Assurance Agency (QAA) in the United Kingdom recently documented a steady increase in references to student learning outcomes and outcomes assessment in its ongoing programme of academic audit (QAA, 2007). Finally, a 2004 review of the Bologna Process in Europe revealed a growing emphasis on learning outcomes references and assessment initiatives at the local, national, and international levels (Adam, 2004).

State governments in the United States have also periodically established examination programmes to directly evaluate the quality of instruction at public institutions. South Dakota, for instance, requires all students to complete a standardised examination of generic outcomes such as reading, writing, mathematics and critical thinking in order to graduate. Until recently, moreover, Florida mandated that all students achieve certain scores on a standardised examination as a condition for advancing from their second to third year of study. This parallels Brazil's use of standardised examinations from 1996-2002 to evaluate student progress (Schwartzman, 2010). Finally, government bodies throughout the world, including many states in the United States, routinely use the results of professional licensure examinations as part of their assessment of programme quality.

The second application of assessment of learning outcomes is to provide guidance in improving teaching and learning. In order to provide effective guidance, though, tools for gathering appropriate evidence need to be far more fine-tuned than those appropriate in the context of accountability, and must lend themselves to considerable disaggregation to reveal patterns of strength and weakness across different kinds of students and different dimensions of ability. This frequently demands moving beyond standardised examinations toward popular alternatives like "curriculum-embedded" assessments and student portfolios. Under the curriculum-embedded approach, faculties collectively identify specific assignments located at key points in a curricular sequence that can be used to examine particular learning outcomes at particular levels of performance. Doing this requires the institution to create its own version of a "qualifications framework"; many countries have put one in place, and it is a centrepiece of the evolving Bologna Process in Europe. It also demands "secondary reading" of student responses by faculty who did not teach the class in which the response was generated - a process

reminiscent of the external examiner approach used in the United Kingdom and other Commonwealth countries (Lewis, 2010). Under the "portfolio" process, students post examples of their work in an accessible electronic medium, grouped under learning outcomes specified by the institution or programme, as evidence that they have mastered each area. This evidence is then evaluated by teaching staff using specially developed scoring guides or rubrics. Use of portfolios as both a pedagogical and a programmatic assessment mechanism is also becoming increasingly popular in other parts of the world. For example, factors affecting the successful introduction of portfolios in the Netherlands were recently discussed in an international quality journal (Tartwijk et al., 2007).

Using assessment to improve teaching and learning can be considerably enhanced if assessment results can be benchmarked against established standards or across institutions. Such benchmarking not only enables institutions and programmes to know where they stand, but also allows them to identify potential "best practices" that they can learn from. For example, a group of more than 50 independent colleges in the United States is engaged in an ongoing benchmarking collaboration, centred on a common performance assessment (CIC, 2008). Growing international interest in benchmarking the results of common learning outcomes assessments is evidenced by the Assessing Higher Education Learning Outcomes (AHELO) initiative recently launched by the Organisation for Economic Co-operation and Development in economics, engineering and generic skills (OECD, 2009).

In addition to such direct measures of student learning outcomes, the results of commonly administered surveys of currently enrolled students and recent graduates are generally included within the realm of assessment. Results drawn from such surveys, if they address specific student experiences and teaching-learning practices, can be used in combination with results of direct assessments of learning outcomes to target what needs to be improved for which student populations. Such surveys have been a part of the United States assessment landscape for more almost 50 years for purposes of benchmarking and institutional improvement. Now, similar applications are emerging in other countries. For example, a recently-published volume on the use of alumni surveys in Europe cited examples from Germany, the United Kingdom, Spain, and the Netherlands (Weerts and Vidal, 2005). Results of student and alumni surveys are also prominent in institutional accreditation reports in the United States and have been used by states to provide common accountability benchmarks for public institutions. The National Survey of Student Engagement (NSSE), for instance, is regularly administered to students in states like Kentucky, North Carolina and South Dakota (Ewell, 2010). This application is similar to the Australian Student Course Experience Questionnaire (SCEQ) first administered in 1999 to stratified random samples of undergraduate students and repeated annually ever since (Harris and James, 2010).

In sum, although the systematic assessment of student learning outcomes began a bit earlier in the United States than its applications elsewhere, practice in all countries is rapidly converging. Because of its importance in both accountability and improvement contexts, assembling and interpreting evidence of what students know and can do as a result of their tertiary educational experience is becoming much more common and may eventually be mandatory. However, as documented in the NILOA survey described below, the biggest challenge to be faced in the United States is to use the resulting knowledge to improve teaching and learning. This is probably the case elsewhere as well.

What academic leaders in the United States say about learning outcomes assessment

The NILOA survey on United States assessment practices was conducted electronically in the second quarter of 2009. In it, we asked provosts or chief academic officers at all regionally accredited, undergraduate-degree-granting, two and four-year public, private, and for-profit institutions in the United States (n = $2\,809$) about the assessment activities underway at their institutions and how assessment results are being used. The NILOA questionnaire (NILOA, 2009) was organised around four broad questions:

- 1. What learning outcomes are you measuring at your institution?
- 2. How are you assessing these outcomes and using the results?
- 3. What are the major factors prompting assessment at your institution?
- 4. What do you need to further learning outcomes assessment at your institution?

All told, of the 1 518 institutions contacted, 53% responded. The characteristics of these participating institutions reflect the national profile in their institutional sectors, size (based on enrolments) and geographic regions.

Major findings

Eight observations summarise the current state of outcomes assessment in the United States and suggest that more assessment activity may be underway in American higher education than some government officials and others might assume.

1. Most institutions have identified a common set of learning outcomes that apply to all students

About three-quarters of all institutions reported having common learning outcomes for all their undergraduate students. This is consistent with another recent study of Association of American Colleges and Universities member schools (Hart Research Associates, 2009). Unsurprisingly, given their complexity and wide range of programmes, larger research-intensive institutions were less likely to have common learning outcomes for all undergraduate students than were colleges that award primarily baccalaureate or associate degrees.

2. Most institutions use a combination of institution-level and programme-level assessment approaches

We asked provosts what approaches were used by their institutions to assess learning outcomes, such as nationally normed measures of general knowledge and skills, portfolios, national or locally developed surveys, and alumni and employer surveys and interviews. We also asked if the tools or approaches were used with institutionally valid samples so that claims could be made about overall institutional performance or if the assessment approach focused at the programme level. Assessment tools and approaches understandably vary depending on what the data are intended to represent.

- The vast majority (92%) of all colleges and universities use at least one assessment approach or tool with institutionally valid samples; two-thirds of all schools use three or more.
- Nine out of ten schools use at least one institutional-level and one programme-level assessment approach; 77% use two or more of each type and 58% use three or more of each.
- The most frequent approach used with an institutionally valid sample was a national survey. More than three-quarters (76%) of all schools reported using surveys at the institution-wide level.
- Two-fifths (39%) of all campuses reported using a standardised measure of general knowledge and skills.
- External expert judgments of student work (9%), tests of specialised knowledge (8%), student portfolios (8%) and employer interviews (8%) were used much less often with institutionally valid samples (Figure 1).
- At the programme level the most popular approaches to assessing learning outcomes were student portfolios, measures of specialised knowledge and other performance assessments, and rubrics (Figure 2), as more than 80% of institutions indicated at least one of their academic programmes was using one of these approaches.

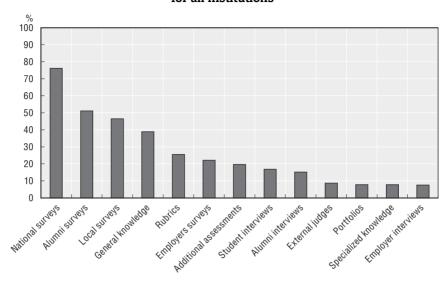


Figure 1. Institution-level assessments of learning outcomes for all institutions

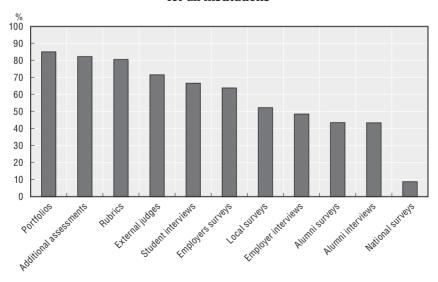


Figure 2. Programme-level assessments of learning outcomes for all institutions

Source: Kuh, G.D. and S.O. Ikenberry (2009), More than you Think, Less than we Need: Learning Outcomes Assessment in American Higher Education, Urbana, IL: University of Illinois and Indiana University, National Institute of Learning Outcomes Assessment.

- Community colleges and other associate degree-granting institutions were more likely to use general knowledge assessments at the programme level.
- More for-profit schools employed multiple approaches using institutionally valid samples, but fewer collected information at the programme level, reflecting the more discipline-focused nature of their curricula (Figure 3).
- At more than seven out of ten institutions, at least one department was using:
 - specialised knowledge measures;
 - performance assessments other than grades;
 - external judgments of student performance;
 - rubrics:
 - portfolios;
 - student interviews:
 - surveys of employers.

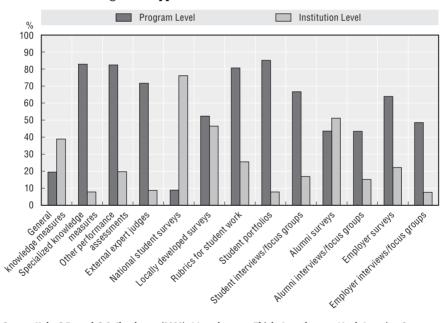


Figure 3. Types of assessment information

3. Assessment approaches and uses of assessment results vary systematically by institutional selectivity

In general, institutions that have less competitive admissions standards were more likely to administer standardised measures of general knowledge with institutionally valid samples. Colleges and universities with the most competitive admissions standards more frequently used locally developed instruments to collect information from students and alumni (Figure 4).

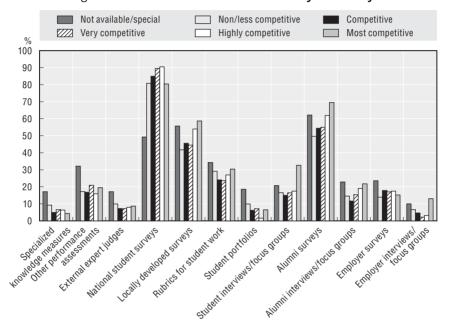


Figure 4. Institutional-level assessment by selectivity

Source: Kuh, G.D. and S.O. Ikenberry (2009), More than you Think, Less than we Need: Learning Outcomes Assessment in American Higher Education, Urbana, IL: University of Illinois and Indiana University, National Institute of Learning Outcomes Assessment.

- About half of the least competitive schools employ general knowledge tests compared with only about one-fifth of the most competitive institutions.
- At least four-fifths of all schools use nationally normed student surveys, except for institutions that do not have selectivity data available, where only half do so.

The **uses** of assessment data at institutions of varying selectivity tell a different story. While the most competitive colleges and universities collect information at rates generally comparable to their less-selective counterparts, they do not report using it nearly as often – with one exception: reporting to

the governing board. To illustrate, the most competitive institutions are least likely to use assessment data for:

- revising learning goals;
- responding to calls for accountability;
- informing strategic planning;
- improving instructional performance;
- evaluating units and programmes;
- allocating resources;
- reporting to the public.

4. The most common use of assessment data is related to accreditation

The most common uses for student learning data reported by provosts were for preparing for institution and programme accreditation and, to a lesser degree, for revising undergraduate learning goals. Assessment results were used to a lesser extent for making day-to-day decisions about resources, admissions or transfer policies, faculty and staff performance, etc. (Figure 5).

The patterns of assessment data use varied somewhat by institution type:

- Fewer doctoral-granting universities were using outcomes data for determining student readiness for upper-level course work, improving instructional performance, evaluating departments, allocating resources to academic departments, and informing strategic planning.
- At the same time, more doctoral institutions were using results to respond to calls for accountability such as the Voluntary System of Accountability (VSA) and to meet specialised academic programme accreditation requirements.
- Baccalaureate schools were more likely to incorporate assessment results for making faculty promotion and tenure decisions, consistent with their focus on undergraduate education.
- Community colleges and other associate degree-granting institutions reported using outcomes data for aligning curricula across sectors, determining student readiness for college course work, improving instructional performance, and allocating resources to academic units – all encouraging findings.
- For-profit schools reported the most frequent use of assessment data in every category of use. While only 34 for-profit schools are represented in these data, they represent more than half of the accredited for-profit institutions that award degrees, which were the two criteria for inclusion in the sample. So, the results for this group of institutions probably are as reliable as for the schools in other categories.

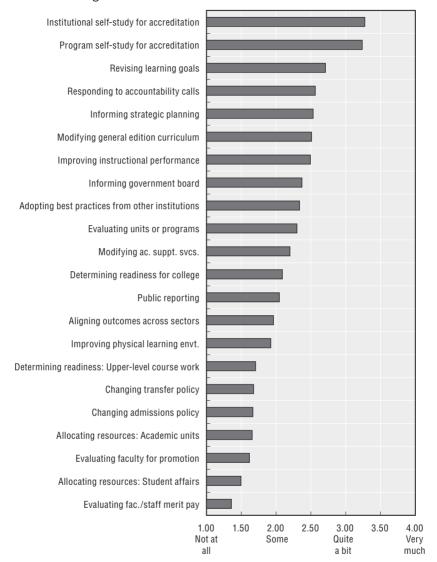


Figure 5. Uses of assessment data for all schools

5. Assessment is driven more by accreditation and a commitment to improve than external pressures from government or employers

The three most influential forces driving outcomes assessment reported by provosts are the requirements of regional accreditors, the requirements of specialised accreditors, and an institutional commitment to improvement. Somewhat less influential in this regard were national calls for accountability or mandates from trustees or state co-ordinating boards.

The relative importance of different factors prompting outcomes assessment varied somewhat in predictable ways by institution type:

- Community colleges and other associate degree-granting institutions were more responsive to co-ordinating and governing board mandates. In the United States, these are all public institutions, with oversight and funding provided by state governments.
- Baccalaureate institutions accorded relatively greater importance to a campus commitment to improvement as a reason for assessing learning outcomes. Master's institutions gave regional and specialised accreditation relatively greater weight.
- Initiatives such as the "Voluntary System of Accountability" recently put in
 place as an accountability vehicle by national associations of public
 universities seemed to be more influential at doctoral-degree-granting
 institutions relatively less influential at those campuses was faculty and
 staff interest in improving student learning.
- For-profit schools indicated that every one of the eight observations was influential in driving assessment activity, again suggesting a sharper focus on learning outcomes assessment at those schools.

6. Learning outcomes assessment is undercapitalised

Given the importance of higher education to the future of society and the resources devoted to the enterprise, investment in assessment staff is modest.

- Although four-fifths of all institutions had a person or unit charged with co-ordinating or implementing assessment campus wide, only a quarter assigned more than one full-time equivalent (FTE) person to assessment.
- Almost half (47%) of doctoral institutions reported having one or more staff, while only one-fifth (19%) of community colleges and other associate degree-granting schools had at least one person focused on outcomes assessment.

7. The two greatest needs to advance student learning outcomes assessment are greater involvement of faculty and more assessment expertise, resources and tools

Two-thirds of all schools noted that more faculty involvement would be helpful. Three-fifths wanted more assessment expertise. Rated least important in terms of need was information about assessment policies and practices at other schools (18%) and presidential support (9%).

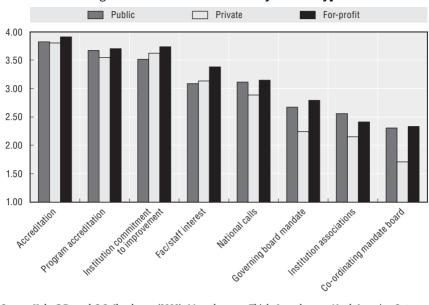


Figure 6. Assessment drivers by control type

8. Most institutions plan to continue outcomes assessment work despite budgetary challenges

Although more than half of all institutions predicted that the recession would not affect their assessment activities, a not insignificant number (one-fifth) indicated that a decrease in institutional support was possible. Understandably, about 15% of all schools (and more at public institutions) were not certain about what might happen at the time the survey was conducted.

Outcomes assessment in the United States is work in progress

Our survey revealed that a fair amount of assessment work is going on in colleges and universities in the United States. Challenges to additional progress remain, however. Student performance evaluation is so embedded in the everyday work of teaching, testing and grading that many faculty members interpret calls for documenting outcomes at the programme or institution level – if not as an outright threat – as a redundant exercise or worse: a waste of time and resources that could be more profitably invested elsewhere. Thus, it was not surprising that gaining faculty co-operation and engagement was at the top of provosts' wish lists.

Campus culture also plays a role. As noted earlier, the most selective institutions are the least likely to use assessment data for improvement or accountability. Some faculty and staff at prestigious, highly selective campuses wonder why documenting something already understood to be superior is warranted. They have little to gain and perhaps a lot to lose. On the other hand, many colleagues at lower-status campuses often feel pressed to demonstrate their worth; some worry that they may not fare well in comparison with their better resourced, more selective counterparts. Here, too, anxiety may morph into a perceived threat if the results disappoint.

Accreditation is a catalyst for improvement and accountability

Accreditation is the primary vehicle for quality assurance in American higher education and the major driver of learning outcomes assessment. A fair amount of assessment work is with institutionally valid samples, especially using student and alumni surveys as well as standardised measures of general knowledge and skills. Equally important, various assessment approaches are being used at the program level – in engineering, business and teacher education, for example. Such work often animates improvement. The curricular changes in engineering and engineering technology education stimulated by ABET, Inc., are especially instructive, because much of the impetus originated outside the academy by practitioners via the accreditors. Second, the changes featured discipline-specific assessment strategies to evaluate the efficacy of the changes in a formative and summative manner.

That same convergence of improvement and accountability forces is influencing institution-wide regional accreditation. While the focus of regional accreditation is improvement, external accountability forces are shaping and sharpening its expectations to press for more extensive assessment of student learning and using the results for improvement and making institutional performance more transparent.

While some observers see these two purposes – **improvement and accountability** – if not at odds, at least in tension with each other (Ewell, 2009), campuses seem to suggest that their assessment efforts are substantively influenced by both factors.

Sustaining assessment work

Allocating resources to assessment is an expression of institutional priorities, culture and values. Some institutions have more resources than others to devote to student learning outcomes assessment; colleges and universities that offer a substantial variety of programmes should spend more on it. While in the past campuses were left to determine the quality of effort they would direct to assessing student learning, the time has come for a

systematic analysis of what institutions of varying levels of organisational and programmatic complexity should invest to get assessment right and to ensure effective use of the results.

The degree to which an institution or programme is likely to expend resources on improving student learning is a function of its knowledge about how well its students are learning what is important and its knowledge of what to do to improve learning outcomes. How well are individual courses coming together as a cohesive whole? Are the essential learning goals and expectations for students being met? Do engineering graduates have the crucial knowledge and skills? Is the nurse sufficiently well prepared to care for the patient? Is the newly minted graduate capable of critical thinking? Does (s)he have the analytical and communication skills the campus promises and employers expect?

Focusing on these and related questions about outcomes can be the common ground that brings together those who demand greater accountability by documenting accomplishment and those whose primary interest in assessment is enhancing accomplishment. States and higher education associations can play an important role in bridging this divide.

Recommendations and potential actions

The looming challenge for higher education in the United States is to convince naysayers among the faculty that assessment is not a threat and to find ways to thoughtfully **use** assessment data to inform decisions, improve programmes, and communicate effectively with the public. Indeed, it is this last point – productively **using** learning outcomes results to inform decision making and to improve teaching and learning – that remains the most important unaddressed challenge related to student learning outcomes assessment in our country. Simply posting a number on an institution's website or checking a box on an accreditation report are of little value to students, parents, or policy makers. Equally important, such actions do nothing to improve access, affordability, or accomplishment.

Who needs to do what to advance the assessment of student learning outcomes in ways that improve the current state and future prospects of higher education in the United States?

• Presidents, provosts, and other academic leaders must make quality assurance an institutional priority. They need to tell their assessment professionals what the institution needs to know and why, and assign a group to evaluate and periodically report on the quality and utility of the learning outcomes assessment efforts underway. They should determine whether the resources allocated to assessment are sufficient for the scope and growing importance of the task, and know how the results are being used, if at all, by

- whom and for what purposes. They must champion effective use of the results to make decisions. Finally, they need to keep the governing board informed about the degree to which a culture of evidence is taking root.
- Governing board members must ensure their institution has a system of academic quality control supported by the assessment of student learning and the use of those results for continuous improvement. They should receive an annual update on these efforts. Institutional leaders need to ensure that their board chairs keep the issue on the agenda for at least one meeting each year.
- Faculty members must systematically collect data about student learning, carefully examine and discuss these results with colleagues, and use this information to improve student outcomes. This challenging process may well reveal shortcomings on the part of students, instructors, the curriculum, and institutions. But by making sure these data are used to improve and not penalise, the exercise need not, and should not, be threatening. If assessment results are to be meaningfully interpreted and if changes are to be made to improve outcomes, faculty leadership and involvement are crucial.
- Assessment and institutional research personnel should revisit the rationale for using various tools and approaches to be sure they yield the kind of information that the institution needs to respond to improvement and accountability mandates. They should present results in ways that will speak to faculty and policy makers and will answer their important questions. They need to point to areas that assessment data indicate require attention and design subsequent data collection activities that will determine whether changes in teaching and learning approaches have had the desired effects.
- Student affairs staff must share their perspectives on the student experience by participating on the campus assessment committee and self-study committees. They should partner with academic affairs to promote a deeper, more widespread awareness and understanding of common undergraduate learning outcomes among faculty, staff and students. They need to use outcomes assessment results to orient and inform student affairs practice.
- Faculty developers must become familiar with the campus assessment activities and results and use this information to design professional development opportunities for faculty, student affairs professionals, librarians and others who work with students.
- Prospective students and parents should look for learning outcomes information about students who attend the institutions they are considering. If it is not publicly accessible on an institution's website, they

should ask someone in the institutions' admissions offices for data about how their students perform on different kinds of measures.

- Higher education associations must keep learning outcomes assessment on their agenda. Much of the campus assessment activity reported by provosts would not be underway without the initiatives of these organisations. Statewide planning and co-ordinating boards must confirm that all institutions under their scope of influence have effective internal systems of academic quality control supported by assessment data that conform to the expectations of both regional and specialised accreditation bodies. They should use language that removes the spectre of threat from assessment work, and offer incentives for campuses to develop and share sound practices of outcomes assessment.
- Accrediting groups must not slacken their efforts to promote assessment and the use of student learning outcomes. They need to sharpen accreditation standards as they are applied to: i) collecting institution- and programme-level data about student performance, ii) using assessment results to improve student performance and institutional quality; and iii) making assessment results available internally and externally. In all of these areas, they must hold institutions accountable.
- **Foundations** should keep learning outcomes assessment on their funding agendas. They should devote more attention to programmes and incentives that encourage institutions to use outcomes data productively. Accrediting groups, both regional and specialised, should be encouraged to be vehicles for campus change that is constructive and attainable.

These suggested action steps are necessary but not sufficient to strengthen American higher education through more effective knowledge of student learning outcomes and to use that knowledge to improve. While more assessment work is underway than many think in the United States, it is considerably less than what is needed to ensure US college graduates are prepared to manage the challenges of the 21st century and to secure the future to which we aspire.

The authors:

George D. Kuh
Chancellor's Professor and Director
Center for Postsecondary Research, Indiana University
1900 East 10th Street, Eigenmann Hall #419
Bloomington IN 47406-7512
United States

E-mail: kuh@indiana.edu

Peter T. Ewell
Vice President
National Center for Higher Education

National Center for Higher Education Management Systems 3035 Center Green Drive

Suite 150

Boulder, CO 80301-2251

United States

E-mail: peter@nchems.org

The opinions expressed in this paper are those of the authors and do not necessarily reflect the views of the organisations that funded this research: Carnegie Corporation of New York, Lumina Foundation for Education and The Teagle Foundation.

References

- Adam, S. (2004), "Using Learning Outcomes: A Consideration of the Nature, Role, Application and Implications for European Education of Employing 'Learning Outcomes' at the Local, National and International Levels", Scottish Executive, Edinburgh, Scotland.
- Council of Independent Colleges (CIC) (2008), Evidence of Learning: Applying the Collegiate Learning Assessment to Improve Teaching and Learning in the Liberal Arts Experience, Council of Independent Colleges, Washington DC.
- Ewell, P.T. (2009), Assessment, Accountability, and Improvement: Revisiting the Tension, NILOA Occasional Paper No. 1, University of Illinois and Indiana University, National Institute of Learning Outcomes Assessment, Urbana, IL.
- Ewell, P. (forthcoming), "The US National Survey of Student Engagement (NSSE)",D. Dill and M. Beerkens (eds.), Public Policy for Academic Quality: Analyses of Innovative Policy Instruments, Springer, New York, pp. 87-102.
- Harris, K-L. and R. James (2010), "The Course Experience Questionnaire, Graduate Destination Survey, and Learning and Teaching Performance Fund in Australian Higher Education", D. Dill and M. Beerkens (eds.), Public Policy for Academic Quality: Analyses of Innovative Policy Instruments, Springer, New York, pp. 103-124.
- Hart Research Associates (2009), Learning and Assessment: Trends in Undergraduate Education (a survey among members of the Association of American Colleges and Universities), Washington DC, www.aacu.org/membership/documents/2009MemberSurvey_Part1.pdf.
- Lewis, R. (forthcoming), "External Examiner System in the United Kingdom", D. Dill and M. Beerkens (eds.), Public Policy for Academic Quality: Analyses of Innovative Policy Instruments, Springer, New York, pp. 21-38.
- National Institute for Learning Outcomes Assessment (NILOA) (2009), National Survey of Learning Outcomes Assessment, www.learningoutcomeassessment.org/documents/NILOA_ForWeb_5-22.pdf.
- Organisation for Economic Co-operation and Development (2009), OECD Feasibility Study for the International Assessment of Higher Education Learning Outcomes, OECD publishing, www.oecd.org/document/22/0,3343,en_2649_35961291_40624662_1_1_1_1_00.html.

- Quality Assurance Agency (QAA) (2007), Outcomes from Institutional Audit, The Adoption and Use of Learning Outcomes, Gloucester, United Kingdom.
- Santiago, P. et al. (2008), Tertiary Education for the Knowledge Society, Vol. 1, OECD Publishing.
- Schwartzmann, S. (forthcoming), "The National Assessment of Courses in Brazil", in D. Dill and M. Beerkens (eds.), Public Policy for Academic Quality: Analyses of Innovative Policy Instruments, Springer, New York, pp. 309-332.
- Tartwijk (van), J. et al. (2007), "Factors Influencing the Successful Introduction of Portfolios", Quality in Higher Education, Vol. 13, 1 April 2007, pp. 69-80.
- University Grants Committee of Hong Kong (2005), Education Quality Work: The Hong Kong Experience, University Grants Committee of Hong Kong, Hong Kong.
- Weerts, D. and J. Vidal (2005), "Enhancing Alumni Research: European and American Perspectives", New Directions for Institutional Research, No. 126, Jossey-Bass, San Francisco.