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Using CAS as a Framework to Assess Holistic Learning

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CAS Council for the Advancement of Standards in Higher Education

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NILOA Mission

The National Institute for Learning Outcomes Assessment (NILOA), established in 2008, is a research and resource-development organization dedicated to documenting, advocating, and facilitating the systematic use of learning outcomes assessment to improve student learning.

CAS Mission

The Council for the Advancement of Standards in Higher Education (CAS), a consortium of professional associations in higher education, promotes the use of its professional standards for the development, assessment, and improvement of quality student learning, programs, and services.

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Abstract

Holistic student learning has been a hallmark of U.S. higher education since the early 20th Century when the American Council on Education (ACE) published the *Student Personnel Point of View* (SPPV) in 1937, reaffirming time and again that learning happens both inside and outside of the classroom. To consider students' holistic development, various scholars and organizations have developed learning taxonomies and learning outcome frameworks. The Council for the Advancement of Standards in Higher Education (CAS) provides tools and resources to guide the development of holistic learning and development outcomes that employers and higher education professionals wish to see in college graduates. CAS consists of a consortium of experts from various areas of higher education engaged in developing standards for professional practice as well as resources for self-assessment for functional areas of student support in higher education. Based in holistic learning and incorporating 47 functional areas involved in student learning and development, the CAS Standards serve as a validated, reliable resource in this data-driven, accountability-focused higher education environment. CAS Standards align with multiple other learning frameworks, are endorsed by higher education organizations and associations, and have multiple uses in research, evaluation, and assessment of student engagement, learning, and development. This paper explores how the CAS learning domains and dimensions can be used to identify and achieve various division-level or functional unit goals, to advance self-assessment, and to inform institutional effectiveness.

Using CAS as a Framework to Assess Holistic Learning

Gavin W. Henning, Rich Robbins, & Stacy Andes

Importance of Holistic Learning

Holistic student learning has been a hallmark of U.S. higher education since the early 20th Century when the American Council on Education (ACE) published the *Student Personnel Point of View* (SPPV) in 1937. This groundbreaking document proposed that higher education should provide functions to serve the whole student rather than just focusing on cognitive development. The SPPV recommended support functions such as career services, food services, mental and physical health services, and extracurricular activities relating to students' social life and spiritual development. ACE revisited the SPPV in 1949, after witnessing a revolution in higher education spurred by the Servicemen's Readjustment Act of 1944, otherwise known as the GI Bill, which led to a large influx of veterans attending colleges and universities. In the revised 1949 version of the SPPV, ACE reaffirmed that learning happens both inside and outside of the classroom and students' holistic development should be considered.

Over time, leading organizations of higher education have reaffirmed that learning happens both inside and outside of the classroom and students' holistic development should be considered.

During this time, researchers also began to study student learning, expanding beyond cognitive domains. Benjamin Bloom and his colleagues met at the 1948 American Psychological Association Convention to discuss how individuals learn. Through their work, they identified three types of learning: cognitive, affective, and psychomotor (Henning & Roberts, 2016). The original cognitive taxonomy was developed in 1956 by Bloom and his colleagues (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956) and later revised by a group that included his former students (Anderson, Krathwohl, Airasian, Cruikshank, Mayer, Pintrich, Raths, & Wittrock, 2000). The affective domain was later developed by Krathwohl, Bloom, and Masia in 1964. A number of psychomotor taxonomies were developed by researchers in the late 1960s and early 1970s (Dave, 1970; Harrow, 1972; Simpson, 1972). Those learning taxonomies laid the foundation for holistic learning and development.

Various organizations have developed learning outcome frameworks that include multiple dimensions of learning. In 2002, the Association of American Colleges and Universities (AAC&U) published a set of essential learning outcomes within the document entitled *Greater Expectations: A New Vision for Learning as a Nation Goes to College*. This framework had four domains and included the following:

1. Knowledge of Human Cultures and the Physical and Natural World
2. Intellectual and Practice Skills
3. Personal and Social Responsibility
4. Integrative and Applied Learning

In 2003, the Council for the Advancement of Standards in Higher Education (CAS) developed a framework that included 16 domains of learning and development. This

framework was revised in 2008 to six domains spanning a wide-range of learning types (CAS, 2009):

1. Knowledge acquisition, construction, integration, and application
2. Cognitive complexity
3. Intrapersonal development
4. Interpersonal development
5. Humanitarianism and civic engagement
6. Practical competency

Goals for Learning in Higher Education

Holistic learning is critical for employers as well as students. Some would suggest that the goal of higher education is career preparation with many students expecting to secure a job after graduation. For others, the goal of higher education is a liberal arts education. These two goals are not mutually exclusive. The alignment of learning frameworks that guide college and university education with outcomes, behaviors, and dispositions that employers seek is critical. AAC&U collaborates with Hart Research Associates to understand the types of skills and knowledge employers expect from college graduates. In the most recent research report, employers reported seeking employees with skills and knowledge that transcend individual majors. Among those they deemed most important include oral and written communication, critical thinking, ethical judgment, teamwork, and real-world application of skills and knowledge (Hart Research Associates, 2018). The learning that employers seek in college graduates occurs in experiences across the student experience—in and outside the classroom.

Learning Happens Everywhere

Learning Reconsidered (Keeling, 2004) redefined learning as integrating both academic learning and student development, processes that are often considered separate, even independent of each other. Assessment of student learning, therefore, cannot be relegated to measures of academic performance, but should also consider the entire campus ecology in mapping opportunities for the construction of knowledge, meaning, and self in community.

Gallup (2011) suggested that student success is dependent upon strengths in multiple areas of students' lives, specifically well-being. Their research suggests that:

1. Strengths development leads to hope and engagement
2. Hope and engagement work independently and interdependently to produce the positive outcomes of well-being and academic success
3. People with high well-being have more success than people with low well-being
4. Strengths development leads to hope and engagement that, in turn, lead to well-being and academic success

Based on Gallup's research, holistic student development is key to academic success.

Using interviews with more than 30,000 undergraduates and building on the research regarding flourishing (Keyes, 2003; Seligman, 2011) and thriving (Schreiner, 2013), the Gallup-Purdue Index (2016) demonstrated that learning does indeed happen everywhere, and that the conditions in which students live and learn significantly impact their success and well-being. The Gallup-Purdue Index (2016) made one thing very clear: when it comes to college, it is not about WHERE you go but HOW you go. College graduates who go on to great jobs (workplace engagement) and great lives (well-being) demonstrate greater outcomes across "The Big Six" elements of the college experience, that can be categorized as either support or experiential elements.

Gallup-Purdue Index (2016) demonstrated that learning does indeed happen everywhere, and that the conditions in which students live and learn significantly impact their success and well-being.

Support Elements:

1. I had at least one professor at [College] who made me excited about learning.
2. My professors at [College] care about me as a person.
3. I had a mentor who encouraged me to pursue my goals and dreams.

Experiential Elements:

1. I worked on a project that took a semester or more to complete.
2. I had an internship or job that allowed me to apply what I was learning in the classroom.
3. I was extremely active in extracurricular activities and organizations while attending [College].

This expanded view of learning demonstrates movement beyond 'grades and grads' (Schreiner, 2013); that is, beyond the traditional measures of student success of persistence and retention. To measure thriving, or full engagement in the college experience, outcomes must incorporate student perceptions of campus safety, sense of belonging, degree of connectedness, extent of contribution to the community, and opportunities to learn and thrive. Research conducted in the United States, Canada, and Australia using the *Thriving Quotient* (Schreiner, McIntosh, Nelson, & Pothoven, 2009) suggested that creating communities in which students evaluate these elements is the single best way to help all students thrive. True learning can therefore only be measured by complex and cumulative measures over the course of a student's career and beyond.

The *Okanagan Charter* Call to Action 1 (2015) further recommended that institutions of higher education be "proactive and intentional in creating empowered, connected and resilient campus communities that foster an ethic of care, compassion, collaboration and community action" (p. 7). The calls to action in this landmark international document are grounded in:

- *comprehensive and campus-wide* engagement that crosses functional areas and academic disciplines;
- *participatory processes* that actively seek to engage vulnerable populations,
- *evidence-informed practice* that applies research and innovation;
- *whole systems approaches* that assess the interdependence and interrelatedness of community;
- *strengths-based perspective*; and
- *universal responsibility* for creating a thriving community for all.

Importance of Holistic Learning and Outcomes Measurement

Student learning outcomes provide direction for the implementation and assessment of student learning. These outcomes have typically been categorized as cognitive, behavioral, or affective outcomes, respectively, and reflect Bloom's (1956) taxonomy of educational objectives. Student learning and development outcomes may be derived from internal and/or external sources. Important internal sources include institutional values, vision and mission statements, and goals as well as any values, visions, missions, and goals identified for the specific program being assessed (Robbins, 2016). Another way to think about outcomes is within a system or ecology. Short-term outcomes measure learning from knowledge-based interventions; mid-term outcomes measure performance based on skill-based interventions; and long-term outcomes measure quality of life based on experiences. This extension of Bloom's taxonomy from individual learning outcomes is reflected in the new Advancing Health and Well-Being CAS cross-functional framework (Abrams, Andes, DeRicco, Rider-Milkovich, & Wilcox, 2019) which considers the collective impact of a series of interventions, a system of policies and places, and a longitudinal view of learning.

Overview of CAS and Brief History

The Council for Advancement of Standards in Higher Education (CAS) provides tools and resources to guide the development of holistic learning and development outcomes that employers and higher education professionals wish to see in college graduates. These tools include an outcomes framework that can be applied across an institution, functional area standards for co-curricular units (e.g. academic advising, student activities, campus police), cross-functional frameworks for issues that transcend any one office (e.g., first-year experience programs), and a self-assessment process that guides evaluation of outcome achievement and program effectiveness. To appreciate the reasons why these tools and resources can be helpful, it is useful to know a bit about CAS as an organization.

The Council for the Advancement of Standards in Higher Education (CAS) consists of a consortium of experts from various areas of higher education engaged in developing standards for professional practice as well as resources for self-assessment for functional areas of student support in higher education. The ultimate purpose of CAS resources is to foster quality student learning and development. CAS was founded in 1979 by eight student services associations to develop a set of professional standards for practice for individual functional areas. CAS has evolved over time to include 40 higher education associations in the U.S. and Canada representing over 115,000 professionals in higher education. Each organization has two representatives on the Council. A list of these organizations and associations can be found at www.cas.edu (CAS, 2018).

There are currently 47 sets of functional area standards published and a full list can also be found on www.cas.edu (CAS, 2018). The standards are designed to be achievable by any program or service at any type of institution. Each functional area standard has a respective Self-Assessment Guide (SAG), which is a tool to support a program self-assessment. In addition to functional area standards, CAS has also developed 3 cross-functional frameworks to address issues that transcend any one department. In addition, CAS has also developed a set of learning and development domains and dimensions (as noted earlier) because the association believes that high-quality practice must attend to holistic student learning and development. To assist the use of the functional area standards,

cross functional frameworks, and learning/development domains and dimensions, CAS has a myriad of assessment resources available and more currently under development. The organization embraces a collaborative consensus approach to standards and resource development. As such, resources are developed and revised by teams that include CAS representatives along with subject-matter experts. All Council members provide input during multiple stages of the development/review process and any standard or framework must be approved by the entire Council. With input and approval from 40 higher education associations, the CAS Standards, Frameworks, tools, and resources are truly supported by the whole student services field.

CAS Learning Domains and Dimensions

To ensure compliance with CAS functional area standards, programs and services must identify the learning and developmental outcomes that are fostered. CAS (2009) provides direction by outlining six domains that include 26 total dimensions for learning and development (see Figure 1). One could replace the term *dimensions with outcomes*. These dimensions (or outcomes) foster a focused approach for the development and assessment of students, student support programs, and practices.

Student Outcome Domain	Dimensions of Outcome Domains	Examples of Learning and Development Outcomes
Knowledge acquisition, construction, integration, and application	Understanding knowledge from a range of disciplines	Possesses knowledge of [a specific] one or more subjects.
	Connecting knowledge to other knowledge, ideas, and experiences	Knows how to access diverse sources of information such as from the internet, text observations, and databases.
Cognitive complexity	Critical Thinking	Identifies important problems, questions, and issues.
	Reflective thinking	Applies previously understood information, concepts, and experiences to a new situation or setting.
Intrapersonal development	Realistic self-appraisal, self-understanding, and self-respect	Assesses, articulates, and acknowledges personal skills, abilities, and growth areas.
	Identity development	Integrates multiple aspects of identity into a coherent whole.
Interpersonal competence	Meaningful relationships	Establishes healthy, mutually beneficial relationships with others.
	Interdependence	Seeks help from others when needed and offers assistance to others.
Humanitarianism and civic engagement	Understanding and appreciation of cultural and human differences	Understands one's own identity and culture.
	Global perspective	Understands and analyzes the interconnectedness of societies worldwide.
Practical competence	Pursuing goals	Sets and pursues individual goals.
	Communicating effectively	Conveys meaning in a way that other understand by writing and speaking coherently and effectively.

Figure 1. CAS Learning and Development Outcomes by the Council for the Advancement of Standards, 2009.

Learning Reconsidered Student Learning Outcomes (2004)	LEAP [AAC&U] Essential Learning Outcomes (2002)	CAS Learning and Development Domains (2008)	Degree Qualifications Profile [DQP] Categories of Learning (2011)	Project CEO Desirable Skills (2016)
Knowledge, Acquisition, Integration, & Application	Knowledge of Human Cultures & the Physical & Natural World	Knowledge Acquisition, Construction, Integration, & Application	Specialized Knowledge; Broad & Integrative Knowledge	Career-specific Knowledge
Cognitive Complexity	Intellectual & Practical Skills	Cognitive Complexity	Intellectual Skills	Problem Solving; Decision Making; Quantitative Analysis
Interpersonal & Intrapersonal Competence; Humanitarianism; Civic Engagement	Personal & Social Responsibility	Interpersonal Competence; Intrapersonal Development; Humanitarianism & Civic Engagement	Civic & Global Learning	Teamwork; Verbal Communication
Practical Competence; Persistence & Academic Achievement	Integrative & Applied Learning	Practical Competence	Applied & Collaborative Learning	Writing and Editing Reports; Computer Software Skills; Workflow Planning

Figure 2. Alignment of CAS Learning and Development Domain and Dimensions with other Learning Outcome Frameworks, by Drechsler Sharp, M., Glass, M., & Henning, G., 2018, *Using the CAS Standards for Co-curricular Program Review and Assessment*. Presentation at ACPA 2018 Annual Convention, Houston, TX.

The CAS domains and dimensions also closely align with other outcome frameworks (see Figure 2). These other frameworks include Learning Reconsidered (Keeling, 2004), LEAP Essential Learning Outcomes (AAC&U, 2002), Degree Qualifications Profile (Lumina, 2011), and Project CEO Desirable Skills (Griffin, Peck, & LaCount, 2016). Articulating the alignment across outcome frameworks is helpful when a unit or division uses one framework and an institution uses another.

Uses for CAS Learning Domains and Dimensions

Setting Divisional Learning Goals

The CAS learning domains and dimensions provide a framework that can be applied in a myriad of ways. One of those ways is identifying division-level or functional unit goals. For example, a division could use the CAS outcomes as a framework for all of its departments. Activities within units could be mapped to the identified outcomes and those outcomes could be assessed systematically.

Setting Divisional Priorities

The CAS outcomes can be used to set divisional priorities. For example, a division could select 1-2 of the outcome domains to focus on for an upcoming academic year. This

priority setting would guide planning and assessment. For example, a division could decide that their priority outcome area, or theme for the year, is going to be cognitive complexity. During the year, departments would identify the various ways their programs and services address this outcome and annual assessment plans could be built around this specific outcome.

Developing New Programs and Services

Additionally, CAS learning and development outcomes can be useful when developing a new program or service. The CAS functional area standards and cross-functional frameworks provide structures for the elements of a new program or service, including the identification and measurement of outcomes. Individuals or teams creating a new program or service can review the list of domains and dimensions and identify the appropriate outcomes for the new unit.

The CAS Learning Domains and Dimensions provide flexibility in form and function for divisional units, leading to many possible uses.

Identifying Program and/or Service Learning Outcomes

Further, CAS domains and dimensions can be used as a framework from which to identify learning and development outcomes for an existing program or service. A program would identify which domains and dimensions would guide the work of that area. The chosen outcomes would inform strategies to achieve unit-level goals and would also be a basis for program evaluation. For this purpose, the CAS learning domains and dimensions may be applied "as is" to serve as learning and development outcomes for programs or services. The domains and dimensions may be revised and adapted as needed. They may also be utilized as a framework from which to initially develop student learning and development outcomes for a specific program.

Market Programs and Services

The CAS learning and development domains and dimensions can further be used for marketing purposes. It is increasingly important for all units, including co-curricular units, to continually demonstrate the value they bring to the educational enterprise. The CAS outcomes can provide the language for communicating the learning that a unit proposes to foster to multiple stakeholder groups. This language, coupled with assessment data to demonstrate achievement of the outcomes, can help to create a compelling narrative.

While most of the focus of CAS resources is on programs and services, the end goal is creating educational environments that further student learning and development. In the competitive job market, students need to effectively articulate not just what they have done, but also demonstrate what they have learned and how they can translate that learning to the work setting. The CAS outcome framework provides students the concepts and words to describe their learning. By developing intentionally structured experiences where students can reflect on what they have learned, students engage in reflective thinking, which is a dimension of cognitive complexity, for example.

Advocating for Resources

Finally, the CAS outcomes can assist when advocating for institutional resources. The CAS learning domains and dimensions address complex forms of learning that happen across an institution, not just in student affairs/student services areas. They can easily be mapped to institutional learning goals. Thus, by demonstrating CAS outcome achievement through a self-assessment process, a functional area can demonstrate how programs and services align with institutional goals, making it easier to demonstrate both a need and validation for resources.

Aligning Program Activities to Outcomes

The Kellogg Foundation's logic model (2004) is one demonstrable way of linking outcomes (both short- and long-term) with program activities/processes and the theoretical assumptions/principles of the program. The following program logic model delineates a framework in which an identified CAS functional area may map to the broader outcomes for divisional priorities and, ultimately, provide evidence of need for additional resources. On its own, a logica model framework links both outcomes (short- and long-term) with activities and processes. A CAS self-assessment can demonstrate the impact of the components outlined in the logic model (Figure 3).

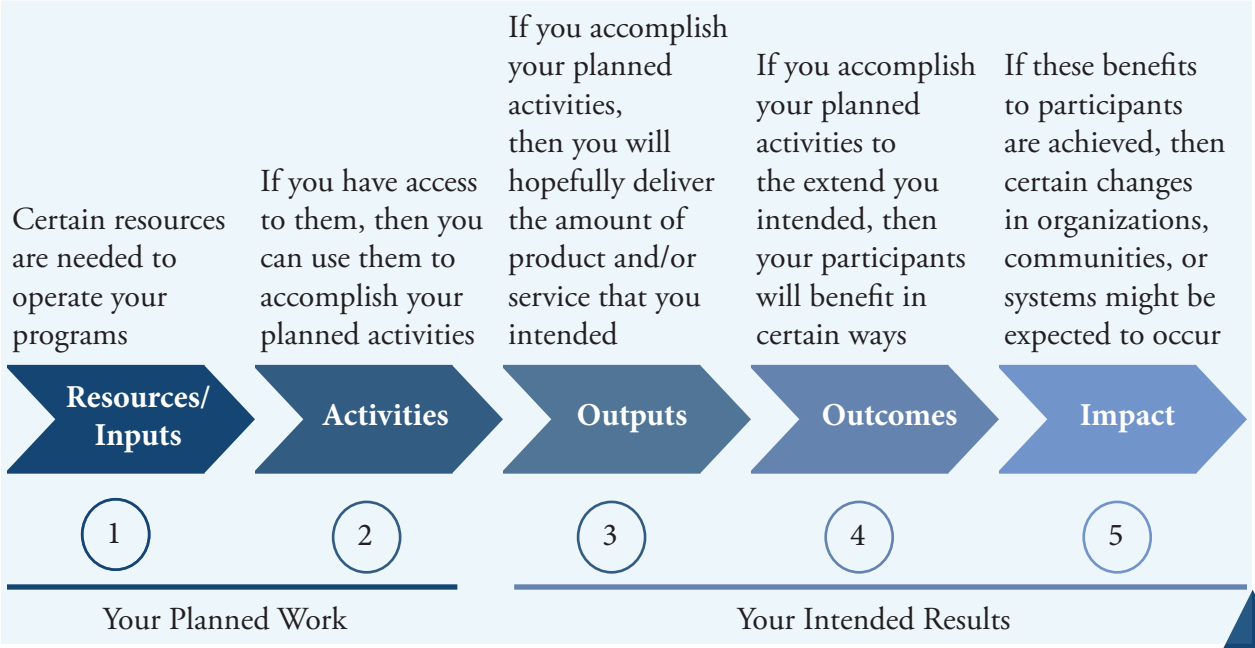

Figure 3. Logic model by W.K. Kellogg Foundation (2004), *Logic Model Development Guide*.

Learning Assessment as Component of Self-Assessment

Assessment of student learning is an important aspect of any self-assessment. This process includes several components. The first element is articulation of the learning and development outcomes the program purports to foster or support. The second step is mapping program or service activities to each outcome so that there is explicit alignment between each strategy the program implements and the expected outcome. The next step is the collection of evidence to assess the extent to which the outcomes are achieved. Once evidence has been collected regarding the outcomes, that evidence must be analyzed, interpreted, and a summary shared with key stakeholders as part of a large self-assessment report. While traditional assessment techniques to provide this evidence have included surveys, interviews, and focus groups, CAS encourages the use of more direct learning assessment techniques such as 1-minute papers, muddiest point, and documented problem solutions.

Using CAS as Model for Other Self-Assessment Processes

CAS provides a detailed outline for functional area and cross-functional issue self-studies and also shares a Self-Assessment Guide (SAG), or workbook, for each set of standards or framework as a guide for the process. While the CAS self-assessment process, which may

be part of a broader program review process, utilizes the CAS functional area standards and cross-functional areas, the process can be adapted to other sets of standards. There are five key characteristics of the CAS self-assessment process that can be applied:

1. Consensus-driven, self-assessment philosophy
2. Standards-directed practice
3. Self-assessment process steps
4. Evidence-based ratings
5. Support via a workbook

Similar to regional and specialized accreditation processes, the CAS self-assessment process can be applied to any type of professional standards. While there are Self-Assessment Guides to support the CAS self-assessment process, the process itself is not CAS Standards specific. CAS currently has sets of standards for 47 functional areas and 3 cross-functional frameworks and continues to grow. If a set of standards does not exist for a functional area, the CAS General Standards can be a useful tool. Additionally, a department could choose to apply the CAS self-assessment process using unit-level or institutional learning outcomes as a set of standards guiding a self-assessment. Evidence-based ratings is a hallmark of the CAS self-assessment process. While anecdotes can provide useful information and can be included in the self-assessment, ratings should be grounded in evidence. Evidence can be gathered to rate the program's effectiveness at helping students achieve the identified learning and development outcomes. Annual priorities or a strategic plan can also be the basis of a self-assessment.

Similar to regional and specialized accreditation processes, the CAS self-assessment process can be applied to any type of professional standards. While there are Self-Assessment Guides to support the CAS self-assessment process, the process itself is not CAS Standards specific.

The CAS self-assessment process, built over a number of years, and endorsed by 40 higher education organizations in the US and Canada, provides a useful blueprint for conducting a self-assessment that can be applied in other settings with different sets of standards. There are many outcome frameworks available to guide a self-assessment process, CAS is simply a well-resourced and consensus-driven framework.

Using CAS for Institutional Effectiveness

While CAS Standards and resources appear to be most useful for co-curricular areas, they are also useful in demonstrating institutional effectiveness. As noted, learning happens everywhere. The CAS Learning Domains and Dimensions can be used to connect learning, development, and institutional outcomes with academic learning outcomes. The CAS Learning Domains and Dimensions are closely aligned with other major learning outcome frameworks which may map to global learning outcomes espoused by Academic Affairs and related departments (refer to Figure 2).

Given that CAS Standards and Cross-Functional Frameworks are supported by 40 higher education associations, they are highly credible and transferrable across disciplines. For departments of institutional effectiveness seeking to encourage program review for co-curricular units, the CAS Standards may be easily accepted and integrated into ongoing outcomes measurement processes. CAS also outlines steps for an effective self-study and provides tools to assist with this process. Collectively, these resources enable institutional effectiveness professionals to provide program review support to co-curricular offices using concepts and language that can be easily understood by those units.

Another area where CAS tools can be useful is in accreditation processes. Regional accreditors now expect assessment of co-curricular areas as well as demonstration of learning outside the classroom. CAS materials are designed to do just that. Using CAS Standards and Frameworks as part of the CAS self-study process allows co-curricular units to articulate the extent to which mission and goals are achieved, to identify areas for improvement, and to demonstrate learning that occurs through their programs and services and/or through the collection of programs and services across units.

Conclusion

Based in holistic learning and incorporating 47 functional areas involved in student learning and development, the CAS Standards serve as a validated, reliable resource in this data-driven, accountability-focused higher education environment. As described above, they align with multiple other learning frameworks, are endorsed by higher education organizations and associations, and have multiple uses in research, evaluation, and assessment of student engagement, learning, and development. It is hard to find another resource that spans such a broad spectrum of student learning and development.

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Gavin Henning, Ph.D. is Professor of Higher Education at New England College, where he directs the Doctorate of Education and Master of Science in Higher Education Administration programs. Gavin is Past-President of CAS as well as a Past-President of ACPA. His scholarship includes two books on student affairs assessment as well as numerous articles on the topic.

Rich Robbins holds a Ph.D in Social Psychology and is an Associate Dean in the College of Arts and Sciences at Bucknell University. Rich has been an active leader in NACADA: The Global Community for Academic Advising, for over 20 years, including serving as a NACADA representative to CAS. Rich's areas of scholarship include student development, student retention and persistence, assessment of academic advising, administration of academic advising, advisor development and training, and research methodology, among others. Rich has received numerous advising awards and has performed over 150 professional presentations and over 40 campus consultations.

Stacy Andes, Ed.D., is the Director of Health Promotion at Villanova University, where she oversees the University's health and well-being initiatives. Stacy represents the American College Health Association on the CAS board and has served as the Chair of the Alcohol, Tobacco and Other Drug Coalition within ACHA. Her scholarship includes multi-institutional research on and a toolkit for health promotion practitioners on non-medical prescription drug use.

About NILOA

- The National Institute for Learning Outcomes Assessment (NILOA) was established in December 2008.
- NILOA is co-located at the University of Illinois and Indiana University.
- The NILOA website contains free assessment resources and can be found at http://www.learningoutcomesassessment.org.
- The NILOA research team has scanned institutional websites, surveyed chief academic officers, and commissioned a series of occasional papers.
- NILOA's Founding Director, George Kuh, founded the National Survey for Student Engagement (NSSE).
- The other co-principal investigator for NILOA, Stanley Ikenberry, was president of the University of Illinois from 1979 to 1995 and of the American Council of Education from 1996 to 2001.

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