

Engaging Students with Complexity and Change

Preparing “The Best-Educated Citizenry and Workforce”

2014 Statewide Trustee Conference, hosted by the Massachusetts
Department of Higher Education

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A GUIDE TO FREQUENTLY CONFUSED TERMS

***** LIBERAL EDUCATION:** An approach to college learning that empowers individuals and prepares them to deal with complexity, diversity and change. It emphasizes broad knowledge of the wider world (e.g science, culture and society) as well as in-depth achievement in a specific field of interest. It helps students develop a sense of social responsibility as well as strong intellectual and practical skills **that span all major fields of study**, such as communication, analytical and problem-solving skills, and includes a demonstrated ability to apply knowledge and skills in real-world settings.

LIBERAL ARTS: Specific disciplines (e.g., the humanities, sciences, and social sciences)

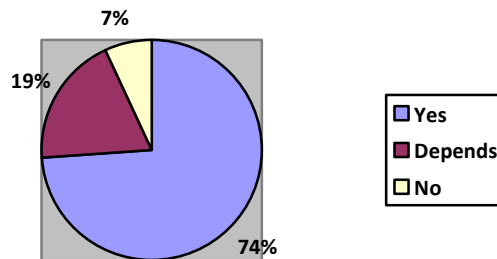
LIBERAL ARTS COLLEGE: A particular institutional type – often small, often residential – that facilitates close interaction between faculty and students, while grounding its curriculum in the liberal arts disciplines.

ARTES LIBERALES: Historically, the basis for the modern liberal arts: the trivium (grammar, logic and rhetoric) and the quadrivium (arithmetic, geometry, astronomy, and music).

GENERAL EDUCATION: The part of a liberal education curriculum shared by all students. It provides broad learning in liberal arts and science disciplines and forms the basis for developing important intellectual, civic and practical capacities. General education can take many forms, and increasingly includes introductory, advanced, and integrative forms of learning.

Adapted from: *Greater Expectations: A New Vision for Learning as a Nation Goes to College* (Association of American Colleges & Universities, 2002)

*****Three in four employers would recommend this kind of education to their own child or a young person they know.**



These findings are taken from a survey of employers commissioned by AAC&U and conducted by Peter A. Hart Associates in 2013. For a full report on the survey, "It Takes More than a Major: Employer Priorities for College Learning Student Success," and its complete findings, see www.aacu.org/leap.

You may also want to review: "How Should Colleges Prepare Students To Succeed in Today's Global Economy?" (2007), "How Should Colleges Assess And Improve Student Learning? Employers' Views on the Accountability Challenge" (2008), and "Raising the Bar: Employers' Views on College Learning in the Wake of the Economic Downturn" (2010).

THE LEAP INITIATIVE AT A GLANCE

Launched in 2005, Liberal Education and America's Promise (LEAP) is a national public advocacy and campus action initiative of the **Association of American Colleges & Universities (AAC&U)**. LEAP champions the importance of a twenty-first-century liberal education—for individual students and for a nation dependent on economic creativity and democratic vitality. Through LEAP, hundreds of campuses are making far-reaching educational changes to help all their students—whatever their chosen field of study—acquire the broad knowledge, higher order capacities, and real world experience they need to thrive both in the economy and in a globally engaged democracy.

LEAP asks core questions about the learning students most need from college; listens and responds as employers make the case that today's workers need to be better prepared for a global economy; and focuses on education for knowledgeable citizenship, as well as careers.

LEAP PROMOTES

- **Essential Learning Outcomes**—the learning outcomes essential for success in life and work in the 21st century. These outcomes include: 1) broad knowledge of culture, science and society, as well as competence in specific fields; 2) intellectual and practical skills, such as inquiry and analysis; critical and creative thinking; written and oral communication; quantitative literacy; information literacy; teamwork and problem-solving; 3) studies and experiences related to democratic and global citizenship and intercultural competence; and 4) integrative, applied and adaptive learning.
- **High-Impact Educational Practices (HIPs)**—ways of engaging and challenging students—such as first year programs; intensive writing, collaborative assignments, undergraduate research, internships, and major projects that help students achieve essential learning outcomes.
- **Authentic Assessments**—using students' own work and faculty-validated rubrics, probing whether individual students have developed essential capacities, and can apply their learning to complex problems and real-world challenges.
- **Inclusive Excellence**—to ensure that all students at every kind of institution benefit from a deep, hands-on, and practical education that prepares them for success in work, life, and citizenship.

AREAS OF WORK

Campus Action

- Faculty-led strategies for deepening and assessing student learning;
- LEAP Partner States and Consortia – California State University System, Indiana, Kentucky, **Massachusetts**, North Dakota, Oregon, Utah, Virginia, Wisconsin; COPLAC; NAC&U; LEAP Texas; several other states seeking inclusion;
- LEAP Campus Action Network (350 two- and four-year institutions – private and public – and organizational partners);
- Summer institutes for campus teams working on outcomes in general education, arts and science learning, integrative learning and departments, assessment and institutional change to make excellence inclusive;
- Partnership with Project Kaleidoscope to advance STEM reform.

Authentic Evidence

- LEAP VALUE project – nationally validated rubrics for assessing students and reporting on 16 essential learning outcomes that are integral to a liberal education;
- Reports—prepared in concert with research agencies—on students' achievement of essential learning outcomes and their participation in high impact forms of learning;
- Employer research on competencies and experiences students need for success in the workplace.

Public Advocacy

- LEAP advocacy seeks to spark public debate about the college learning outcomes essential for all students; to create more informed public support for higher education and for changes to improve quality; and to challenge the belief that students must choose either a broad education or a practical education.
- Policy engagement and advocacy in LEAP States (see above).
- LEAP Presidents' Trust – connecting LEAP with public and local priorities – economic and civic

The Essential Learning Outcomes



Beginning in school, and continuing at successively higher levels across their college studies, students should prepare for twenty-first-century challenges by gaining:

★ Knowledge of Human Cultures and the Physical and Natural World

- Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

Focused by engagement with big questions, both contemporary and enduring

★ Intellectual and Practical Skills, including

- Inquiry and analysis
- Critical and creative thinking
- Written and oral communication
- Quantitative literacy
- Information literacy
- Teamwork and problem solving

Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance

★ Personal and Social Responsibility, including

- Civic knowledge and engagement—local and global
- Intercultural knowledge and competence
- Ethical reasoning and action
- Foundations and skills for lifelong learning

Anchored through active involvement with diverse communities and real-world challenges

★ Integrative and Applied Learning, including

- Synthesis and advanced accomplishment across general and specialized studies

Demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems

Note: This listing was developed through a multiyear dialogue with hundreds of colleges and universities about needed goals for student learning; analysis of a long series of recommendations and reports from the business community; and analysis of the accreditation requirements for engineering, business, nursing, and teacher education. The findings are documented in previous publications of the Association of American Colleges and Universities: *College Learning for the New Global Century* (2007) and *The LEAP Vision for Learning* (2011). For more information, see www.aacu.org/leap.

Employer Priorities and Consensus on College Learning Outcomes



★ Knowledge of Human Cultures and the Physical and Natural World

- Broad knowledge in the liberal arts and sciences 80% ■
- Global issues and knowledge about societies and cultures outside the US 78% ■
- Knowledge about science and technology 56% ❖

★ Intellectual and Practical Skills

- Critical thinking and analytic reasoning 82% ❖
- Complex problem solving 81% ❖
- Written and oral communication 80% ❖
- Information literacy 72% ❖
- Innovation and creativity 71% ❖
- Teamwork skills in diverse groups 67% ❖
- Quantitative reasoning 55% ❖

★ Personal and Social Responsibility

- Problem solving in diverse settings 91% ■
- Ethical issues/public debates important in their field 87% ■
- Civic knowledge, skills, and judgment essential for contributing to the community and to our democratic society 82% ■
- Ethical decision making 64% ❖

★ Integrative and Applied Learning

- Direct experiences with community problem solving 86% ■
- Applied knowledge in real-world settings 78% ❖

Note: These data are taken from *It Takes More than a Major: Employer Priorities for College Learning and Student Success*, a report on findings from a 2013 survey of employers conducted for AAC&U by Hart Research Associates. For a full report on this survey and earlier reports on employer views, see www.aacu.org/leap.

■ indicates percentage of employers who “strongly agree” or “somewhat agree” that, “regardless of a student’s chosen field of study,” every student should attain this area of knowledge or skill.

❖ indicates percentage of employers who say they want colleges and universities to “place more emphasis” on this area of knowledge or skill.

Employer Support for Inquiry and Engaged Learning Practices



- **91%** of employers say that, whatever their major, all students should have experiences in solving problems with people whose views are different than their own.
- **83%** of employers say an electronic portfolio demonstrating a student’s work and key skill and knowledge areas would be useful in evaluating potential candidates for hire.

Employer Endorsement of Select Practices

Among ten existing and emerging educational practices tested, employers believe several have the potential to improve the education of today’s college students and prepare graduates to succeed in the workplace. These include:

	Will Help a Lot/ Fair Amount
<p>Research Expecting students to develop the skills to research questions in their field and develop evidence-based analyses</p>	83%
<p>Senior Projects Expecting students to complete a significant project before graduation that demonstrates their depth of knowledge in their major AND their acquisition of analytical, problem-solving, and communication skills</p>	79%
<p>Internships Expecting students to complete an internship or community-based field project to connect classroom learning with real-world experiences</p>	78%
<p>Collaborative Research Expecting students to develop the skills to conduct research collaboratively with their peers</p>	74%
<p>Scientific Inquiry Expecting students to acquire hands-on or direct experience with the methods of science so they will understand how scientific knowledge is developed</p>	69%
<p>Ethical Questions Expecting students to work through ethical issues and debates to form their own judgments about the issues at stake</p>	66%
<p>Flipped Classroom Using new approaches that deemphasize lectures in the classroom and instead have students listen to lectures online and devote classroom time to dialogue, debate, and problem solving, in groups or alone, and with guidance from the instructor</p>	59%

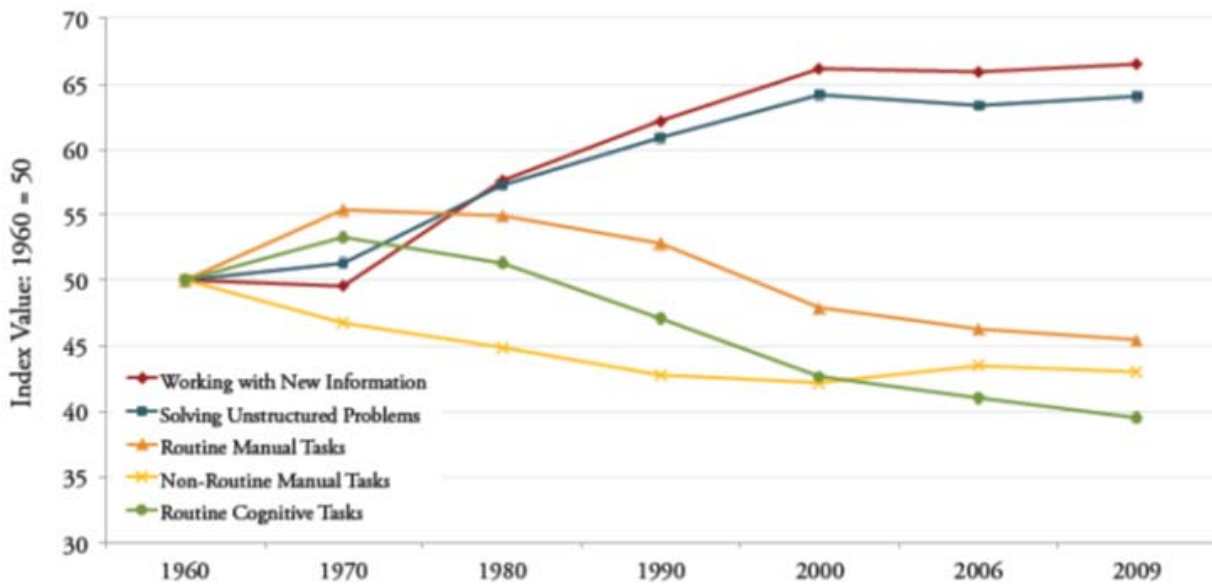


Source: Hart Research Associates. *It Takes More Than a Major: Employer Priorities for College Learning and Student Success* (Washington, DC: AAC&U, 2013), www.aacu.org/leap/public_opinion_research.cfm

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Changing Priorities for Work in the U.S. Economy 1960-2009



From *Dancing with Robots: Human Skills for Computerized Work* (2013, available at <http://content.thirdway.org/publications/714/Dancing-With-Robots.pdf>)

“In order to prepare young people to do the jobs computers cannot do we must re-focus our education system around one objective: giving students the foundational skills in problem-solving and communication that computers don’t have....[T]hese skills are not just the skills of professionals with advanced degrees. What computers have done is to make even traditional blue collar jobs like auto-mechanic—dependent upon one’s ability to problem solve and to communicate.” - *Dancing with Robots: Human Skills for Computerized Work* (Emphasis added by AAC&U)

Employers Seek Graduates Who Can Deal with Complexity

- ★ 92% of employers say that “innovation is essential to our company’s continued success.”
- ★ 93% of employers say that they are “asking employees to take on more responsibilities and to use a broader set of skills than in the past.”
- ★ 91% of employers say that “the challenges their employees face are more complex than they were in the past.”
- ★ 95% of employers agree that their companies put a priority on hiring people with the intellectual and interpersonal skills to help them contribute to innovation in the workplace
- ★ 93% of employers say that candidates’ demonstrated capacity to think critically, communicate clearly, and solve complex problems is more important than their undergraduate major
- ★ 91% of employers say that, whatever their major, all students should have experiences in solving problems with colleagues whose views are different from their own

Source: Hart Research Associates. *It Takes More Than a Major: Employer Priorities for College Learning and Student Success* (Washington, DC: AAC&U, 2013), www.aacu.org/leap/public_opinion_research.cfm. See also: George Kuh, *High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter*. (Washington, DC: AAC&U, 2008).

Employers Want Broad Learning, Cross-Cultural Literacies, AND Hands-On Skills

Part I: Employer Views on Cross-Cultural Learning and Career Preparation

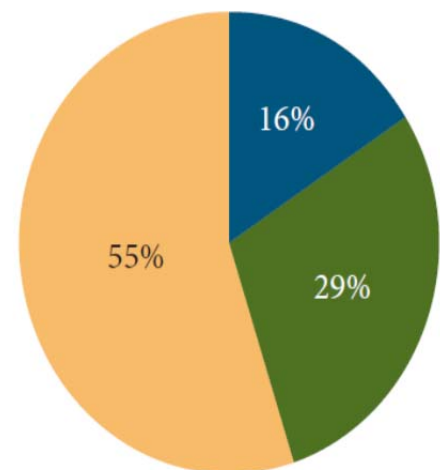
Percentage of employers who agree “somewhat” or “strongly” with each statement

All students should have educational experiences that teach them how to solve problems with people whose views are different from their own.	91%
All students should learn about ethical issues and public debates important in their field.	87%
All students should have direct learning experiences working with others to solve problems important in their communities.	86%
All students should take courses that build knowledge, judgment, commitment to communities, ensure integrity/vitality of democracy.	82%
All students should acquire broad knowledge in liberal arts and sciences.	80%
All students should learn about societies and cultures outside the United States and about global issues and developments.	78%

Part II: Employer Views on Requirements for Advancement and Long-Term Career Success

Which of the following ranges of knowledge and skills are more important for recent graduates who want to pursue advancement and long-term career success at your company?

- Knowledge and skills that apply to a specific field or position
- A range of knowledge and skills that apply to a range of fields or positions
- Both field-specific knowledge and skills *and* a broad range of knowledge and skills



SOURCE: Data from Hart Research Associates (2013).

Source: Hart Research Associates. *It Takes More Than a Major: Employer Priorities for College Learning and Student Success* (Washington, DC: AAC&U, 2013), www.aacu.org/leap/public_opinion_research.cfm.