

**“ARE THEY REALLY READY TO WORK?”  
RECOMMENDATIONS TO EDUCATIONAL INSTITUTIONS  
IN RESPONSE TO THIS REPORT ON GRADUATE PREPAREDNESS**

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“Content-driven curriculum and lecture-oriented instruction, at best,  
turn out technically competent individuals who nevertheless often lack  
vital skills that industry clearly prizes.”

(BATEC Information Technology Workforce Skills Study, p. 37)

There is significant concern with the preparedness of today’s job candidates. To remain globally competitive, U.S. employers are seeking candidates with a skill set more appropriate to meet the demands of the 21<sup>st</sup> century. While numerous surveys and reports have highlighted the shortcomings of job applicants and the frustrations of employers, this paper will focus primarily on the findings of the report “Are They Really Ready to Work?”

The study was conducted by four organizations: The Conference Board, The Society for Human Resource Management, the Partnership for 21<sup>st</sup> Century Skills, and Corporate Voices for Working Families. New workplace entrants were categorized as recent high school graduates, graduates from two-year colleges (including technical schools), and graduates of four-year colleges. For the purpose of this paper, the findings of the four-year college graduates are being primarily addressed.

With nearly 60 percent of survey respondents indicating that they expected to hire more four-year college graduates over the next five years, it is certainly time to better prepare those graduates. Changes can be made now to better prepare the nation’s current college students for the workplace.

The overarching theme of the survey is the overwhelming significance of applied skills (as opposed to basic skills). Applied skills include the following:

- “critical thinking/problem solving
- oral communications
- written communications
- teamwork/collaboration
- diversity
- information technology application
- leadership
- creativity/innovation
- lifelong learning/self direction
- professionalism/work ethic
- ethics/social responsibility” (Casner-Lotto, p.9)

As defined by the study, the basic skills include the following:

- “English language (spoken)
- reading comprehension (in English)

writing in English (grammar, spelling, etc.)  
mathematics  
science  
government/economics  
humanities/arts  
foreign languages  
history/geography” (Casner-Lotto, p.9)

According to the 400 employers surveyed, the bottom line is that the workforce is not prepared for work in the 21<sup>st</sup> century. “The business community, as represented in part by this research consortium, is speaking with one voice, calling for higher standards of workforce excellence consistent with the demands of the 21<sup>st</sup> century.” (Casner-Lotto p.12)

The top five applied skills reported are as follows: oral communications (95.4%), teamwork (94.4%), professionalism (93.8%), written communications (93.1%) and critical thinking (92.1%). All of these are certainly teachable skills that can be integrated across the curriculum of academic programs. They also reflect skills that are valued across all industries and job vocations.

#### A Common Theme Across Reports

The Boston Area Advanced Technological Education Connections Information Technology Workforce Skills Study found that when employers were asked about the deficiencies of job applicants, technical skills were missing from the list. The “Millennial” generation (those born after 1982) grew up with cell phones and PCs. They communicate with e-mail and instant messaging rather than through conversation. Fifty-six percent prefer the Internet to the telephone. (Carew) It is understandable then, that employers nationwide reported overwhelmingly the need to see more preparation in the areas of communication, problem solving, teamwork, self motivation/management, and an understanding of the context or the “big picture”. All of these skills (which are directly communication based) have been considered soft skills. Cutting across all industries and all sizes of business, these now have been the focus of the preparation of the future workforce. “...Soft skills have outstripped intellect and technical prowess as the primary competence for successful business leadership.” (Goldberg, p. 7)

Robinson (2000) suggests that “job readiness skills are clustered into three skill sets: basic academic skills, higher order thinking skills, [and] personal qualities.” (p.1) The good news is that employability skills are teachable. The bad news is that they are not being taught to the extent necessary to adequately prepare the nation’s future workforce.

While communication skills continue to be cited as one of the most critical for job applicants, the 2005 National Assessment of Adult Literacy reported on the decreasing literacy levels among college graduates. “Most jobs don’t call for deep academic background. Employers, for the most part, are looking for people who are readily trainable and can work with others. Good language skills are of the greatest importance in that respect, but many graduates entering the workforce are weak there.” (Leef, p.NA)

According to a 2005 American Sociological Association (ASA) survey, only 40 percent of recent sociology college graduates agreed that their program provided them an opportunity to practice the soft skills. “These soft skills included working in groups, getting involved in volunteer activities, participating in service learning programs, and interacting with their fellow majors.” (Erskine, p.NA) Relational skills development was highlighted as a deficiency. This report

concluded that there is a definite disconnect between the skills taught and the skills required in the vocation to meet the realities of the workplace.

In preparation for the workplace, education has an obligation to provide opportunities for students to practice their job readiness skills. To do so will require that educators re-think some of their approaches to teaching. The BATEC study (2006) provides a critical warning to education stating that “You can’t prepare the 21<sup>st</sup> Century workforce with 20<sup>th</sup> century content in 19<sup>th</sup> century classrooms.” (p.7) One recommendation is to use “more holistic methods of teaching – methods that transcend content delivery and that involve students in complex problems developed from industry input.” (BATEC Information Technology Workforce Skills Study, p. 7) It is simply not enough to prepare graduates with the technical skills of their major field of study. The soft skills have been deemed the “hard stuff” repeatedly by business and industry.

### Responses at One College

According to the report, “Are They Really Ready to Work?”, college graduates are still deficient in writing. The recommendation is that more colleges integrate writing across the curriculum. Several years ago, in response to the concern with weak communication skills voiced in general national surveys, the English curriculum at Goldey-Beacom College was revised to address two specific areas: writing and speaking. Two semester-long courses were developed for writing and argumentation/debate. In the writing course, an emphasis was placed on the writing of business documents (including a resume and a research paper in the student’s major field of study). An expert reader in the student’s major oversees this process addressing the quality of the research paper’s content. A rubric was also developed whereby consistency was achieved across different departments.

Professors across the curriculum were encouraged to assign more writing assignments. Case studies and research papers are utilized extensively in several of the business courses. Some of the classes have introduced formal debates on controversial topics to further strengthen student verbal communication skills. Generally, class presentations are required for most projects. Group “reporting out” is used extensively in many courses to provide informal public speaking opportunities for students.

Guest speakers from business and industry are invited to the classroom to address the importance of the soft skills and the “real world” issues surrounding employability skills. Workshops outside of class are also conducted. An annual “*How to Wine, Dine, and Act Fine*” program is sponsored by the student chapter of the Society of Human Resource Management (SHRM), the Delaware professional chapter of SHRM, and the Career Services Department of the college.

According to the report, “Are They Really Ready to Work?”, creativity and innovation are expected to increase in importance in the workplace. Unfortunately, the report found that only 21.5 percent of survey respondents identified four-year college graduates as excellent in this skill category. Goldey-Beacom College developed a course entitled “Creative Problem Solving in Business”. This course was delivered in a creative one-week format and team taught. While stressing the importance of developing creative problem solving skills (as opposed to only rational decision making skills), the course used creative delivery (primarily delivered through experiential exercises) and creative assessment (a hands-on project and a journal of self-discovery). The course itself was an application of the concepts being taught.

College graduates are also reported to be deficient in leadership. This is particularly troublesome since this is the number two deficiency cited in college graduates and yet is one of the most

important applied skills recognized for new entrants to the workforce. Leadership as an applied skill is defined as the ability to “leverage the strengths of others to achieve common goals; use interpersonal skills to coach and develop others”. (Casner-Lotto, p.16) Goldey-Beacom College has developed courses in group/team dynamics and leadership. The general management and organizational behavior class (required of all business students) has emphasized team skills and “getting things done through others”. Experiential exercises and self assessments are utilized extensively in the delivery of this course.

Outside of the classroom, leadership workshops are offered for student organization officers. While officer positions provide a wonderful opportunity for development and growth, a formal workshop helps students better take advantage of that opportunity to leverage the most they can.

### Benchmarking Practices: Innovative Responses by Other Colleges and Universities

As organizations have become more selective in their hiring choices, the pressure is on academia to better prepare students for the workforce. Education has realized the importance of partnering with business to prepare graduates. Universities already developing these partnerships include MIT, the University of Texas, UCLA, Temple University, and Ohio State University.

Recommendations for education from the report, “College Learning for the New Global Century”, include more widespread use of learning communities whereby students are provided the opportunity to research broad problems by linking different disciplines, writing intensive courses across the curriculum, collaborative learning environment, additional global learning opportunities (such as study abroad programs), “real world” community-based learning, internships and capstone courses with the culmination of an integrating project or paper.

“In today’s knowledge-fueled world, ensuring the most empowering forms of learning for all students should be our top educational priority.” (“College Learning for the New Global Century”, p. viii) Some of the changes to education require new approaches in teaching. Ohio State University has responded with a broader approach by “teaching undergraduate computer science majors about utilizing a software engineering methodology rather than teaching them about a particular programming language like Java or C++”. (Hoffman, p.41) Students at MIT’s Sloan School work in teams on real-world projects submitted by their corporate sponsors. IT executives are invited to present their own IT problems and then lead a discussion of how they were solved.

The need for more problem-based learning was addressed in the nursing program at Samford University in Alabama where course concepts are presented in modules. Teams of students then present solutions for the problems. Providing students with opportunities to “connect the dots” by integrating information from various disciplines is critical. Wagner College has developed learning communities where seniors attack big, real-world problems integrating the knowledge gained in two different disciplines. Portland State University provides opportunities for a similar senior learning experience based on their local community. This community service has had positive consequences for students beyond the mere curriculum as they have learned how to contribute to their communities. Tulane University actually requires public service in a “service learning” class for graduation.

Advisory boards are playing a bigger role today. Babson College solicited the input of an ad-hoc advisory board of IT experts to redesign their IT program’s electives – and then they responded immediately by making the suggested changes within just two weeks. The report “Are They Really Ready to Work?” and similar reports have prompted considerably more discussion about

including a liberal education in bachelor's degrees. The push for the liberal arts education is to provide opportunities to students to acquire soft skills. The federal Commission on the Future of Higher Education has put colleges and universities across America on notice. More is expected – and sooner rather than later.

“In a deliberate break with the academic categories developed in the last century, liberal education is defined...not as a discrete set of disciplines...but rather as a comprehensive set of aims and outcomes that are essential both for a globally engaged democracy and for a dynamic, innovation-fueled economy.” (“College Learning for the New Global Century”, p. 11) A re-mapping of the educational process may be needed to help institutions move away from the traditionally ingrained academic silos. Recognizing the importance of writing skills, Carleton College requires writing portfolios with mandatory inclusions of a minimum of two different disciplines.

Bentley College in Waltham, Massachusetts, is encouraging students to develop the softer skills by creating a way for undergraduates majoring in business to easily complete a secondary degree in Liberal Studies. Students take eight classes they would have taken anyway grouped together under a concentration heading and connected to business classes through papers, projects, etc. LSM concentrations include Global Perspectives, Media Arts & Society, American Perspectives, and Ethics & Social Responsibility. (“Bentley’s Liberal Arts Bent”) This is an attempt “to really connect the dots and make connections across disparate disciplines and bodies of knowledge”. (“Bentley’s Liberal Arts Bent”, p. NA) Students choose LSM because business students hope to develop a competitive edge as they enter the workforce.

Davy suggests, “Great art isn’t made in a vacuum, and great business isn’t made in a vacuum,” (“Bentley’s Liberal Arts Bent”. p. NA). More stakeholders have taken active roles in designing college curriculum. Recommendations by the National Association of State Boards of Accountancy (NASBA) prompted changes in the teaching of ethics in accounting programs. In Ohio University “real-life” situations, financial statements, and documents are used in the classroom. The University of Oklahoma partnered with the business community to develop curriculum to provide the specific skill set needed in the engineering program. “Worker skills and education will be decisive factors in America’s ability to compete in the global manufacturing environment. If colleges and universities don’t step up to the plate, they will be the losers, along with the manufacturing base, the economy, and the citizens of the United States.” (Fenster, p.100) The Partnership for Regional Innovation in Manufacturing (PRIME) is a partnership of colleges in Pennsylvania that has specifically responded to local manufacturers’ input in developing their workforce.

Recognizing the importance of teamwork in today’s workplace, many colleges and universities have integrated teamwork into the curriculum. The ability to work effectively with other students is a big factor in completing courses successfully at the University of Phoenix. The belief is that this cannot be learned from a book, but must be experienced. “A maximum of 30 percent of a student’s grade is derived from team grading...meaning poor teamwork can affect a student’s final grade.” (Cline, p.NA)

All stakeholders are taking a more active role in defining the competencies required of the workforce. The State Council of Higher Education for Virginia (SCHEV) has developed a list of competencies important for college graduates. Public institutions in Virginia are then required to report on their specific results in meeting these outcomes. Commitment to essential learning outcomes across programs has been embraced by Indiana University-Purdue University

Indianapolis (IUPUI). Faculty created six Principles of Undergraduate Learning that are applied and assessed across the entire curriculum.

### Conclusions and Further Recommendations

The question posed by the report, “Are They Really Ready to Work?” has a disappointing answer. Today’s graduates are simply not prepared for work. This report and others with similar findings are creating a buzz – in business, industry, government, and education. The key, however, is that all the stakeholders must partner to develop creative actions to respond. The longer that this situation persists, the farther behind the US workforce will fall.

Employers have further suggested, that employees are “unpromotable” if they lack the soft skills. A lack of professionalism is even reflected in today’s recent graduates. “Punctuality, courtesy, and manners are among the qualities many employers see as having fallen through the cracks between the Baby Boomers generation and succeeding ones.” (McLester, p. 24)

There are far reaching implications of these findings that highlight the ill-prepared workforce. Linda Barrington of the Conference Board warned that the global competitiveness of America is at risk with a workforce that does not deliver the skills required. The U.S. Chamber of Commerce has estimated that approximately 90 percent of new American jobs will require education beyond a high school diploma. It is essential that business is actively partnering with education to identify the skills needed in the workforce.

The Massachusetts Business Alliance for Education (MBAE) issued a report that echoed the findings of national surveys and provided some basic recommendations for education. These included providing more opportunities for students to practice public speaking and teamwork. Even the physical layout of college classrooms nonverbally suggests that communication flows in one primary direction – from the professor to the students. This needs to change. Physically reconfiguring seating (perhaps in circles) encourages more interaction among students themselves and between students and the professor. Team projects should be used in every class and graded as a team effort. When grades reflect a student’s ability to work well with others and coordinate these efforts, the skills seem more important.

According to Leef (2006), “If we want to improve the usefulness of college, the place to start is with English skills”. (p.NA) More writing assignments across the curriculum and more opportunities for oral presentations are needed. The best ideas in business are irrelevant if employees cannot communicate them. Education can provide more opportunities to ensure that students are writing and speaking more in every class – and being graded on it.

Henderson and Wieler (2005) have suggested that community colleges have an opportunity to positively impact regional economies by focusing on occupational skills needed by local employers. They point out that “Community colleges are uniquely positioned to link needs of local business with skilled local workers, benefiting firms, workers, and the region as a whole.” (p. NA)

Business and industry can play a bigger role in the educational process today by offering more internships and job shadowing opportunities. Professional organizations can partner with colleges and universities to bring students to the workplace to shadow professionals to get a feel for the vocations and the “real world” in general. Summer jobs and work-study programs can provide valuable learning opportunities for students as well. The opportunities, however, must be provided by business and industry in partnership with educational institutions.

The issue of workforce preparedness is so critical that it even was taken to Capital Hill in a March briefing. KPMG, the H.E. Butt Grocery Co. and CVS were highlighted for their efforts to provide opportunities for young people to acquire job readiness skills. KPMG provides employees four hours away from work each month to do volunteer teaching (for organizations like Junior Achievement). The H.E. Butt Grocery Co. offers job shadowing to enable students to learn about their company and CVS developed a program, “Pathways to Pharmacy”, to generate an interest in math and science. These programs once again emphasize the need for a coordinated effort by all stakeholders.

According to the BATEC Report (2006), “...current instructional methods produce students who are good test-takers, but not necessarily good problem solvers.” (p. 38) The call is for a focus on the performance of students – versus “seat time” in the classroom. The recommendation to simultaneously teach content and skills is firmly grounded in the Socratic approach to education. Institutions today can use more “problem based case based instructional methods” (BATEC Information Technology Workforce Skills Study). It may, however, be necessary to provide professional development funds for faculty to adapt to these new approaches.

It will also be necessary for higher education to re-think the development of program outcomes. The recommendation for writing high-level outcomes is constructing “by-or-through statements”. (BATEC Information Technology Workforce Skills Study, p.73) These will provide a clearer assessment of whether the student was able to perform the task. The following examples were provided as guidelines by the BATEC report (2006):

“Poorly written outcome:

The student will write a program in C language that prints to the computer.

Better high level outcome:

Using include, get, md, compare, and print(f) functions the student will compile and demonstrate user interfaces **by** demonstrating a C language program that gets user input (whole number) from a keyboard, compares it to a program generated random integer, and outputs the mathematical whole number difference to a system connected printer.” (p.73)

To better ensure partnerships with all the stakeholders, education can take the lead by attending both industry and professional association meetings, solicit involvement of employers in curriculum development, follow relevant legislative issues, and ensure faculty develop relationships with local employers.

The hope of these many workforce readiness reports and this paper is to “inspire action” – on the part of all the stakeholders - to better prepare the nation’s workforce in meeting the competitive challenges of the 21<sup>st</sup> century.

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