Summer 2008

Reforming the undergraduate experience

Diane VanderPol

University of Nevada, Las Vegas

Jeanne M. Brown

University of Nevada, Las Vegas, jeanne.brown@unlv.edu

Patricia A. Iannuzzi

University of Nevada, Las Vegas, patricia.iannuzzi@unlv.edu

Follow this and additional works at: https://digitalscholarship.unlv.edu/lib_articles

Part of the [Curriculum and Instruction Commons](#), and the [Library and Information Science Commons](#)

Repository Citation

VanderPol, D., Brown, J. M., Iannuzzi, P. A. (2008). Reforming the undergraduate experience. *New Directions in Teaching and Learning*, 2008(114), 5-15.

<http://dx.doi.org/10.1002/tl.313>

This Article is protected by copyright and/or related rights. It has been brought to you by Digital Scholarship@UNLV with permission from the rights-holder(s). You are free to use this Article in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/or on the work itself.

This Article has been accepted for inclusion in Library Faculty Publications by an authorized administrator of Digital Scholarship@UNLV. For more information, please contact digitalscholarship@unlv.edu.

This chapter examines common objectives in some of the major initiatives in higher education. It highlights the role of librarians and libraries in higher education reform.

Reforming the Undergraduate Experience

Diane VanderPol, Jeanne M. Brown, Patricia Iannuzzi

The Higher Education literature abounds with reports and studies calling for reform in undergraduate education. The alphabet soup of higher education associations, including AAC&U, NSSE, DEEP, NASPA, ACPA, ACRL, and others, create, adopt, and/or advocate desired learning outcomes for post secondary education and endorse approaches for student learning. This chapter explores several key initiatives with wide-reaching potential impact on our college campuses and reveals linkages and divergences between each. In most cases, deeper scrutiny of the motivations and approaches reveal shared values and common purpose. All too often, the jargon within our respective disciplinary and/or administrative silos prevents us from working together to achieve greater synergy, leverage varied expertise, and advance a common mission.

This chapter shows connections between some of the major initiatives, and demonstrates how in the aggregate they create a blueprint for the restructuring of undergraduate student learning through the content of the curriculum, the way we teach, and through the intentional design of co-curricular learning experiences.

The chapter also underscores how libraries as organizations and librarians as professionals are uniquely positioned to contribute to educational reform. Librarians most deeply engaged with information literacy initiatives over the past decade have been advocates for and in some cases leaders on their campuses in undergraduate education. Re-examination of curricula and shifts in teaching and learning strategies are necessary for information literacy learning outcomes to take root. As more campuses seek to create the institutional climate and effective practices for robust student engagement with their learning, this chapter specifically addresses the ways in which the culture, expertise, and organizational structure of libraries uniquely positions librarians to help these initiatives succeed.

Five Key Initiatives

From among the many reports, initiatives and projects garnering notice in the literature of higher education, this chapter will examine especially the following five approaches.

LEAP. *College Learning for the New Global Century*, a report from the LEAP National Leadership Council. LEAP or Liberal Education and America's Promise: Excellence for Everyone as a Nation Goes to College is a campaign on the part of the Association of American Colleges & University designed to advance and communicate the idea of the importance of undergraduate liberal education for all students. This report, which we will refer to as "LEAP", was selected for its broad intended audience and far reaching aims. The LEAP document is crafted by and for campuses both large and small, and reconciles the perceived division between liberal education and workforce education.

DEEP. *Student Success in College: Creating Conditions That Matter* by George D. Kuh, Jillian Kinzie, John H. Schuh, Elizabeth J. Whitt, and Associates. This title is based on the Documenting Effective Educational Practice (DEEP) project from the Center for Postsecondary Research at Indiana University and reports the educational methods and environments on campuses that lead to student success. This document, which we refer to as "DEEP", stresses the importance of collaborations among all educators on campus - be they faculty, student affairs personnel, or librarians - and the "positive restlessness" that results in continuous improvement.

Learning Reconsidered. *Learning Reconsidered: A Campus-wide Focus on the Student Experience*, a product of a joint effort on behalf of The National Association of Student Personnel Administrators (NASPA) and The American College Personnel Association (ACPA). As its title and provenance suggest, it is a document from the student life perspective but with a far reaching viewpoint on the possibilities for undergraduate educational reform. We refer to this document by its short title "Learning Reconsidered." It demonstrates significant areas of overlap with the recommendations and research of the other documents, despite the fact that it, and each of the other reports, has a distinct intended audience.

Reinventing Undergraduate Education. The Boyer Commission on Educating Undergraduates in the Research University, created by the Carnegie Foundation for the Advancement of Teaching, issued a report in 1998 entitled *Reinventing Undergraduate Education: A Blueprint for America's Research Universities*. This report, based on the work of Ernest Boyer, calls on research universities to examine their particular strengths and weaknesses in educating undergraduates and provides recommendations for change that are later echoed by those aimed at a broader group of colleges and universities.

ACRL. And lastly, *Information Literacy Competency Standards for Higher Education* produced by the Association of College and Research Libraries (ACRL) and endorsed by several higher education advocacy, research and accrediting bodies, presents a set of well defined learning outcomes for college students and lifelong learners. This document does not speak to the wholesale reform of the undergraduate education experience as do the others, but it advocates the widespread adoption of selected learning outcomes that require wholesale reform in curriculum content as well as in the way faculty create learning experiences. It is included for its broadly based efforts at defining those outcomes and for its understanding that all campus entities must collaborate in order for learning to succeed.

Overcoming differences

The words we use can be illuminating or they can get in the way. With the many initiatives in higher education, words used to describe concepts can be illuminating IF you are familiar with the full description and context of the concept. If you are not they devolve into jargon. As jargon, interpretation depends on surface meanings as well as other contexts in which the word is used. This can be a substantial obstacle in generating acceptance and in integrating new concepts into existing approaches and practices.

The Association of College and Research Libraries' *Information Literacy Competency Standards for Higher Education* is a case in point. A primary message to be gleaned from the title of this document is conveyed through the use of the word "literacy." "Literacy" has a long history of referring to basic reading and writing skills. Its use here projects the impression that the standards are

at a very basic level. In fact, however, the information literacy competencies formulated by ACRL are not just "basic"; rather they encompass a range of skills, attitudes, and approaches. In addition, "literacy" is a term being used in many contexts these days, such as computer literacy and media literacy. Familiarity with one type of literacy may provide a filter through which other literacies are interpreted.

Even as the information literacy standards were being developed in 2000 the phrase was under intense debate and the discussion has continued unabated. A National Research Council report (1999) on Fluency in Information Technology (FITness) includes information literacy as a subset of what it considers to be broader information technology skills. The ACRL approach presumes that information literacy includes information technology literacy, even as some claim that it does not and insist upon IT literacy as a separate concept. And the Education Testing Service iSkills test has popularized the concept of information/communication/ technology literacy (ICT Literacy) linking communication, technology, and information literacy into one cluster of skills and abilities. Regardless of the phrase, many information literacy experts have tried to avoid the jargon and focus instead on the learning outcomes and on the educational approaches needed to ensure their development. Since the learning outcomes themselves relate to most major educational reform initiatives, the conversation can be tailored to a local campus culture by framing the issue within the language of that initiative and by demonstrating the linkages to it. (e.g., research-based learning)

Relating ACRL objectives to those of other higher education groups, the skills and attitudes promoted have much in common with the outcomes identified by several of the groups we have discussed. For instance, *Learning Reconsidered* promotes "transformative" learning. Transformative learning includes having the student "evaluate both new information and the frames of reference through which the information acquires meaning." Although broader in scope than the ACRL standards (transformation also implies identity development) "transformative" is nonetheless closely aligned with ACRL Standard Three: "The information literate student evaluates information and its sources critically and incorporate selected information

into his or her knowledge base and value system" (ACRL 2000).

The AAC&U in its description of the "empowered learner" in *Greater Expectations*, the document preceding the report from LEAP, has similar learning outcomes, specifically to "interpret and evaluate information from a variety of sources." In LEAP, the AAC&U actually uses the ACRL language and specifies as one of its four major areas of outcomes "intellectual and practical skills, including inquiry and analysis, critical and creative thinking, *information literacy*, quantitative literacy, and teamwork and problem solving." [Italics added.] This merging of language is a step in the right direction, presuming the same definition is envisioned by each group. Even here however the AAC&U separation of critical thinking and problem solving from "information literacy" might be taken to imply that information literacy does not include elements of each, which is not the case.

"Engagement" is another word used with specific meaning in higher education reform efforts. Promoted by George Kuh in both the National Survey of Student Engagement and the extensive studies reported in DEEP, engagement with faculty, with librarians, with advisors, and with other students is said to be a key in effective learning. Following through with the ACRL example, engagement is not part of the ACRL standards per se, as the standards are focused on learning outcomes. However, the learning structures that engage students are also those that require information literacy and engagement is a method advocated in ACRL's *Guidelines for Instruction Programs in Academic Libraries*. That document provides implementation examples which cite methods identified in DEEP as promoting engagement and therefore learning, including first-year seminars, capstone course, and service learning. However without this in-depth awareness of the work of ACRL one might not make a connection between the findings of the study on "engagement" and the path advocated by the library group.

Just as jargon limits our ability to see the coherence of the various approaches, so does too close a reliance on the definitions themselves. The ACRL standards are more than a set of outcomes. They involve more than libraries. They embody an educational approach. The same can be said for LEAP, *Learning Reconsidered*, *Reinventing the Undergraduate Experience*, and all the rest. Nonetheless,

finding the commonalities in language is a key step in developing a coherent approach. Everyone wants to put their mark on ideas held essentially in common. We must break through branding and jargon to achieve shared understanding. Bottom line, it is all about what students need to learn to function in today's society, and tomorrow's world, and what methods are best employed to bring about that learning.

Making Connections

Nearly all of the reports under consideration begin with a discussion of how the post secondary education system in the United States is broken. *LEAP, Learning Reconsidered*, and *Reinventing Undergraduate Education* all discuss the changing student body and higher education's lack of response. Students today bring a greater diversity of experience, preparedness, motivation, and support to the enterprise. The same three documents and additionally the ACRL document also introduce the notion that students are not graduating with the skills they need to succeed in a new mobile, global, knowledge economy. Most of the documents make suggestions on just what it is that students should know, understand, and be able to do upon graduation and each makes recommendations on just how colleges and universities should ensure that this can happen. The DEEP project focuses much more on how institutions need to develop cultures and structures to achieve their stated learning outcomes than on the identification and acceptance of these outcomes.

Outcomes

LEAP, Learning Reconsidered, and *Reinventing Undergraduate Education* all reaffirm the importance of the traditional mission of higher education: helping students to develop a breadth of knowledge in the major disciplines. None of the three attempts to describe exactly what a college graduate should know about the physical world, for example, but each notes that it is important the learning outcomes include knowledge acquisition and application in the sciences.

All four of the initiatives that promote reform in the undergraduate educational mission articulate a need for the development of skills and abilities that contribute to

student success, both in their academic careers and in their lives. These "intellectual and practical skills," to use the language of the LEAP authors, include information literacy, communication competencies and other cognitive abilities crucial to life long learners in the new knowledge economy. Reformers are acknowledging the need for a deepening of these skills and abilities at the post secondary level and a new degree of focus on core skills due to an increasingly mobile and fast changing environment.

Lastly, the same four initiatives suggest that higher education include a kind of moral or social education. While none would suggest that institutions determine a set of values for their students, each discuss the importance of helping to students to discover, articulate and live within their personal code of ethics. LEAP talks about graduates with "personal and social responsibility". *Learning Reconsidered* includes several desired outcomes including civic engagement, humanitarianism and interpersonal and intrapersonal competence. Even the more narrowly focused ACRL document calls for students who "understand many of the economic, legal, and social issues surrounding the use of information and [who] access and use information ethically and legally."

Again, the call to focus on outcomes of this nature is based in the environment students will face following graduation. Their work and lives are increasingly likely to play out in a global environment with a broader array of cultural norms and values. Graduates of post secondary institutions should possess the tools to navigate this environment. As the LEAP report recommends, student learning experiences should be "anchored through active involvement with diverse communities and real-world challenges."

Principles and approaches

Just as the calls for education reform overlap in their identification of learning outcomes, they overlap in their notions of how those outcomes might be achieved. Each of the reports considered, LEAP, DEEP, *Learning Reconsidered*, *Reinventing Undergraduate Education* and ACRL, stresses the need for a collaborative approach. DEEP points to the need for collaborative learning with students and faculty interacting with a common goal. *Learning*

Reconsidered charges student affairs professionals to partner with academic affairs to create learning and developmental opportunities for students. LEAP and *Reinventing Undergraduate Education* take the broad approach and suggest that the agreed upon learning outcomes need to be a framework and that the university must approach learning as an entire community. The ACRL report, despite its clear and detailed articulation of specific learning outcomes, was also developed as a framework for institutions to use as the various stakeholders on campus work together to create the learning environment for graduates who are prepared to function in this global, knowledge economy.

All of the initiatives considered stress the need for inquiry based, self directed, learning using case studies and real-world problems. Opportunities for students to engage in big questions and make meaning through their learning are strategies promoted.

DEEP, *Learning Reconsidered* and *Reinventing Undergraduate Education* challenge institutions to tackle the issue of support and structure. *Reinventing Undergraduate Education* promotes the removal of barriers to interdisciplinary research. Administrative and organizational structures must support the efforts to achieve learning outcomes as is noted by *Learning Reconsidered*.

Nearly every initiative notes the need for assessment to, as LEAP encourages, "establish a culture of continuous improvement." DEEP echoes the sentiment, using the same phrase, "continuous improvement", and adding the concept of positive restlessness to describe this drive for the richer and deeper outcomes. The responsibility for the measurement of the institution's success or failure at helping students to meet the specified learning outcomes must be shared by faculty, librarians, student affairs professionals and administrators as is noted in *Learning Reconsidered* and ACRL.

LEAP, *Reinventing Undergraduate Education* and ACRL make the point that the learning outcomes determined by the institution must be integrated vertically through the curricula of the disciplines and cannot be covered in a few general education courses without the context of the area of study to provide relevance and motivation for students preparing for careers.

Lastly, most of the reports note that reform can not occur without support and reward for faculty and staff efforts to develop experiences, structures and programs to further the new learning outcomes. *Reinventing Undergraduate Education* is especially vocal on the need for professional development opportunities in support of curricular change. They are joined by DEEP, *Learning Reconsidered*, and ACRL in this premise.

Framework

Each report fleshes out the broad recommendations on ways to achieve learning outcomes. They all provide specific examples of opportunities for development and enhancement in the curricular and/or co-curricular pedagogical experiences of students. Many of the initiatives address the various interconnected parts of a framework for student learning. They focus on what the student should know when they leave college, and although they may not all label it this way, they focus on content knowledge, skills and abilities, and behaviors and attitudes. But they all also talk about the fundamental importance of engaging students in their educational experience in three important ways:

- How they are inspired and engaged by faculty as instructors in and out of the classrooms, and through learning strategies and approaches developed by faculty to develop each student's own passion and curiosity.
- Ways to excite and motivate students through the content of the curriculum, engaging students in the big questions, through relevance and real world application.
- The importance of engaging students to take steps for their own development through a variety of experiences available external to the curriculum.

Specific suggestions gleaned from the various documents include the development of robust First Year Experiences with living and learning components or cohorts of students who are block scheduled, the use of capstone experiences to allow students to demonstrate learning in a holistic and integrated fashion, service learning, study abroad and internships to foster civic engagement and cultural appreciation, and mentorship, advisement and

meaningful assessment of student progress as opportunities to inspire motivation and reflection in students.

Several of these initiatives underscore the importance for these student engagement strategies to be intentionally designed and coordinated to offer individual students opportunities best suited to customized experiences that, in the aggregate, contribute to the overall desired learning outcomes.

Roles for libraries and librarians

Libraries as organizations and librarians as professionals are uniquely positioned to contribute directly to the student learning agenda and to reform efforts in higher education. This is particularly true as campuses explore the integration of skills and abilities that include information literacy and especially as they design learning experiences that occur external to and complementing the curriculum.

Bridges between the curricular and co-curricular

Libraries and librarians participate in both curricular and co-curricular initiatives and developments on campuses. Students, on one hand, experience the library as a place for self paced learning and study, a place for lectures, exhibits, and other learning experiences. These out-of-class interactions are similar in nature to programming offered by student affairs and by academic departments. At the same time, libraries and librarians are central to students' ability to succeed in the research and learning required by their course work, both by providing resources and in an instructional role. Students may participate in library sessions as part of their course work, or even take a required course in research and library skills. Library resources - books, online materials, media, etc. - support the curriculum as does the expertise of the librarian in making those resources accessible and findable. The library sits soundly in both the student affairs, or co-curricular, camp and in the academic affairs or curricular camp.

Librarians participate in faculty governance, including curricular review, as well as in the development of campus student support and programming through service on campus committees, task forces and working groups. They

are not seen as advocating for particular departments or disciplines but are recognized as neutral. They have contacts across all disciplines, and are skilled in making connections. They partake of academic affairs in their formal instruction efforts and students affairs in their informal instruction efforts. Their own literature has for years discussed many of the general education outcomes and methods in the form of the development and use of the ACRL standards. Librarians can and many already do contribute in both process and content to many of the outcomes highlighted in the higher education reform movement.

Experts in developing skills for a knowledge economy

Several of the higher education initiatives focus on the change to a global knowledge economy and the importance in educating our students to function and be competitive in that world. Among the critical skills are the ability to determine the nature of information needed to solve a problem, to find targeted information and evaluate its reliability and usefulness, to apply and analyze the information to create new knowledge, and to function with an understanding of the ethical and financial contexts of their information use. These skills are at the heart of information literacy.

Librarians develop rich and varied collections of books, journals, government documents, art and artifacts, and more to provide faculty and students with a broad but intentional sample of the entire information universe. Librarians create tools to provide access to previously difficult to find information, mount digital collections, or work with the vendors of information to improve their interfaces -- all to expose researchers to the wealth of resources possible.

Librarians are information professionals, highly skilled at ferreting out that elusive resource and possess a rich tradition of sharing their expertise. Since before the age of widely distributed online searching, librarians have been navigating the waters of Boolean operators and controlled vocabularies, and the nature of the profession demands constant growth and relearning for new online environments.

The Boyer Commission in *Reinventing Undergraduate Education* says:

...If anything is evident, it is that the more information a person can obtain, the greater the need for judgment about how to use it. Obtaining information from the Internet is easy; children in elementary school can do it. But who teaches students how to take advantage of this mass of information? Who teaches them how to tell the difference between valuable information and clutter?

Librarians do. In cooperation with faculty and student affairs staff, librarians develop class sessions, tutorials, assignments, and a proliferation of materials designed to help post secondary students develop a critical approach to the glut of information in their worlds. Librarians help students make sense of the non-intuitive parts of the information age, issues of intellectual property, ownership of rights to the sole use of information, the costs of information, privacy, security and more.

Libraries as laboratories

Laboratories as learning environments in the sciences are designed to provide active learning environments for students to engage in inquiry and discovery, in groups, but with guidance. The experience intentionally complements the content of the class lecture while providing an interactive and collaborative learning experience where technical skills, procedures and methods, as well as data analysis and interpretation are practiced and developed. Scientific laboratory or field experiences are intentionally designed and linked as complementary to specific courses. Students learn to formulate a hypothesis; determine questions; learn about underlying principles; develop some technical skills; observe and record, question, analyze, and interpret data; try again as necessary; communicate/present results; and write an abstract or report, or an oral presentation or prepare a poster session. In general, laboratories as learning environments are designed for students to develop skills and abilities to question, explore, analyze, discover, reflect, practice, make connections, and communicate the results of their experience.

Libraries, physical and virtual, are also environments where students learn the craft of research. They, like laboratories, are places where students, with assistance and guidance, engage in hands-on practice to develop the

skills and abilities to explore and discover, analyze and reflect, interpret, evaluate, and make connections. Unfortunately, most institutions do not intentionally link the library experiences to courses and curricula in ways that mirror the laboratory experience. Somehow the expectation is that students will engage in these activities and learn these skills and abilities in a co-curricular fashion, on their own initiative. What is possibly worse is the belief and expectation that all the techniques of library-based research can be learned in one or two class sessions - colloquially referred to as "one-shots" by librarians. Students must be exposed to all the tools, techniques, approaches, and experiences they need to develop over time. Learning occurs best where a pattern of introduction and then reinforcement is in place. This is as true of information competencies and attitudes as it is for the skills and knowledge in the disciplines. In addition, these skills must be integrated across the curriculum, and throughout the learning experience.

Professional values and a supportive environment

Kuh's DEEP studies show the importance of a supportive campus environment. As his research shows, engagement is a key to retention and to learning. It is often recognized that Libraries have a very visible space that unites the campus, a budget that allows them to respond to changing environments, and a long tradition of education support and service. Librarians offer a stable and supportive presence to the student during the library's extended hours, and even online with chat and email services. These interactions, in a librarian's office or at a service desk, often mature into ongoing relationships.

What is less obvious is how the deeply ingrained values of the library professional contribute to student learning in a sustained way. For example, the service culture of libraries is reflected in a commitment to continuous improvement, as is evidenced by the development and use of nationally benchmarked user satisfaction surveys such as LibQual+, a survey used by libraries to assess user expectations and perceptions and to make changes accordingly. This strong service culture influences our role as educators. The library professional literature is filled with articles and research about ways to constantly anticipate needs and design new services, accommodating all

types of learners. For decades we have had a professional focus on teaching. We have continually explored and contributed in this area, such as in the creation of learning environments as well as in our role as partners in the educational process. And as information specialists and power users of every generation of technology, librarians have frequently been the first on campus to apply technology as a tool for teaching and learning.

Faculty development, collaborations, and networking

Librarians on many campuses are engaged in faculty and staff professional development efforts as providers of training and development opportunities. Librarians help faculty and staff stay abreast of rapid changes in information access and management technologies. Librarians identify developments and trends in scholarly publishing in the disciplines and filter and forward information to faculty and staff. Librarians can advance the call for faculty development, help create a campus environment that values faculty development in many areas, provide a venue for events, and lead or assist in organizing events. Some examples include provision of workshops on plagiarism or copyright or specific databases; collaboration with a teaching /learning center to work with faculty on assignment design; and advocating and planning a retreat on general education.

Librarians as participants in complex, interconnected organizations must be collaborative and goal oriented. Unlike their faculty colleagues engaged primarily in the self directed and independent world of the classroom or lab, librarians must engage with their peers in business operations to order and process materials, must develop working groups to develop and enhance service programs, must foster rich collaborations with instructors in order to reach classes of students engaged in structured research projects, must network with librarians at other institution to engage in consortial purchasing deals, and must constantly be working in concert with a host of others both in and outside the library to ensure that the entire package that is an academic library runs smoothly and coherently. Librarians have a tremendous amount of practice at team work and meaningful contribution to committees and partnerships. As John M. Budd says in "The Spellings Commission: Challenges to Higher Education and Academic

Libraries" (Budd 2007) "It is possible ... for colleges and universities to learn from their libraries when it comes to cooperation. The lessons include enhancement of what students and faculty can accomplish and the financial realities of achieving the enhancement."

Librarians have a solid record and a professional value that encourages collaborating and networking both on campus and among other institutions.

Conclusion

Educational reform initiatives are being proposed by many groups. There is substantial overlap in these initiatives. This overview provides a glimpse of the role the many stakeholders can play -- especially librarians, whose current and potential contributions are sometimes overlooked. With that in mind, the authors, librarians all, offer the following recommendations:

- Include librarians in academic planning processes.
- Incorporate the learning outcomes of information literacy when planning learning outcomes for students on your campus.
- Consider ways to integrate information literacy across the disciplines, along with other essential skills such as communication.
- Intentionally link library instruction to core courses in order to allow for the design of sequenced, developmental learning.
- Partner with librarians on course redesign, many are creative and knowledgeable about designing scalable assignments that encourage the development of research skills.
- Consult with librarians as you intentionally create learning experiences for students within library spaces and programs.
- Include librarians with student affairs experts as co-curricular learning experiences are developed.

References

Association of American Colleges and University. *Greater Expectations: A New Vision for Learning as a Nation Goes to*

College. A National Panel Report. 2002. Retrieved November 7, 2007 from <http://www.greaterexpectations.org/>

Association of College and Research Libraries. *Guidelines for Instruction Programs in Academic Libraries*. 2003. Retrieved November 7, 2007 from <http://www.ala.org/ala/acrl/acrlstandards/guidelinesinstruction.cfm>

Association of College and Research Libraries. *Information Literacy Competency Standards for Higher Education*. Chicago: Association of College and Research Libraries, 2000. Retrieved November 9, 2007 from <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.cfm>

Boyer Commission on Educating Undergraduates in the Research University. *Reinventing Undergraduate Education: A Blueprint for America's Research Universities*. 1998. Retrieved November 7, 2007 from <http://naples.cc.sunysb.edu/Pres/boyer.nsf/>

Budd, John M. "The Spellings Commission: Challenges to Higher Education and Academic Libraries." *portal*, 2007, 7 (2), 137-146.

Kuh, George D., Kinzie, Jillian, Schuh, John H, and Whitt, Elizabeth J. *Student Success in College: Creating Conditions That Matter*. San Francisco: Jossey-Bass, 2005.

National Association of Student Personnel Administrators and The American College Personnel Association. *Learning Reconsidered: A Campus-wide Focus on the Student Experience*. January 2004. Retrieved November 7, 2007 from http://www.naspa.org/membership/leader_ex_pdf/lr_long.pdf.

National Leadership Council for Liberal Education & America's Promise. *College Learning for the New Global Century*. Association of American Colleges and University. 2007. Retrieved November 7, 2007 from http://www.aacu.org/advocacy/leap/documents/GlobalCentury_final.pdf

National Research Council. Committee on Information Technology Literacy; Computer Science and

Telecommunications Board; and Commission on Physical Sciences, Mathematics, and Applications. *Being Fluent with Information Technology*. Washington: National Academy Press, 1999. Retrieved November 9, 2007 from http://www.nap.edu/catalog.php?record_id=6482

Authors

Diane VanderPol is the Head of the University of Nevada Las Vegas Instruction Department. She serves on the UNLV General Education Advisory Committee and the campus Committee on Culture of Teaching and Learning.

Jeanne M. Brown is Assessment Librarian for the UNLV Libraries. She serves on the campus Assessment Committee, which participates in the assessment of general education outcomes.

Patricia Iannuzzi is Dean of the University Libraries at UNLV. She chairs the campus Committee on Culture of Teaching and Learning. She also chaired the ACRL task force which developed the Information Literacy Competency Standards.