

**Part Four:
The Literature
Base Drawn Upon
by the Committee**

Establishing an intellectual foundation for university outreach represented an important component in the committee's plan of work. In Chapter 6, the reader will be exposed to summaries of cutting-edge literature associated with the subjects of universities and university outreach. The committee found this literature to be invaluable; the documents helped inform the committee's thinking about the fundamental nature of the university enterprise and the function of outreach in the work of a university.

**Chapter 6
LITERATURE ON UNIVERSITIES AND
UNIVERSITY OUTREACH¹¹**

Reading and discussing a select set of literature about universities and university outreach were the very first tasks undertaken by the committee. These tasks served four important functions:

- ▶ They provided a diverse group of people with a common vocabulary about higher education and outreach.
- ▶ Because relatively few committee members had academic backgrounds in higher education and/or outreach, reading the literature provided a means to become knowledgeable about important issues and topics.
- ▶ Because the literature review was one of the first tasks, the initial interactions among committee members were associated with the literature, as compared to discussions about MSU outreach strategy (which might have served to polarize committee members).
- ▶ The reading, discussing, and interacting served to frame (if not galvanize) the committee's intellectual perspectives about higher education and outreach.

¹¹ Chapter written by Frank A. Fear

During the first 10 weeks of the committee's deliberations (from late January through the middle of March 1992), committee members spent most of their time discussing pertinent literature. Each piece of literature served a different purpose. The goal of this chapter is to summarize the key points included in seven important readings that informed the committee's perspective on outreach:

Keller's (1984) *Academic Strategy* was selected because the author describes the essential dimensions of strategic thinking and planning for institutions of higher education.

Boyer's (1990) *Scholarship Reconsidered* was selected because the author proposes an expanded notion of scholarship—a notion that is relevant for outreach.

Lynton and Elman's (1987) *New Priorities for the University: Meeting Society's Needs for Applied Knowledge and Competent Individuals* was selected because the authors recommend ways of invigorating universities with specific reference to the outreach function.

Alpert's (1985) paper, "Performance and Paralysis: The Organizational Context of the American Research University," was selected because the author suggests an alternative way of thinking about university organizational structure.

Enarson's (1989) monograph *Revitalizing the Land Grant Mission* was selected because the author discusses issues that directly apply to the case of Michigan State University.

Checkoway's (1991) paper, "Unanswered Questions about Public Service in the Public University," was selected because the author enumerates and discusses many of the knotty issues associated with the public university's public service function.

Votruba's (1992) paper, "Promoting the Extension of Knowledge in Service to Society," was selected because it outlines eight challenges facing universities in their attempts to revitalize the academic mission to better accommodate outreach.

Keller's Perspective on Academic Strategy

The driving questions posed by Keller are: What business are we in? What work is most central to us? How shall we proceed in doing that work, given the nature of our business? Keller (p. 75) writes:

To have a strategy is to put your own intelligence, foresight, and will in charge instead of outside forces and disordered concerns. The priorities are always there. The question is who selects them. When the pressures are in charge, the present gets the attention not the future; fighting brush fires and improvisation take precedence, not planning; defense is the game, not offense; and political and psychological infighting rules, not meeting the outside needs, threats, and opportunities. Strategy means agreeing on some aims...or to arrive at a destination—through the effective use of resources....

The beginning point is self-consciousness for the organization. It is knowing the place for the first time, understanding what business you are in, or want to be in, and deciding what is central for the health, growth, and quality of the organization.

Keller argues that academic strategy requires that an institution establish a clear sense of goals, and a means of allocating resources to achieve those goals. Because of the recent budget dilemmas facing higher education, the author believes that colleges and universities are becoming more farsighted, more externally aware, and more competitive. But, as institutions engage in academic strategy, Keller warns about the emergence of one or more of three "dilemmas":

- ▶ The "Planners Dilemma" means that the greater the threat, the more you need to plan. But the greater the uncertainty, the larger the chance that the plan will be inadequate or inappropriate.
- ▶ "Hirschman's Dilemma" suggests that every organization is subject to decline and decay (gradual loss of energy, efficiency, rationality). Yet renewal and development demands stimulating people to bring new energy and imagination to their work.
- ▶ "Kaufman's Dilemma" advises that only through steady changes over long periods of time will organizational transformation take place. But slowness during times of rapid environmental change often leads to demise and disaster.

Keller also describes the basic elements of academic strategy; it—

- ▶ is an active, outward looking process that attempts to keep the institution in step with a changing environment;
- ▶ is competitive by recognizing that higher education is subject to increasingly stronger competition;
- ▶ concentrates on making decisions that are appropriate for the institution;
- ▶ combines economic analyses, political maneuvering, and psychological interplay; and
- ▶ is participatory and tolerant of controversy.

At the same time, those in academe must understand what academic strategy is not. Keller believes that academic strategy—

- ▶ does not produce a blueprint;
- ▶ is not simply a vague set of platitudes;
- ▶ should not represent a personal vision (vs. an institutional vision);
- ▶ is not a collection of plans;
- ▶ should not be done by planners;
- ▶ does not surrender institutional mission to market forces or trends; and
- ▶ is not a way to eliminate risks.

Keller's framework is presented graphically on p. 152 of his book. It includes several, interrelated platforms:

Traditions

- ▶ Organizational values, and culture, are powerful forces.
- ▶ Changing values and culture should be done "knowingly, tenderly, and tactfully."

Academic Strengths and Weaknesses

- ▶ Each important activity and function should be candidly evaluated in terms of quality, need, appropriateness to mission, and competitive availability.
- ▶ Most important is the evaluation of faculty and programs.

Abilities and Priorities of the Leaders

- ▶ Planning effectiveness is not simply a function of conducting quality analyses and identifying the most appropriate strategies.
- ▶ Academic managers "must have a saddle that they find comfortable for riding into the future."

Environmental Trends

- ▶ Includes five areas in which campuses need to forecast the future—technological, economic, demographic, politico-legal, and sociocultural forecasting.

Market Preferences

- ▶ Includes three important elements: market segmentation (identifying potential clients), perceptual mapping (determining what stakeholders believe about the institution), and positioning (building on widely held perceptions with specific audiences).
- ▶ Each campus must look for its market niche. No college can be everything to everybody.

Competitive Situation

- ▶ The goal is to find a position in the marketplace where an institution can best defend itself against competitive forces or at least can influence those forces in its favor.
- ▶ The key is determining where you stand vis-a-vis the competition so that you can make decisions regarding which position you will strive to maintain (or establish).

Boyer's Multidimensional Notion of Scholarship

Boyer's manuscript, written for The Carnegie Foundation for the Advancement of Teaching, represents for many the clarion call for fundamental change in higher education. Boyer believes that scholarship is the core of academic life, but that the faculty reward system does not match the full range of functions that take place within the academy. Professors are then often "caught" between obligations that compete for their time—some of which are better rewarded than others.

Boyer poses the most provocative of questions: What does it mean to be a scholar? He believes that the answer is to be found in the functions that academics are expected to perform in conjunction with their position responsibilities. He then concludes that it is time for the priorities associated with the professoriate to be better linked to the faculty reward system and the missions of the institutions in which academics work.

Boyer traces the history of higher education in America to show how the meaning of "scholarship" has changed over the years. At the colonial college, Boyer writes, the student was the focus of attention. Teaching was the primary mission, and higher education was expected to build student character and prepare the next generation of civic and religious leaders. With the passing of the Morrill Act of 1862, service became a major focus for many institutions. Boyer contends that "service" took on a moral meaning—not just to serve, but to "reshape society." This approach was resisted by some in the academy; others thought it was simply wrongheaded and counter to the very purpose of the academy.

By the middle of this century, basic research became the focus for many institutions. The modern university, as we now know it, became increasingly committed to the scholarship of science. In this environment, professors' scholarly reputations are built on the number and importance of their contributions to the knowledge base. In the modern university, the research function and graduate student training are very important. Boyer (p. 12) writes:

The problem was that the research mission, which was appropriate for some institutions, created a shadow over the entire higher learning enterprise—and the model of a "Berkeley" or an "Amherst" became the yardstick by which all institutions would be measured.

A different, more sophisticated, metric is needed according to Boyer (p. 13):

We proceed with the conviction that if the nation's higher learning institutions are to meet today's urgent academic and social mandates, their missions must be carefully redefined and the meaning of scholarship creatively reconsidered.

With this background, Boyer seeks to redefine and broaden the meaning of scholarship. He describes four scholarly functions: the scholarship of discovery, integration, application, and teaching:

Scholarship of DISCOVERY

- ▶ The scholarship of discovery significantly contributes to the intellectual climate of a university.
- ▶ Discovery is not limited to outcomes. The process (and the passion) gives meaning to the function.

Scholarship of INTEGRATION

- ▶ The key consideration is the process of giving meaning to isolated facts, making connections, linking the disciplines in new ways, and looking for larger intellectual patterns.
- ▶ Integrative efforts mesh with various scholarly trends, including interdisciplinary research.

Scholarship of APPLICATION

- ▶ To be considered scholarship, service activities must be tied directly to one's special field of knowledge and relate to, and flow directly out of it, this professional activity.
- ▶ Scholarship of application is not one-way. Theory and practice vitally interact, and one renews the other.

Scholarship of TEACHING

- ▶ Teachers must be well informed, steeped in the knowledge of their fields, widely read, and intellectually engaged.
- ▶ Teaching is not just transmitting knowledge. It also transforms and extends it. Through the teaching experience, professors should be pushed in new directions.

Lynton and Elman's New Priorities for the University

For Lynton and Elman, universities are in the "knowledge business," especially the business of advancing the frontiers of knowledge. As society's knowledge needs change, the authors contend, so also should the ways in which universities organize to do business. Lynton and Elman suggest that this will require universities to—

- ▶ Broaden faculty values, priorities and rewards to include a wider range of knowledge-based activities.
- ▶ Enlarge instructional activities beyond traditional geographic bounds, time frames, and formats.
- ▶ Adapt structures and procedures to accommodate interdisciplinary activities and knowledge-transfer needs.

They write (p. 3):

We are suggesting, then, that universities in their teaching as well as in their other professional activities, relate theory to practice, basic research to its applications, and the acquisition of knowledge to its use. The more faculty become involved in external applications of knowledge through technical assistance, policy analysis, and other extension activities, the easier it will be for them to make the necessary changes in the curriculum and the more qualified they will be to teach students returning to the classroom with workplace experience.

Lynton and Elman coin the term the *extended university* to describe how they believe universities should adapt to the society's knowledge needs:

We are proposing a conception of the university quite different from the pervasive image of a self-contained and fairly isolated campus populated by research scholars engaged in the pursuit of knowledge for its own sake and by young students pursuing undergraduate and graduate studies on a full-time basis. That image has always been an idealization. Today, it has become a myth that constitutes a serious barrier to the university's real objectives (Lynton and Elman, p. 4).

The authors argue that the research university of the post-World War II era has promulgated a narrow conception of scholarship and a limited range of instructional options. The fundamental paradox in the postwar explosion in the growth of higher education institutions, they contend, is great diversity in the number of institutions combined with relative homogeneity in terms of institutional values and aspirations.

The challenge facing today's higher education, Lynton and Elman continue, is not limited to the generation of knowledge. The challenge is what the authors describe as the "synthesis, interpretation, distribution, and ingestion" of knowledge in ways that can be efficiently and effectively "absorbed" in society. In their model of the extended university, each institution determines the appropriate mix of knowledge-based activities.

In seeking to transform knowledge into applications, universities will likely view technical solutions in relationship to the economic, social, political, and cultural contexts in which the knowledge will be used. For many institutions, this will mean "rediscovering extension":

What we need today are a rediscovery and renewed implementation of the fundamental concept that underlay the land-grant institution: combining extension with research. The needs of our knowledge society today are strikingly similar to those of our agricultural society a century ago....

However, the implementation of this idea is far more difficult in the contemporary context than it was for agriculture at the beginning of the century.... Operationally, the past has little to teach us: neither the mechanism of extension agents nor the relatively simple funding pattern through federal legislation is adequate to current and future needs (Lynton and Elman, pp. 28, 29).

One of the major problems confronting higher education institutions as they seek a transition to the extended university model is that "service" has not been generally viewed as scholarship in the faculty reward system. Rather, it has implied a kind of academic philanthropy or "good citizenship." Yet, activities associated with the interpretation and application of knowledge, which are undertaken as part of technical assistance of policy analysis, for instance, require scholarship. Because of the widely held notion is that service is not scholarship, there is a need to use another label for referring to scholarship undertaken for the direct benefit of external (to-the-academy) audiences. One alternative is to refer to this work as *university outreach*.

While not all faculty will engage in outreach in the extended university at any point in time, some certainly will. Therefore, the traditional faculty reward system needs to be modified to accommodate university outreach as an essential feature of faculty work. Without this modification, the authors warn, the *status quo* will remain in place:

Without a substantial adaptation of the faculty reward system, all efforts at greater university outreach and expanded faculty activities will continue to be what they have been in the majority of institutions: a matter of well-intended but ineffective rhetoric (Lynton and Elman, p. 150).

In order to reward university outreach, it is important to evaluate it effectively. The nature of that evaluation—the indicators and review process—should not be different from what is used to assess the quality of "traditional" scholarship.

Alpert's Matrix-Model University

Alpert argues that the university, as any institution in the throes of retrenchment, must rethink its basic organizational structure. The dominant pattern of university organization, what Alpert classifies as the *linear model*, involves an autonomous set of academic departments and professional schools that are linked by an institutional identity. In this model, the academic unit is the basic organizing unit in the academy. But, the "world's problems are not organized by academic unit." Consequently, the traditional university organizing structure does not mesh well with the university's relationship to its external environment. And, internally, in light of increased competition for financial resources, competition between departments and schools has also increased.

The *matrix model* of the university represents an alternative organizational scheme. This scheme is more sensitive than the linear model to the importance of institutional mission, the university's internal dynamics, and the university's relationships with its external environment. In the matrix model, each academic department has special relationships with other departments at the same university (the campus community), as well as departments of the same discipline at different universities (the disciplinary community). The campus community addresses itself to the undergraduate teaching mission, while the disciplinary community addresses itself to the graduate education, research, and faculty selection and performance elements:

In the university of today, the disciplinary communities have assumed the central responsibilities not only for graduate and professional education, but also for setting the goals, justifying and selling research agendas to federal sponsors, allocating academic research grants and implementing the peer review process for the rating of individual and department quality (Alpert, p. 252).

Although Alpert does not expressly address the topic of university outreach in his paper, the concepts of "campus community" and "disciplinary community" are readily applicable to the subject. The lateral linking of campus units (i.e., across disciplines at the same university) enhances the possibility of organizing university knowledge resources in conjunction with societal problems (e.g., faculty from various disciplines working on the problem of job creation and retention). At the same time, the vertical linking of disciplinary units across campuses (i.e., within discipline at different universities) offers great promise as a mechanism for enhancing interinstitutional cooperation. In so doing, this approach can reduce duplication and overlap in disciplinary specialization.

Enarson's Strategies for Revitalizing the Land Grant University

Enarson, former president of The Ohio State University, suggests that the Morrill Act revolutionized American higher education. With the passage of this act, land grant institutions of higher education were created, institutions that were—

- ▶ inclusive, not exclusive;
- ▶ unconventional, not traditional;
- ▶ practical and societally relevant;

- ▶ collaborative with the public sector; and
- ▶ committed to conducting applied, as well as basic, research.

Yet, President Enarson argues, it is evident that large numbers of faculty currently appointed in land grant universities are either unfamiliar with the history of the land grant concept or fail to understand or accept the central values of the land grant concept. Since World War II, as described earlier in this chapter, the model of the research university has become preeminent. Many land grant universities have become national research universities. Given this evolution, Enarson (p. 3) poses a central question:

How can the land-grant university embrace the research university model and yet be faithful to the land-grant mission? This is the troubling question.

There are major differences between land grant universities and major non-land grant state institutions of higher education. According to the author, a land grant institution (1) is linked with the USDA and is expected to have a major commitment to American agriculture and natural resources; (2) puts a high premium on outreach; and (3) pioneered in extending service to developing nations.

Enarson believes that "...these are differences that must be preserved and protected against all who would homogenize public higher education" (p. 4). But the author expresses the concern that land grant institutions are favoring basic research as opposed to applied research, and that the needs of the state in which they are located may be less important to many faculty than their disciplinary work.

President Enarson continues by outlining four major challenges facing contemporary land grant institutions. Those challenges are:

- ▶ **Agricultural development and rural America.** Land grant universities need to rethink the research agenda and accept the challenge to work with rural America to rebuild its social and economic health. He argues that the scope of Cooperative Extension, as it was traditionally conceived, must be expanded or new mechanisms must be created to extend knowledge on problems relevant to society.
- ▶ **The youth and school crisis.** Enarson argues that land grant institutions must address issues associated with youth-at-risk, including the capacity of the public school system to educate tomorrow's citizens and leaders.
- ▶ **Economic development.** Land grant universities, according to Enarson, need to be integrally involved in issues associated with public policy and administration, local governance, and the creation of public-private partnerships. Another critical role involves educating students and training adults (through off-campus programs) to achieve a well-trained workforce. Finally, these universities must take leadership in helping to internationalize their respective states through foreign language training, business development programs, and civic education.
- ▶ **Reform of undergraduate education.** In many respects, Enarson contends, the land grant institution's most important form of service to its state comes in the form of undergraduate education.

Enarson concludes by observing that the topic of outreach often becomes a topic of debate even on land grant campuses. This debate stems, he feels, from differing conceptions about the purpose and priorities associated with higher education. But is this an informed debate, the author asks? Given the mandate of land grant institutions, President Enarson believes that:

Ritual obeisance to the public service role in mission statements is not enough. In its priorities, budgetary decisions, and personnel policies, the land-grant university must give sharp definition and vitality to the performance of its public service obligation (p. 16).

Checkoway's Unanswered Questions about Public Service in the Public University

Professor Checkoway defines *public service* as work that develops knowledge for the welfare of society. He contrasts public service with *professional service*, i.e., work associated with professional associations, societies, and organizations; and *university service*, i.e., work associated with campus efforts.

Checkoway's thinking about public service has been shaped by his experience as a faculty member at the University of Michigan. On the one hand, it is natural to assume that the public university has responsibilities (if not obligations) to the society whose funding it owes its existence. One could reasonably argue that one of those responsibilities is to provide knowledge as a resource for society's welfare. One could also argue, from a pragmatic perspective, that research and service are complementary activities and that excellence in one function enhances excellence in the other function. But Checkoway admits that there is no consensus regarding the public service responsibilities of public universities. And members of the academy do not all agree that there is a synergistic relationship between research and service.

He argues that an informed discussion is needed regarding the standing, prospects, and future of public service in public universities. The purpose of Checkoway's paper is to delineate the basic topics that might inform that discussion. Among the most important questions, according to the author, are:

- ▶ What activity should be included as service?
Create new knowledge? Train others in discipline/area of expertise? Make knowledge more understandable/useful?
- ▶ What are the benefits of service to faculty members?
Better relate theory to practice? Develop teaching skills? Produce positive curricular changes? Strengthen new courses of study?
- ▶ What are the benefits of service to the university?
Help fulfill responsibility to society? Build support for academic activities? Generate funds for programs? Improve communications with constituents? Serve public vs. special interests?
- ▶ What are the benefits of service to society?
Provide knowledge and skills responsive to needs? Develop individual capacities?

- ▶ Who should perform service?
All employees? Only those in certain programs (e.g., in the professional schools)?
- ▶ Who should be served?
The general community? People in a particular geographic area? Those previously excluded?
- ▶ How should service be evaluated?
What indicators should be used? What methods should be used to determine if service is worthy of reward?
- ▶ What are the university's service strengths?
Service on certain topics (e.g., economic productivity, environmental quality, health and human services)? Does the answer depend on how the knowledge is disseminated or used?
- ▶ What is the impact of the university's intellectual resources on society?
- ▶ How effective is a faculty member's work in terms of its utilization?
- ▶ What forces limit service in the university?
- ▶ What strategies would strengthen service?
- ▶ What structure would strengthen service?
Create new bureaucratic units and special staff? Should leadership be taken by academic units with experienced faculty who have a commitment to develop knowledge through collaboration with the community?

In many respects, Checkoway's questions—as an aggregate—can be viewed as a means to answer the fundamental questions: A university for what? A university for whom? And, although his essay is designed to be more provocative than definitive, Checkoway does suggest one way of treating public service in the public university—as a function equivalent to teaching and research:

Quality research, teaching and service are emerging as complementary activities in many professions and fields. The new vision is one in which excellence in one activity is increasingly inseparable from other activities in accordance with the best traditions and highest standards of the academic community (p. 224).

Votruba's Challenges Associated with University Outreach

Votruba writes (p. 72):

American universities have received unprecedented public support that has flowed from a belief that universities were advancing the public good. Today, the adaptive capacity of universities is being tested like never before....

But are universities ready for this challenge? Votruba believes that institutions of higher education need to strengthen their capacity to respond to society's needs. That strengthening process will

likely transform the way universities do business. He discusses eight strategic challenges associated with that transformation:

1. *Reconceptualize the core academic mission*

Votruba believes that the first step involves recasting traditional thinking about the core academic functions of teaching, research, and service. He argues that the transformational process requires us to view these functions as interactive and mutually reinforcing, not as distinct and separate, enterprises.

Reconceptualizing the academic mission—as this new thinking will almost certainly accomplish—means that we shall need to expand our definitions of research and teaching. Votruba (p. 73) argues:

Research must be broadened to include not only the generation of new knowledge but also the aggregation, synthesis, and application of existing knowledge. Teaching must include noncredit as well as credit instruction, on and off campus, involving older as well as younger students.

2. *Reconceptualize the meaning of access*

The traditional meaning attached to the word "access" pertains to admitting students to undergraduate degree programs and making higher education more affordable (e.g., through affordable tuition rates). These certainly are important ways of thinking about access, according to Votruba, but they are insufficient ways of conceptualizing access in the knowledge age. Access should also mean the ability of persons to participate in learning throughout the lifespan; for professionals to acquire continuing professional education in a timely manner; and for learners to take advantage of university knowledge resources without having to attend classes on campus.

Because of the multidimensional meaning of access, universities will also need to think more in terms of "function trade-offs." Each university (indeed, each college and department) will need to decide—based in terms of the society's learning needs, and its knowledge capacities—how it will balance its efforts among an array of activities: undergraduate and graduate instruction (on campus), basic and applied research, off-campus instruction, etc.

3. *Rebalance the faculty reward system*

Reconceptualizing the meaning of access, and the subsequent broadening of the parameters associated with the academic mission, means that universities will need to adjust the faculty reward system in corresponding fashion. Votruba (p. 74) offers:

On most university campuses today, the faculty reward system is dangerously out of balance with the mission. Despite all of the rhetoric...the continuing emphasis on research productivity as the primary and often sole criteria for professional status and advancement places these other dimensions of the campus mission in jeopardy.

To accomplish the goal of rebalancing the faculty reward system, the author argues that institutions must "unpack" the service category (so as to clearly identify the mission-related dimensions of extending knowledge to society, i.e., outreach), and establish measurement and evaluation systems for outreach activities that are commensurate with the systems used for evaluating on-campus teaching and research efforts.

4. *Adapt institutional organization*

Traditionally, universities have organized knowledge in disciplinary terms. Votruba argues that universities are being challenged to organize knowledge around societal problems. To accomplish this, multi- and interdisciplinary work is needed. And institutions need to reduce the barriers—and also create incentives—for faculty to participate in problem-focused work.

5. *Integrate outreach*

The outreach efforts at many universities are frequently performed by persons who have major outreach responsibilities and in units (such as institutions and centers) that have been created with applied research and outreach in mind. Votruba believes that the expanded notion of the academic mission carries with it an expanded notion of who should be responsible for outreach. He suggests (p. 76):

Outreach should be the responsibility of every dean and chair in the same way that these administrators are currently responsible for undergraduate and graduate education and research. Every college and departmental mission statement should include specific reference to the unit's knowledge extension and application priorities, as well as indices for measuring accomplishments.

Votruba also argues that nonacademic units (e.g., the library) should engage in outreach, and should incorporate into their mission and operating plans how they intend to "reach out" to society.

6. *Financing outreach*

This energetic outreach agenda will require additional financial resources. A multiple strategy approach will be required to accomplish this goal, and will likely include a mix of internal reallocations, external fundraising (e.g., foundation support), and fee-for-service activities.

One of the dangers associated with financing outreach is to cater only to those who can afford to pay the full cost of services. An effort must be made to avoid the insidious consequence of having outreach become a tool for expanding the gap between the *haves* and the *have nots*.

7. *Promoting community-based learning systems*

Universities are not the sole knowledge resource in society. And land grant universities are not—and should not be—the only universities that engage in outreach. Community colleges, liberal arts college, regional universities, as well as an array of public, private, and nonprofit organizations, need to join major universities in establishing community-based learning systems. A community-based learning system involves identifying local learning needs and then acquiring the knowledge resources—from a variety of sources—to meet those needs.

New alliances, partnerships, and collaborations among knowledge resource institutions will be required to make possible the community-based learning system. Votruba believes that distance education technologies are an important part of this agenda:

With the advent of satellite broadcast, two-way interactive television, and other forms of distance education, we appear to be embarking on a new and exciting era in collaborative education programming; and era that...can integrate the best of "high tech" and "high touch"... (p. 78).

8. *Learning about the knowledge utilization process*

Votruba's message should not be construed as simply a call for universities to "do more outreach." The call very much implies doing "good" outreach, and learning from those experiences. Extending knowledge suggests that outreach is a one-way, mechanical process. Those experienced in outreach recognize that it is more than that. Much research is needed to help us more fully understand how, when, where, and why specific outreach strategies work and do not work. As Votruba (p. 78) writes:

We need to advance our understanding of the knowledge utilization process in a variety of settings involving a broad range of learners. This knowledge must then be used to help inform the extension and application of knowledge as it is undertaken by academic units across the campus.