

**FOUNDATIONS FOR THE FUTURE:
A STRATEGIC PLAN FOR BUCKNELL**

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Executive Summary

"Foundations for the Future" is a strategic plan for Bucknell University in the 1990s. This clear yet flexible plan should enable Bucknell to offer effective educational programs, meet its admissions goals, develop budgets that support its educational goals, and continue to succeed in resource development. The strong and persistent criticism of higher education over the past decade sets the context for the challenges we must address. Colleges and universities have been attacked for incoherent curricula, unjustifiably high costs, lack of accountability, and an excessive emphasis on research that causes teaching to be neglected. This critical public environment exacerbates the specific challenges Bucknell faces.

While addressing these external challenges, Bucknell faculty and administrators must learn to educate a more socially diverse and ethnically segmented school population, recruit among a decreased number of college-age high school graduates, replace a large cohort of retiring faculty from a shrinking pool of graduate students, and operate under increased budgetary constraints. Bucknell needs to be concerned about affordability and price sensitivity, what we teach and *how* we go about teaching the students of the '90s, recruiting and supporting teacher/scholars, examining our educational value system, teaching our students to put burgeoning technology in historical and moral perspective, and developing a governance system that can provide timely decisions and respond to rapid changes. If we ignore these challenges and fail to make clear to our public the strengths of the education we offer, the costs to us will be reduced educational effectiveness, declining admissions, decreased external funding, and severe cutbacks in budget.

Bucknell's mission is to liberate students to be critical and complex thinkers and original decision-makers who have learned compassion, civility, and a concern for social justice. To achieve this educational mission, "Foundations" presents six common learning objectives:

1. Integrating compartmentalized disciplinary knowledge and multiple perspectives, balancing study in the major with the kind of study that provides students with competing views on complex problems;
2. Understanding our natural and fabricated worlds, stressing the connection between our human and created worlds and our responsibilities to both;
3. Developing international and multicultural perspectives, committing our curriculum and campus life to a sustained focus on global and multicultural issues;
4. Fostering creativity, personal reflectiveness, and moral discernment, by providing a supportive environment to encourage students in imaginative and disciplined intellectual and personal growth;
5. Nurturing independent and collaborative learning, by balancing the competitive and cooperative dimensions of education;
6. Creating a holistic, supportive community of mutual respect, using Bucknell's living and social environment to enhance its educational objectives.

By utilizing its traditional strengths, Bucknell has adopted as priorities four strategic goals to meet these learning objectives:

1. Provide for students a balanced appreciation of scientific, technological, human, and social ways of knowing;
2. Incorporate the six learning objectives in "general education" and the major, as well as in the co-curricular and residential lives of students;
3. Extend undergraduate independent study/research to the humanities and social sciences;
4. Create a positive and synergistic educational community, one that works together in creative tension toward commonly accepted goals.

Recommendations to implement these goals include several high priority operational objectives that seek to integrate our academic mission, student living, facility and financial planning, and resource development. The highest priorities for immediate action include:

- developing a common learning agenda and creating more opportunities for global understanding and international awareness (*The Academic Enterprise*, p. 24),
- focusing development efforts to increase Bucknell's endowment and developing a budgetary process that maintains the affordability of Bucknell's education (*Financial Considerations*, p. 25), and
- bringing student life into closer harmony with the academic and educational goals of Bucknell (*The Out-of-Classroom Lives of Bucknell Students*, p. 26).

The effect of achieving the strategic goals should be an enhancement of the learning Bucknell students experience, the development of a truly distinctive Bucknell built on its traditional strengths, and a clarification of Bucknell's current educational mission.

INTRODUCTION

The introduction to a "Report from the Goal Setting Committee: A Focus for Discourse"¹ describes a number of planning initiatives at Bucknell that touch virtually every aspect of our educational enterprise and concludes by noting that, in order to surmount the difficulties facing higher education today, "Bucknell will need more clearly to establish institutional priorities and improved coordination and integration of its various planning activities." Discussions over the past year have resulted in "Foundations for the Future" as the strategic planning document that is necessary to prioritize and to implement the goals and recommendations presented in "A Focus for Discourse."

Our educational mission is the foundation for our strategic thinking, and the discussion that follows, therefore, is intimately connected to Bucknell's Mission Statement and goals (see *Faculty Handbook*, Notes, p. 4-5). The primary purpose of our strategic planning is to position ourselves in relation to our external environment (political, admissions, accrediting, and economic) in such a way as to attract sufficient resources (both human and fiscal) to accomplish our educational mission. A natural next step is the development and prioritization of implementing goals.

As an intellectual community, we must work to develop a clear sense of direction for Bucknell if we are to be able to prioritize the numerous goals² and recommendations mentioned in "A Focus for Discourse." The present document proposes such a direction. The final stage of the planning process will be the application of strategic goals in the annual budget or staff decision process that carry out the implementing goals and recommendations. Bucknell's accrediting body, the Middle States Association of Colleges and Schools, confirms the need for this connection in the description of its expectations of the institutions it accredits:

"There must always be a demonstrable relationship between stated goals and objectives and the actual program. An institution is likely to serve its clientele better by doing a few things well than by undertaking too much. It should aim to produce optimum results within its available resources."

Characteristics of Excellence of Higher Education

¹ Bucknell University, April 1990.

² "Foundations for the Future" assumes the following goals from Section I of "A Focus for Discourse": to maintain the present size student population, to continue to select academically able students, to improve the diversity of the student body, faculty, and staff, and to provide and maintain outstanding physical facilities.

"Foundations" provides a plan for Bucknell education in the 1990s so that Bucknell may succeed in:

- **Educational Effectiveness.** Bucknell already has most of the elements of this proposed plan in place in some part of the institution. Hence, the curricular and educational challenge at Bucknell is to achieve coherence and widespread application of the common learning objectives and practices presented herein in order to ensure that all Bucknell students are challenged to mature intellectually and personally. "Foundations" argues that both department majors and liberal learning goals as codified in freshmen seminars, senior capstone courses, and distribution requirements should reflect the same six common learning objectives. Likewise, the social, residential, and co-curricular experience of students should reflect these common learning objectives and create for each student a sense of what it means to be challenged to grow as a whole person.

- **Admissions.** While Bucknell has developed many new curricular and co-curricular programs and enhanced others over the past twenty years, it is critical that we be able to tell students and parents what *common learning* they can expect and how they can benefit from the total educational experience they will receive at Bucknell. But promises to prospective students and parents of the exceptional education Bucknell offers can be made only if the faculty, student life staff, and other campus constituencies are committed to providing a common learning environment that attempts to achieve particular results. The attached document offers a direction and perspective that can make a positive difference in admissions when couched in terms understandable to their audience.

- **Development.** The recently completed capital campaign focused upon increasing the endowment to support faculty and department development and student scholarships, monies for new and renovated buildings, and increased annual giving to support the operating budget. What can we say now to foundations and potential donors regarding the direction Bucknell is moving and how a major gift might contribute to the overall aim of the institution? It is especially important in the interim between major, targeted fund-raising campaigns to present a clear picture of the University and the direction it is headed. Each educational foundation approached this year has asked, in effect, "What kind of institution is Bucknell trying to become?" While such questions can often be answered from an individual perspective or at the departmental or programmatic level, there is no larger educational and institutional design that the whole Bucknell community has embraced. The *six common learning objectives and four strategic goals* presented in the

last section of the attached document do provide "foundations" upon which the Development Office can build a persuasive case for giving to Bucknell.

- **Budgetary planning.** It is difficult to balance cost and affordability issues with value-added and quality concerns unless an institution has a publicly articulated and agreed-upon overall direction or educational mission it wishes to achieve. A strategic plan built upon the institution's fundamental academic goals will ensure that when tough budgetary decisions are made, it is the educational mission and not *ad hoc* or ancillary concerns that determine priorities for expenditure. It is particularly important that campus and trustee constituencies seek such a common institutional self-understanding in order to increase the cooperation necessary for institutions to succeed in the '90s. "Foundations for the Future" seeks just such common ground for Bucknell.

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FOUNDATIONS FOR THE FUTURE:
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"A Nation at Risk"

With the publication in 1983 of the National Commission on Excellence in Education's study, *A Nation at Risk*, the parade of more than 25 major national reports on education had begun. Seldom in the history of America had the public been asked to think so broadly and critically about education. A 1984 National Science Foundation study argued that undergraduate study in the sciences was too specialized and that post-secondary schools were too weak to provide the full range of human skills scientists and doctors need. The National Endowment for the Humanities report *To Reclaim a Legacy (1984)*, said that high school and, especially, college students had lost touch with the Western tradition(s) contained in the "Great Books" of our heritage. The National Institute of Education's study *Involvement in Learning (1984)*, recommended that students be more active participants in the learning process even as they are held accountable for the education they should receive. All three of these reports held college faculty and administrators accountable for letting higher education institutions drift aimlessly instead of providing a coherent picture of what it is that students should achieve and learn during their college years. This theme was detailed in a biting and forceful critique by the Association of American Colleges, *Integrity in the College Curriculum (1984)*, which argued that the curriculum is in shambles because of faculty indifference, disciplinary myopia, overdepartmentalized governance structures, and negligent administration. With the publication in 1987 of Ernest Boyer's Carnegie Foundation study, *College: The*

Undergraduate Experience in America, the themes of the decade of the '80s were repeated and given focus.

Colleges and universities have also been attacked from outside, and it was the Secretary of Education, William Bennett, who, in the early 1980s, made the most prolonged attack on the incoherent curriculum, the high cost, the lack of accountability, and the preference for research over teaching that infused colleges and universities throughout America. Nor has higher education been ignored by the media. The *Wall Street Journal* has recently run several front-page stories on high tuition and the lack of accountability in colleges and universities. Polls repeatedly report the public's recognition of the increased necessity for a college education and their increasing lack of confidence in it. Charles Sykes' book *Profscam: Professors and the Demise of Higher Education*¹ accuses the faculty of creating self-interested "tribal villages" with all of the mores and internal rationalizations common to such social units. Roger Kimball's book *Tenured Radicals*² presents the case against politically correct thinking as it is found in the humanities, and in English in particular. In his book *Killing the Spirit*,³ Page Smith argues that the curriculum is so politicized that some questions (e.g., on race and gender) may be asked by students or faculty while others (e.g., on religious belief) may not. These are but a few of the many voices whose criticisms are lengthy and, in many cases, compelling. Concerns about diversity, affordability, curricular coherence and relevance, accountability, internationalism, and "politically correct" thinking on college campuses all have their articulate and informed exponents in the literature and media. This scrutiny of colleges and universities will increase in the decade ahead.

In his book *Dateline 2000: The New Higher Education Agenda*,⁴ Dale Parnell outlines specific challenges facing universities and colleges today. He points out that universities will have to educate a more socially diverse and ethnically segmented school population, and that complex issues and problems in the "real" world will require both faculty and students to move beyond single-disciplinary solutions and ivory-tower disdain for the application of knowledge. At the same time, institutions of higher learning will find it even more difficult to recruit ethnic and minority students as they face the task of building a tolerant, multicultural community in an increasingly fragmented world. Furthermore, colleges and universities will be under

1 Regnery Gateway, 1988.

2 Harper & Row, 1990.

3 Viking, 1990.

4 Washington: American Association of Community and Junior Colleges, 1990, p. 8.

increasing budgetary constraints. He suggests that we have seen the end of budgets with two-to-five percent growth above inflation. Moreover, as thousands of faculty retire between now and the year 2000, universities will face the challenge of recruiting faculty from an inadequate pool of graduate students without significant new resources.

Parnell's response to these challenges is to recommend significant revisions in the way we approach our educational task. The greater educational flexibility we need will have to be accompanied by improvements in our governance systems to retain a sense of community decision making while still allowing timely and appropriate responses to internal and external pressures. *Challenges, public concern, and criticism of higher education are likely to increase during the 90s and must be viewed as a threat by colleges and universities like Bucknell that rely in admissions and fund-raising upon a favorable perception of the education they provide. Challenges and criticism, however, may also be viewed as offering an opportunity to articulate clearly and well the value of the education we offer as it relates to our comprehensive fee.* There is, perhaps, no greater threat to private higher education than the increasingly loud voices who claim that the education we provide is not worth the cost.

Affordability and Price Sensitivity

Considerable debate now occurs on college campuses about whether "price sensitivity" is a threat to be addressed or a creation of the media. A 1990 *Money* magazine poll revealed that 79% of middle class and affluent families felt that "sending your children to a good college" was critical to realizing "the American dream."⁵ It is not surprising, then, that the cost of education ranks third on the list of family threats to realizing that dream. Allen Deutschman predicts that colleges will have to limit their increases to no more than 5% a year over the next decade if they are to remain within the realm of affordability for most students.⁶ He warns that a \$67,000 Harvard education for four years of tuition, room, and board in 1990 will become a \$184,000 education by the year 2010, with only a 5% annual increase, and more than \$100,000 per year with a 10% annual increase. Critics within our own educational associations say that it is not at all clear that the quality of education we are providing is worth the tuition and fees we are charging. Theodore J. Marchese says that "absent credible, direct evidence about the ability of institutions to promote student learning, surrogates like price and

⁵ "How Are We Doing?" by Walter L. Updegrave, *Money Magazine Extra*, 1990.

⁶ "Why Universities are Shrinking," *Fortune Magazine*, September 24, 1990.

appearance reign."⁷ As Vice President of the American Association of Higher Education, Marchese warns that such old explanations as "these colleges are worth the cost" or "the public now equates price with quality" are a "dangerous game" being undermined by the public's perception that the quality of colleges is decreasing as their costs rise.

Boards of Trustees of private colleges and universities throughout the country are expressing greater and greater reluctance to increase costs above the level of inflation. This reluctance is occurring at the very time that we anticipate faculty shortages and higher costs. One important message that must be heard by students and parents, as well as university trustees, is that college budget costs are not controlled by the Consumer Price Index. With the cost of scholarly journals rising at double digit inflation annually (e.g., 15% in 1990-91), with increasingly sophisticated scientific equipment and computer technology driving up capital costs, and with the need to attract, develop, and retain high-quality faculty in the face of a looming shortage, there have been considerable pressures over the past decade that have added to the costs of college education. Despite valid reasons for higher-than-inflation increases in university fees, however, it is simply the case that the real income of those who must pay college bills is not keeping pace with those increases. In the ten-year period between 1980-89, disposable family income increased approximately 16%, student financial aid from all sources increased 10.5%, while tuition and fees at public colleges increased 30% and, at private colleges, 56%. A recent *Chronicle of Higher Education* article makes it clear that the middle class is being squeezed out of private schools and is now even finding it difficult to attend the better public institutions.⁸ The economic profile of Bucknell parents reflects this national trend; we ignore it at our peril. It is clear that one of the challenges of the 1990s will be to continue to increase the quality of Bucknell's education even while holding down the cost of that education. If Bucknell is to be successful in this task, it will need to improve its funding stability by increasing its endowment and gifts to specific programs in ways that simultaneously address financial and educational concerns. Increases in annual budgets held to the level of the C.P.I. over a period of years would erode, not maintain, the quality of the education and facilities of Bucknell. *Thus, Bucknell must shift the funding of its increasing costs from tuition hikes to strategically planned increases in its endowment.*

⁷ "Cost and Quality," *Change Magazine*, May/June, 1990, p. 4.
⁸ *Chronicle of Higher Education*, Vol. XXXVII, No. 11, November 14, 1990.

Students of the 1990s

Just as the transition from an agricultural economy to an industrial one caused significant social and economic upheaval, so, too, has the technological/information age placed tremendous stress upon all segments of American society. The current communications/information revolution has so shrunk our globe that every economic market is in some sense a world market. It is not surprising, then, that education is seen more and more as a key to unlock the door to prosperity. In 1969, 18% of the labor force had less than a high school diploma and 20% had an associate or bachelor degree. Twenty years later, fewer than 5% of those in the work force had less than a high school diploma, and 40% had associate or bachelor degrees. It is not merely perception but reality that education is becoming ever more necessary for one to gain access to jobs and economic security. As we seek to educate students in an increasingly technological/information age, it is precisely the poorer--minority and majority--students who must not be left behind.

Perhaps the most critical set of problems Bucknell must face in the decade ahead has to do with its ability to attract, to teach well, and to provide a community for the students for whose education this university was founded. Quite simply, since there will be fewer such students over the next five years, institutions that, like Bucknell, depend heavily upon tuition will have to compete more effectively for them in the marketplace. In raw numbers, the United States population of eighteen year olds has declined from 4,340,000 in 1980 to 3,431,000 in 1990.⁹ This college-age population will decline even further (to 3,195,000) by the year 1994 before a slight upward trend begins.

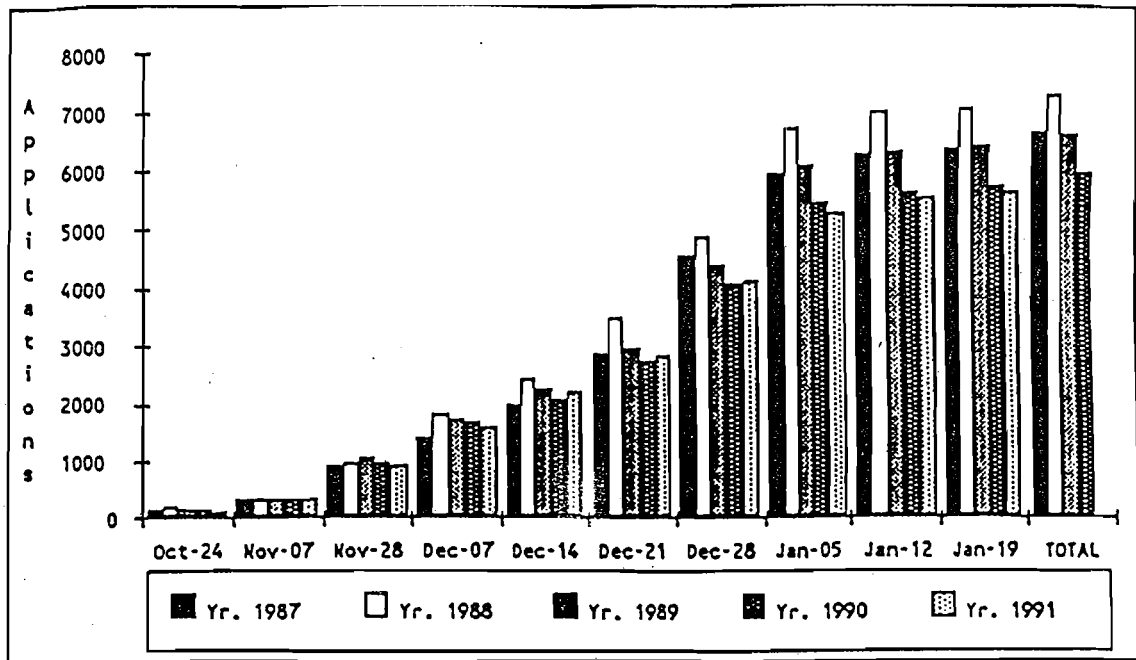
Until now, age and gender trends in the college-going population have mitigated the declining numbers of eighteen-year-old high school graduates. Offsetting declines in other populations, in the period 1970-1986 the percentage of black women attending college increased dramatically from 39% to 50% and the percentage of white female students increased from 47% to 56%.¹⁰ During that same time period, students aged 24 and under decreased from 72% to 64%, while those 25 and older increased from 28% to 35% of their age cohorts.¹¹ In short, until just recently the increased participation rate of older students and women in higher education has hidden the decreased participation rate of eighteen year olds. Bucknell has not been immune from these trends, as seen in the following admissions data:

⁹ Parnell, Dale, U.S. Department of Commerce, Bureau of Census Population Report, 1989, p. 201.

¹⁰ *Ibid.*, p. 118.

¹¹ *Ibid.*, p. 198.

Profile of Applications Received, 1987-91



Not only has the college-age population decreased in numbers and become more ethnically diverse, it is also the case that democratization of higher education in America is bringing different kinds of student learners to our doorstep.¹² The students who are coming to Bucknell in the 1990s *bring different ethical and social values and behavior* than did their predecessors in the 1970s. Reflecting the culture in which they were reared, the students of the 1990s are more worldly wise and more diverse ethnically and economically but, even within the "traditional" college-bound population, less mature and less grounded in value orientations in their social relations and communications.¹³ Likewise, the individualistic orientation and failure of values education in the home and school has led to sexual and gender abuses that have escalated to alarming proportions (e.g., one in nine college women is forcibly raped by a known peer during her college years). It is not surprising that the difficulties students have in peer relations and communication spill over into the classroom environment. If Douglas

¹² Davis, Marjorie T. and Charles T. Schroeder, "New Students' in the Liberal Arts Colleges: Threat or Challenge?," in J. Watson and R. Stephens, editors, *Pioneers and Pall Bearers: Prospectives on Liberal Education* (Macon, GA: Mercy University Press, 1983), pp. 147-68. Also contemporary work by William Perry, William S. Moore, etc. Bucknell faculty who were polled by the General Education Council in 1988 added that among Bucknell students' strengths are generally high intelligence, the possession of basic talents and skills, and an eager and enthusiastic work ethic. To the list of weaknesses Bucknell faculty cited a lack of historical or cultural background and awareness, a lack of basic ethical values, and immature analytical skills.

¹³ The works of Douglas Heath, Davis and Schroeder, and Alexander Astin all point in this direction.

Heath's research is correct, the seeming reticence on the part of students to become involved in classroom discussions may have far more to do with the difficulties they experience in communicating with each other than with their lack of interest in the subject matter.

Perhaps the most debated quality of the new students is the *different learning styles* they bring to the classroom. Some research indicates that as recently as 1970, three-fourths of the students entering colleges and universities felt comfortable with a theoretically and conceptually oriented way of learning, similar to the learning style of faculty members. However, only fifteen years later, those percentages were reversed, with 75% of students more concrete learners and only 25% of students feeling comfortable with the learning style typical of their professors. Not only are our current students more interested in vocational education, in many instances they learn much better by moving from concrete cases to theory and abstractions instead of in the opposite direction.¹⁴ Consequently, the students of the 1990s will not only be fewer in number and more ethnically diverse, but they will also provide greater teaching challenges. *Bucknell's challenge is not simply to revise the curriculum by deciding what it is that we ought to have students learn in common, but also how it is that we should teach them what they should know.*

Faculty of the 1990s

Since the publication of *American Professors: A National Resource Imperiled*¹⁵ in 1986, university faculty and administrators have focused considerable attention upon low faculty morale. Increasing publication standards for tenure at some institutions, a gap in understanding between junior and senior faculty members at others, the level of compensation for all faculty, and a sense of loss of governance power are identified by Bowen and Schuster as causes of faculty malaise. At Bucknell, the Dean's Advisory Council spent nearly two years addressing this issue with trustees and administrators listening to several faculty members talk about the pressures and frustrations they felt in their teaching at Bucknell. Typical of private colleges and universities where faculty morale is higher, Bucknell faculty members exhibited frustration not so much with their vocational choice as with such issues as pay, increasing

14 See Felder, Richard M. and Silberman, Linda K., "Learning and Teaching Styles in Engineering Education," a paper presented at the annual meeting of The American Institute of Chemical Engineers, New York City, November, 1987, and Davis and Schroeder, "New Students."
15 Bowen, Howard R., and Schuster, Jack, New York: Oxford University Press.

workload (including perceived publication pressure), and the demands that new curricula and college-wide requirements (e.g., the writing program) put on them.

Few American colleges can genuinely claim that the "teacher/scholar" and "student/scholar" are models for their learning community. Perhaps only 5% of the 3400+ colleges and universities in this country hold as an ideal the faculty member who is deeply committed to teaching while being, at the same time, engaged in meaningful scholarship. This model assumes that the most knowledgeable, enthusiastic, and effective teachers will be those persons who simultaneously are committed to their pedagogical tasks and their scholarly investigations. For many, if not most, Bucknell faculty the distinction between their scholarship and teaching is blurred. But, the expectation that Bucknell faculty will simultaneously be excellent teachers and scholars places a heavy demand on the individual, as well as on the institution's resources. On the one hand, it is necessary to provide faculty development resources for teaching and curricular development,¹⁶ and on the other, it is important to provide books, travel money, and scientific/computing equipment to support faculty research. If Bucknell is to continue to provide an education worthy of its price, it will be necessary to continue to attract the very best faculty it can while nurturing those already here. One professor from another university comments, "We cannot show them [students] how knowledge is discovered, invented, constructed, and evaluated without laboring at it ourselves. In teaching, there is a small distance, but a world of difference, between critically passing on the work of others. . . and passing critical opinions on work we have not done. The former teaches respect for learning; the latter can breed contempt for it."¹⁷ *Bucknell will have to work hard in the '90s not only to attract the most exciting teacher/scholars it can, but to keep those who have already committed themselves to this institution.*

The Curriculum and Teaching in the 1990s

The need for study in depth balanced with more general educational objectives is a much discussed issue in the national curricular debates and, indeed, the relationship between *the college major and general education* is a complex one. Put in its boldest form, the question is, "How can one provide integrative studies for our students when the heart and soul of every

16 Development of the Teaching Newsletter and workshops and the Untenured Faculty Leave Program are but two recent examples.

17 William Scott Green, "The Soul of the Curriculum," *Liberal Education*, Vol. 76, No. 4, September/October, 1990, p. 6.

university is its departments with their related majors?" The benefit of the major is that it provides a depth of study in one field. Majors have the negative impact, however, of forming "the underlying value system in higher education."¹⁸ Simply put, the major absorbs the energy and attention of faculty and students, marginalizing courses of a general education type that relate the knowledge and approaches of a range of disciplines to complex global issues. Courses that integrate disciplinary approaches to a common concern, such as issues relating to the environment or the development of moral values, have to fight for a place in the curriculum.

On the other side of the debate, many defend the major as the appropriate way for colleges and universities to structure themselves. William Scott Green describes the major as "the soul of the curriculum," asserting that "a generalizing perspective is a consequence of specialization, not its antithesis." He argues that specialized teaching and learning need not obstruct the general education goals and integrated perspectives that distinguish liberal education from technical training and adds, ". . . being able to generalize does not mean being a generalist, and meaningful perspective on a discipline cannot be imposed from without. It comes from within, from thinking one's way to the edge of a field, from asking questions a discipline provokes but cannot answer and moving outward to make connections."¹⁹ Likewise, Green shows that majors are in fact being affected by important contemporary perspectives, by the attention they are forced to give to issues of race, class, and gender, and by being applied to solving real world problems.

In his essay *The Implicit Curriculum*,²⁰ Alexander Astin asks what values underlie our recommendations for reform of curriculum, teaching, or the professoriat and how these relate to our views of "excellence." He argues that "true excellence resides in the ability of an institution to have a positive influence on its students' intellectual and personal development."²¹ An institution's underlying *educational value system* is what he calls its "implicit curriculum," which includes "our teaching methods, how we grade and test our students, and how we treat one another as professional colleagues."²² Too often we emphasize solely the "cognitive" dimensions of learning to the detriment of the affective goals most institutions prominently assert in their mission statements. Astin agrees with Harvard President Derek Bok, who says, "Universities should be among the first to reaffirm the

18 Sheridan, Harriet, W., "How the Major Killed General Education," *Proceedings of the Forty-sixth Annual Meeting of the American Conference of Academic Deans*, January 1990, p. 10.

19 *Liberal Education*, Vol. 76, No. 4, September/October, 1990, p. 6.

20 *AGB Reports*, Association of Governing Boards, July/August, 1989

21 *Ibid.*, p. 7.

22 *Ibid.*, p. 8.

importance of basic values such as honesty, promise keeping, free expression, and non-violence. . ."²³ Astin and Bok remind us that colleges and universities were created to nurture not simply our students' minds, but the whole person. Recent developments in student social life at Bucknell have made absolutely clear the imperative to understand students' social and living environment as a place to realize such fundamental mission goals as the development of compassion, civility and a sense of justice. How these qualities are taught is of utmost importance, and the faculty must serve as role models.

Another challenge for teaching in the '90s is the impact that *information technologies*, especially those provided by the computer and electronic information sources, will have on teaching and scholarship. The pedagogical issues of the next decade will include getting students to read texts closely while utilizing electronic media and addressing issues as wide-ranging as plagiarism and information overload. Peter Suber argues that "we must educate students with intellectual autonomy not discipleship, so they can navigate for themselves in the wilderness of information."²⁴ Even if we do not accept the whole of Suber's argument, it is clear that the information explosion has just begun on campuses like Bucknell's. Its consequences will mean not simply difficult budgetary decisions, but also significant pedagogical ones as well. For example, three consequences at Brown University of using the very sophisticated electronic data base called Intermedia are that students develop self-directed study habits, achieve greater sophistication in interpreting literature, and also read more books.²⁵ What some have called "electronic epistemology" is what we, at Bucknell, are trying to sort out in our strategic plan for academic planning. Bucknell will need to be clear about the ways in which technologies, like the computer, may be used in the service of educating students of the 1990s while we continue to ask critical questions about the technology itself. How we teach our students to put technology (not only the computer, but biological, chemical, and other such technologies) in proper perspective historically, socially, and morally is a challenge not only for the curriculum but for teaching methodologies as well.

Assessment

Assessment may well be the rallying cry for the '90s in terms of institutional accountability. In his editorial "Assessment at Half Time,"²⁶ Russell Edgerton, President of

²³ *Ibid.*, p. 9.

²⁴ *Journal of Perspectives*, Summer 1989, p. 29.

²⁵ See "Intermedia Comes to Bucknell," Larry D. Shinn, *Bertrand Library Contents*, Vol. 5, No. 2, Winter, 1990.

²⁶ *Change: The Magazine of Higher Learning*, Vol. 22, No. 5, September/October 1990, pp. 4-5.

the American Association of Higher Education, says that not only will state pressures for assessment continue, but that government and accrediting bodies pushing assessment are often our allies who wish to *strengthen* the cases colleges and universities can make for budgetary expansion. Assessment is being viewed more often as something faculty themselves should enjoy; if assessment is defined in a classroom-oriented sense, the faculty will find it worth their time to do it. In the end, it is our students who will benefit.

It is clear from the draft document "Framework for Outcomes Assessment," produced in July, 1990, by the Middle States Association, that outcomes assessment is intended by Bucknell's accrediting agency to be linked to institutional effectiveness and that the focus will be on the classroom and student learning. "The 'Framework' insistence that outcomes assessment take the improvement of teaching and learning as its primary goal grows directly from [the Association's] *Characteristics of Excellence in Higher Education*, as well." Middle States will expect Bucknell to address at least three questions in 1993: *what should students learn within the major, what should they learn in common and, finally, are students learning what the institution intends?* There is no question that Bucknell will have to address the nature of the learning environment that it is trying to create and to ascertain the effectiveness of that environment. The Learning and Diversity study we are doing this year is one attempt to provide some answers to what the nature and parameters of that learning environment are in the classroom, residence, and social environments. *There can be no doubt that one of the biggest challenges Bucknell will face in the immediate future is deciding what it wants to teach its students, how it can improve the teaching and learning process, and how it can evaluate its success in reaching its teaching goals.*

Governance

In January of 1991, the Naples Institute hosted a national conference on governance in higher education with faculty and administrative representatives from institutions across the country. Several prominent themes emerged throughout the meeting. First, collegial governance is important in building a sense of community on campuses small enough or cohesive enough to share a common educational vision. Second, the faculty *must* have a role in making the primary educational decisions on curriculum, professional standards for hiring and promotion, and institutional planning associated with both. Third, the major question facing colleges and universities is *whether the usually lengthy processes of decision-making entailed in collegial governance can be modified to provide the flexibility and timeliness*

required to address the rapid changes, even crises, that will face educational institutions in the 1990s. Conference participants agreed that institutions are increasingly interdependent (e.g., community colleges are articulated with four year colleges, and changing admissions trends quickly affect a common group of private selective institutions). Strategies implemented by one college or university often require a purposeful response by the others in its group. To what extent are faculty committees or governing bodies willing or able to address such external factors? To what extent does the consideration of institution-wide concerns or threats increase the costs of collegial governance? These and other such questions were raised by all of the participants at the Naples conference. It should be clear that such issues will have to be addressed at Bucknell as well.

GUIDING BUCKNELL TOWARD THE 21ST CENTURY

The Education of the 21st Century

All of the threats and challenges cited above must be set in the context of the 21st century world already upon us if Bucknell is to create a vision broad enough to encompass that world. What are the overarching characteristics of the 21st century world and how do they express themselves as educational challenges?

The world of the 21st century is one in which the long-standing human and social problems of war, poverty, and family violence persist. While our use of more and more deadly weapons causes greater and greater destruction, the economic and political causes of war still require human solutions. Likewise, although the gap between rich and poor may be widened by the lack of equal access to the sophisticated education necessary for our information age, the roots of this problem are ancient. Right now, for example, one-third of the minorities in America *who work full time* live at the economic margins of society while another third live in abject poverty. Surely we must take educational responsibility for addressing such contemporary expressions of traditional economic and moral problems while we prepare students to cope with problems we cannot yet imagine.

Our world is increasingly a technological and scientifically sophisticated one. No part of our lives--whether we live in the first world or the third world--is unaffected by technologies that expand exponentially. From synthetic fertilizers to assault weapons,

technology both enhances and threatens our lives. Electronic communications and high-speed transportation have contracted our globe. Computer miniaturization places more memory on our desktops than was available on most mainframes only a decade ago and hypersonic flight at more than 4,000 miles per hour is now within reach. Technological and scientific innovations and creations affect every dimension of our lives.

The very technological and scientific advancement that has saved lives and enhanced our daily living has added to unprecedented environmental problems. The synthetic fertilizer that increases crop production threatens to destroy the Midwest farmer's fresh water supply. The manufacture of long-sought technological miracles creates hazardous wastes that we don't know how to handle. The systematic elimination of rain forests brings us frightening earth warming. The ozone layer is being depleted. Can any of us ignore our responsibility to try to heal the earth?

The decreasing size of our world also helps to define the education in which we must engage. Now that satellite communications, high-speed air travel, and the development of multinational corporations have made world markets and financial institutions fully interdependent, higher education, too, has become internationalized. The face of education has changed in some fields (especially the sciences and engineering where up to 30% of the graduate students and potential teachers of the future are international students), but every discipline must take into account the broader perspectives offered by those not native to the West. The notion of a "global village" is no longer a futuristic metaphor.

Finally, all of the above dimensions of our shrinking world are intensified by their increasing rate of change. The rapidity of change in bio-technology alone often exceeds our ability to adjust ethical and legal norms. Events in Eastern Europe and in the Middle East make clear that the pace of change in the political and economic arenas poses equally difficult challenges.

In such a world, Bucknell cannot afford simply to prepare men and women for the limited demands of a career; it must educate persons who, whatever their profession or career, in their roles as citizens are inquisitive problem-solvers and moral agents in a complex, needy, and rapidly changing world. Robert Collander, President of Chemical Bank, argues that we must help our students to develop "the curiosity and intellectual ability to question--and more importantly, to ask the right questions. . . people are not necessarily liberally educated because of where they went to school or because of what courses they took. The question is whether

'it took.' Did the formal education leave an expandable or fixed mind? A malleable or a brittle one? . . . Has the foundation of a liberal education left enough elasticity in the mind-set so that decision making involves a blend of complexity, doubt, introspection, and irony?"²⁷

Precisely because the problem of toxic waste disposal is at one and the same time a technological, political, economic, and moral one, a Bucknell engineering graduate cannot afford to be competent to deal only with its technological dimensions. Likewise, because environmental crises confront voters or legislators as technological problems, a politician who may have majored in religion or political science at Bucknell must possess the technological sophistication to deal competently with legislation relating to toxic waste, acid rain, or the greenhouse effect. Simply put, education for the 21st century should have as its goal the liberation of students to be critical and complex thinkers, life-long learners, and free and original decision makers who have learned compassion, civility, and a concern for social justice as part of their educational maturation.²⁸

If Bucknell is to reach its full potential as a university that prepares its students to live and to work in this 21st century world, it must achieve those aspects of our educational mission that define our **common learning objectives** regardless of department, major, or college. Although various faculty and departments and programs will construe these objectives differently, they represent six distinctive elements in the mosaic that is a Bucknell education.

Six Common Learning Objectives

1. **Integrating compartmentalized disciplinary knowledge and multiple perspectives.** If we are to teach our students "to make consequential judgments. . . on multi-faceted problems"²⁹ it will be necessary to provide them with multiple perspectives on complex problems through holistic studies within and across majors and departments. Words like "cross-disciplinary," "interdisciplinary," and "multidisciplinary" are used in educational literature to describe the kind of study that produces the multiple perspectives that challenge student tendencies to want right and wrong answers presented on the authority of a text or instructor. However, even within disciplines defined along traditional disciplinary or subject

27 "Liberal Learning and the World: A Banker's Perspective," by Robert J. Collander, Keynote Address, 72nd Annual Meeting, American Association of Colleges, New Orleans, January 9, 1986, p. 4.

28 Bucknell University Mission Statement.

29 *Integrity in the College Curriculum*, Foreword, p. i.

matter boundaries, these multiple perspectives can be appropriately provided, whether in an English literary theory course or an organic chemistry course. Faculty members read theoretical and applied literatures across disciplinary lines and often participate in collaborative discussions on the environment that cross the boundaries of the sciences, social sciences, humanities, and engineering. Such academic programs as International Relations, Animal Behavior, and Cell Biology and Biochemistry are actually organized at the points of overlap of traditional disciplines. These new holistic studies often require that a creative tension infuse the teaching and learning environment and, not surprisingly, real-world problems (e.g., environmental or ethical) often provide the best avenue for engaging contemporary students in such complex considerations.

2. Understanding Our Natural and Fabricated Worlds. Harold T. Shapiro, President of Princeton University, stresses the connections between our human, natural, and fabricated worlds in a recent essay. He points to persistent human attempts to give meaning to the natural and social worlds in the religions, cultural beliefs, and philosophies of nature and human communities and then says, ". . . we have demonstrated a remarkable capacity to construct useful artifacts, from books to bridges, from art to agricultural implements, from cantatas to computers. . . . The complex web of new ideas, inventions, and changing social forms required to sustain this remarkable and unfinished journey is an extraordinary story that has yet to be fully comprehended."³⁰ Bucknell's students must be led to consider the economic, environmental, and social influences and effects of technological and scientific worlds even as they comprehend them on their own terms. Likewise, such varied voices as those of the poet, the moral philosopher, and the feminist critic should also inform students' views of the natural and created worlds and their responsibilities to them.

3. Developing International and Multicultural Perspectives. Perhaps the most dramatic changes in Bucknell's curriculum over the past decade have occurred with the addition of global, international, and non-Western dimensions to a traditional Western curriculum. In addition to the development of a Program in International Relations, there has been an infusion of international content and perspectives in social science and humanities majors and also, to some extent, in the sciences and engineering where faculty have opened lines of communication and exchanged research students with colleagues in Europe, Australia, and Japan. Multicultural studies at Bucknell have been enhanced considerably with the addition of three faculty who teach a collection of courses on Africa and with the institution of

an anthropology major. In the establishment of an Office of International and Off-Campus Studies, Bucknell has committed itself to assisting students to study overseas in programs that are as rigorous as those at Bucknell. However, this new focus on global cultures and issues must become a commonplace and sustained concern throughout students' classroom and campus life. BS curricula at Bucknell require languages, but allow virtually no space for concerted study of other cultures. BA curricula do not require foreign language study or any exposure to cultures different from a student's own. At a time when all markets are global and in a world where political or economic crises often extend beyond safe national and cultural boundaries, Bucknell students who do not seek out such studies on their own clearly are disadvantaged.

Simultaneous with this attention to global and international perspectives in the curriculum, the creation of the Race/Gender Resource Center, the institution of women's studies and black studies minors, and the attendant programs and new courses those initiatives have fostered have given prominence to issues of race, gender, and ethnicity. What is clear is that students who attend Bucknell will be served well to the extent to which they "are encouraged to cultivate respect for other individuals and cultures, enhancing in the course of this pursuit their own moral sensitivity."³¹ At a time when racism is on the ascendancy in America, an expectation that all Bucknell students will learn an appreciation for racial and gender differences seems to be a minimal educational requirement. To be true citizens of the world, Bucknell students must learn that personal freedom is best expressed in responsible actions that accept the interdependence of all peoples and nations.

4. Fostering Creativity, Personal Reflectiveness, and Moral Discernment

A Bucknell education should provide for each of its students opportunities for creative expression, quiet spaces for self-reflection, and the opportunity to develop moral discernment. Creativity in its many forms allows imaginative problem solving that is not restricted to received wisdom and tired solutions. Student involvement in and reflection upon the creative arts (e.g., music, art, dance, or poetry) can cultivate the imagination and create new idioms of communication. *Integrity* simply says, "Without a knowledge of the fine arts, we see less and hear less."³² Creativity can also be fostered in the experimental designs of the psychology laboratory, a sociology internship, or a senior engineering project. Reflection on literary, musical, or other texts from a variety of traditions often causes us to challenge who we are and

³¹ Bucknell University Mission Statement.

³² *Integrity in the College Curriculum*, p. 22.

what we might become. Likewise, enabling students to enter into dialogue on significant ethical problems in fields ranging from moral philosophy and literary criticism to genetic engineering and toxic waste can provide a basis from which they may become committed and creative problem-solvers. Creating a reflective environment for students and faculty to develop such creativity and moral discernment is a primary responsibility of a liberating education.

5. Nurturing Independent and Collaborative Learning. To empower students to apply what they learn and to increase their sense of power to change the world for good requires not only specific attention to *what* we teach our students but also *how* we teach them. We must involve them in a learning process marked by collaborative learning which can help to counter the individualistic and passive tendencies of American society. A primary educational task before Bucknell is to balance the competitive and cooperative dimensions of learning so that students gain greater independence in decision-making skills even as they learn from other students and learn to cooperate with them. For example, the Residential Colleges provide multiple ways for students to acquire collaborative and active learning habits that are supported by the residential arrangements. In a different context, undergraduate research in the sciences and engineering accomplishes most of the same learning objectives. On the curricular level, Bucknell has an unusually cooperative environment for interdisciplinary and joint teaching ventures that can serve as a model for student learning. As students increasingly take responsibility for their own education, Bucknell must continue to provide resources to support faculty experimentation in pedagogies and courses that help students balance independent and cooperative styles of decision-making.

6. Creating A Holistic, Supportive Community of Mutual Respect. If Bucknell is to achieve its educational mission, it must attempt to create a holistic multicultural academic community that embraces not only academic study, but also the living and social environment of students. It should be obvious that the affective educational goals of Bucknell may be enhanced as much by the living and social environment as they are by the purely academic. For example, racial tolerance may be taught in the classroom, but the test of that lesson is what happens in the dormitory or in social interactions. Student appreciation for diverse points of view, opinions, lifestyles, cultures, and races is fostered as students live, learn, and socialize together. Consequently, Student Life goals should reflect academic goals even as moral sensitivity, "compassion, civility, and a sense of justice"³³ are enhanced. Residential Colleges at Bucknell--especially as they become multi-class--provide excellent

opportunities not only for faculty and student interaction beyond the classroom, but also for peer learning. Likewise, the curricular period now devoted to the January Plan could be revised to focus especially upon these concerns. Of concern as well is the physical wellness of our students. Fitness programs, intramural or intercollegiate athletics, the acquisition of physical skills and habits of exercise, nutrition education, the willingness to compete and to lose as well as to win, and the opportunity to lead all play an important role in the development of the whole person.

In a year-long study of American campus life, the Carnegie Foundation focused on the principles which it believes students and faculty should share. The report argues for purposeful intellectual campus communities which are places where "dignity of individuals is affirmed" and "freedom of expression is uncompromisingly protected"; where "individuals accept their obligation to the group and where well-defined governance procedures guide behavior for the common good"; and where "the well-being of each member is sensitively supported and more service to others is encouraged." As Bucknell attempts to create a collaborative, holistic, multi-cultural academic community, it is especially important that students and faculty encourage each other to value ethnic, gender, racial and other differences as opportunities for personal growth and not as threats to individual or group identities. Students must be encouraged and empowered to reorganize their social and living relationships even as they are held accountable for them.

Bridges to the Future: Bucknell in the 21st Century

How well is Bucknell positioned to offer an education for the 21st century? First of all, it is clear that Bucknell distinguishes itself by providing a **personalized teaching and learning environment**. Faculty at Bucknell are accessible to their students and take their teaching and learning relationship very seriously. In curricular initiatives such as the Writing Program, independent research, or the Residential Colleges, faculty have extended themselves to benefit their students. A second strength upon which Bucknell can build is the **excellent array of academic programs** that are, in many cases, among the best of their kind in the country. If we are to achieve our complex learning objectives, we must have consistently strong departments across disciplinary and college divisions. A third characteristic of Bucknell's academic community is the **model of the teacher/scholar** that emphasizes teaching as the first of faculty responsibilities and acknowledges independent and creative

scholarship as the necessary and vital complement of teaching. This commitment to the teacher/scholar model has resulted in an unusually active undergraduate research program at Bucknell, especially in the sciences and engineering, but now extending to other parts of the campus as well.³⁴ The presence of masters level programs at Bucknell is a fourth strength that emanates from the third. Graduate programs enhance the upper-level undergraduate curriculum, create academic role models for undergraduates, provide extensions of faculty efforts in teaching and research, and help attract faculty, especially in the sciences and engineering. Yet a fifth strength upon which Bucknell can draw is its physical facilities, recently developed through the efforts of the capital campaign. Despite the need to complete the science center and to renovate several other buildings on campus, Bucknell is not burdened with significant deferred maintenance.

However, as strong as the above elements of Bucknell's educational environment are, perhaps the most distinctive feature of Bucknell's learning environment is its academic diversity, its display of multiple perspectives and the creative tensions generated in the interaction of various educational philosophies and emphases...an effect not unlike what Parnell envisions as "a search for synergy, for combinations." Bucknell's Mission Statement broadens the "two college" perspective to two types of educational philosophy: "Bucknell University is a highly selective, primarily undergraduate institution offering a broad curriculum of studies in the humanities, social sciences, and natural sciences, as well as professional studies in engineering, education, and management. Bucknell benefits from its focus on the *liberal arts and the professions*."³⁵ Like many of the excellent liberal arts colleges on our frame-of-reference list, Bucknell has exceptionally strong traditional liberal arts and sciences departments. On the other hand, much like considerably larger universities, Bucknell has equally excellent programs in the professional areas of engineering, management, music, and education. Few educational institutions have this abundance and balance of human and physical resources in traditional liberal arts, professional, scientific, and technological studies. One indicator of this balance is that Bucknell students are nearly evenly divided between the more intense BS and the more flexible BA degree studies. Furthermore, Bucknell's excellent faculty and physical resources are well distributed across all four divisions and provide the opportunity for creative dialogues that span disciplinary perspectives. An education that requires a student to choose either the liberal arts or professions produces a false dichotomy. Parnell agrees: "No longer can the

³⁴ "Bucknell's Scholars," Bucknell 1988-89 Annual Report, pp. 1-27.

³⁵ *Faculty Handbook*, p. 4.

debate of the importance of the liberal arts or career programs be allowed to degenerate into an either/or argument. They are both important, balance is needed, and the technological-learning age demands it. Educational excellence at all levels must be defined in terms of connectedness and applicability. The liberal arts and technical education need each other."³⁶

A second dimension of Bucknell's academic diversity is the presence of a *broad range of technological, humanistic, and social ways of knowing* that are critical to an education for the 21st century. It is not only the departments in the College of Engineering, but also those of mathematics and others in the natural science and social science divisions that give our students sophisticated introductions to the quantitative and technological studies necessary to those who will live in the emerging technological/information world. From quantitative studies of large computer data bases in the social sciences, to genetic engineering techniques in biology or biochemical engineering techniques, many Bucknell students study alongside faculty educated in sophisticated understandings of the technological dimensions of the contemporary world. Close textual reading, the development of moral discernment, and inquiries into human motivation and behavior can be found in courses as wide-ranging as philosophy, English, and psychology, on the one hand, and civil engineering, management, and biology, on the other. An uncommon strength of Bucknell is the frequent interplay of diverse disciplinary voices that engage the attention of both faculty and students.

A third characteristic of Bucknell's diverse academic community is its *openness to interdisciplinary study*. Some of the intentionally multi-disciplinary approaches to study at Bucknell are evidenced in programs like those of International Relations, Latin American Studies, Biochemistry, Animal Behavior, and the Humanities Program. New and innovative courses that have built upon this heritage are represented in the Residential Colleges where faculty from different disciplines have collaborated to develop truly transdisciplinary courses. Furthermore, there is a growing movement within most disciplines in both Colleges to incorporate multiple perspectives in what may be described as transdisciplinary approaches to subjects as diverse as English, education, history, and geology. **Bucknell does not simply have on one campus the combination of the liberal arts and the professions or the combination of two distinct Colleges. Instead, we have created a culture of multidisciplinary study that not only permeates the interstices between disciplines but infuses the curricula of individual majors as well. It is arguably the case that Bucknell is uniquely situated by the unusual mix of its**

³⁶ *Dateline 2000*, p. 248.

educational programs and perspectives to provide the education that is demanded by the 21st century and the students we must teach.

Strategic Goals

Given Bucknell's traditional strengths, outlined above, and the character of the common education it must provide for its students in the next decade, the following four strategic goals should serve as priorities for the allocation of Bucknell's human, fiscal, and physical resources in the coming decade. If Bucknell achieves all four of these goals, it will attain a clearly distinctive educational image.

1. Bucknell should situate itself as an institution to provide for its students a **balanced** appreciation of scientific, technological, human, and social ways of knowing. On the one hand, Bucknell engineers and scientists should systematically be taught to ask the "right questions" about the political, ethical, and environmental aspects of their work. From building bridges to controlling pollution and handling toxic waste, scientific and engineering graduates of Bucknell must learn to view themselves as stewards of their creations and artifacts in a complex and value-laden world. On the other hand, the human and social concerns and problems that inform the subject matter for the humanities and social sciences at Bucknell cannot be viewed in isolated human or social terms but must be seen in relationship to a rapidly changing technological world where education for vocation and life are synonymous. It is in order to achieve an extension of knowledge, multiple perspectives on any subject matter, and an enhanced learning environment that students will be encouraged to utilize appropriate computing and information resource capabilities. Both environmental study and sophisticated uses of computer technology provide excellent arenas for Bucknell students to benefit from our multidisciplinary and multiperspective strengths and specialness. We must, however, provide our professional students with scientific and technological education *for humanity* as well as liberate our arts and sciences students to be knowledgeable and thoughtful users and critics of technology.

2. The six common learning objectives described above³⁷ should be conceived as the special province of neither "general education" courses nor the major, but of both. Bucknell could gain truly distinctive competence in comparison

³⁷ See pp. 14-18.

with its peer institutions by asserting certain common educational goals and highlighting them in such programs as Foundation Seminars and capstone senior courses,³⁸ while simultaneously understanding these common learning objectives to be the province of *all departments and programs as well*. For example, many Bucknell faculty already attempt to nurture in their students multiple perspectives and interdisciplinary orientations to real-world problems. Therefore, as the Faculty agrees upon a set of learning objectives and *systematically* incorporates in the content and evaluation of their courses exercises that seek to realize them, we may expect that our students will meet these common objectives during their years of study at Bucknell. While international themes and perspectives or ethical issues like honesty are relevant to nearly every program of study in the University, only as faculty explicitly attempt to achieve such learning objectives will they systematically appear throughout the curriculum and have their desired effect on most students' learning. Foundation Seminars and senior capstone courses will not be seen as discrete or marginal "general education" components when the common learning objectives that they emphasize are conceived as ones that ought to permeate the whole curriculum. Although *flexibility must be allowed for individual faculty members and departments to interpret common learning objectives according to their disciplinary or methodological perspectives*, the cumulative impact of shared goals could have a dramatically positive impact upon Bucknell's students. It would, as well, give Bucknell a distinctive position among institutions that insist that their students choose *between* curricula that emphasize general education or majors.

3. Undergraduate independent study should be extended as a special feature across the University. While undergraduate research in the sciences occurs at some of our frame-of-reference institutions, Bucknell is distinctive in the kinds and breadth of this teaching-learning activity. Within the Council for Undergraduate Research, Bucknell has a national reputation as a leader in undergraduate research. We are among the first institutions to have provided free room for summer research students, while compensating them at a level that permits them to undertake research and study with faculty as a summertime job. There are now 70-90 students at Bucknell in any given summer engaged in undergraduate research with faculty in the sciences and engineering. In the last several years, certain humanities and social sciences faculty have begun to use undergraduate students in their summer work associated with either curricular development or their research. If Bucknell were to seek external funding for expanding this teaching/learning/scholarly activity, it could provide leadership in undergraduate education while simultaneously distinguishing itself from its peers. As an added

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See plan to add 25 new faculty positions, adopted by the Board of Trustees, November 1990.

benefit, undergraduate research would provide meaningful summertime employment for our students and an important admissions attraction. Interpreted broadly, summer research with students would permit faculty in the humanities and social sciences, as well as the natural sciences and engineering, to develop active learning programs that would blur the distinctions between teaching and research and invigorate the total learning environment.

4. Bucknell should seek to create a positive and synergistic community from the competitive and sometimes divisive tendencies of some aspects of our learning environment. Put in positive terms, Bucknell should work to develop a collaborative and mutually supportive intellectual community among its faculty, students, administrators, and trustees. If we agree that these four strategic goals should determine the allocation of both fiscal and human resources, tensions often associated with competition among academic programs could be reduced. Instead, appreciation for the many and diverse dimensions of Bucknell would form the basis for a positive and shared learning community that places real differences in a collaborative perspective. Even as Bucknell faculty from the humanities and social sciences have worked with engineers in recent years on Sloan grant projects, so external funding agencies are waiting to support the kind of multidisciplinary and transdisciplinary thinking and programs that arise from collaboration across traditional barriers. Faculty members' participation in both campus-wide programs like the Residential Colleges, the Humanities Program, or Foundation Seminars and their departments' majors programs would be seen to have equal value if the above principles and goals were taken seriously.

What is the Bucknell that will emerge if we accomplish these strategic goals? First, the discrete programs and dimensions of Bucknell that sometimes divide us politically and drain our emotions and resources would instead be experienced by our students as multiple perspectives and creative tensions that are mutually appreciated by faculty and students. Collaborative teaching across divisions and disciplines, the development of University endowed chairs, and the expansion of Residential Colleges with additional themes and across all four classes would be natural expressions of the new Bucknell focus. Second, in their distribution courses, freshmen and senior seminars, and in their majors courses, students would encounter an education marked by systematic attention to the six common learning objectives. Besides the more coherent education such objectives would provide, both the admissions and development offices would have much more to say to their constituencies about why an education at Bucknell is distinctive. Third, at a time when parents and students are weighing the cost of a private education over against the cost of public alternatives, the creation of additional opportunities for students to work side by side with faculty in the

development of new knowledge, through an expansion of research internships or curricular research projects, would give one resounding answer that also meets a fundamental learning objective. Finally, the enhanced educational effect of a Bucknell just described would provide a bridge to the future for *all* Bucknell graduates who would be empowered to learn, to reflect critically, to seek beauty as well as wisdom in their working and their living in the 21st century. Conceived as such, Bucknell could be an intricate, perhaps even elegant, educational bridge that can help our students to transcend their narrow inherited pasts even as they seek to shape a better future.

Recommendations

In order to achieve these strategic goals, the recommendations presented in "A Focus for Discourse" regarding development, student life, and the academic enterprise can be ordered according to the six common learning objectives and four strategic goals presented in this document. The highest priorities for immediate action include:

I. The Academic Enterprise

A. Develop a common learning agenda in order to:

1. Enhance the effectiveness of department and program majors and non-majors courses and integrate them with broader learning goals;
2. Use the January period as an effective interterm to accomplish affective or other mission goals;
3. Seek external funding for teaching/learning objectives and the creation of a more diverse international and multicultural community;
4. Enhance existing and support new programmatic initiatives that bridge disciplines;
5. Develop a general education program comprising distribution courses and freshmen and senior seminars in a way that will give special attention to common learning objectives;
6. Seek ways to educate students about racial and gender diversity and make them tolerant of difference.

B. Create more opportunities for global understanding and international awareness by:

1. Providing new faculty development funds to study other cultures and to incorporate international materials and perspectives into courses across the University;
2. Encouraging study abroad for students;
3. Creating annual international themes around which lectures, theatre/dance/music, and Residential Colleges can be organized;
4. Seeking ways to benefit from the presence of international students on campus.

II. Financial Considerations

- A. Focus development efforts to increase Bucknell's endowment, primarily in staff, scholarship, and programmatic areas, for:
 1. Faculty chairs that emphasize "bridging" and making connections (one way of adding 25 new faculty positions with reduced budgetary impact);
 2. Student scholarships for summer research that would simultaneously provide earned "financial aid" and accomplish the primary educational goal for active learning;
 3. Student scholarships for international students;
 4. New programs that bridge the two Colleges or two or more disciplinary areas, or enable unusual departmental collaborations;
 5. Completing the science center and adding new faculty.

- B. Develop a budgetary process that maintains the affordability of Bucknell's education and fosters the special character Bucknell is attempting to achieve, by:
 1. Developing a pricing policy that takes into account affordability and value-added expenditures that will advance Bucknell's strategic goals;
 2. Using the targeted endowment goals listed above to achieve the most effective cost containment practices;
 3. Maximizing annual giving to offset needed increases in operating expenditures and to reduce the size of comprehensive fee increases;
 4. Seeking revenue-generating opportunities that are in keeping with Bucknell's overall mission.

III. The Out-of-Classroom Lives of Bucknell Students

Bring student life (residential and social) into closer harmony with the academic and educational goals of Bucknell by:

1. Utilizing and developing the Residential College program to encourage multidisciplinary course development, to provide intense student/faculty interaction and cooperation, and to provide living arrangements that expose students to serious intellectual pursuits;
2. Seeking external funds to initiate programs to create a more open, just, caring, and diverse campus community taking into account the findings of the Learning and Diversity study;
3. Organizing student residential and social life to place students at the center of the decision-making processes to teach responsibility and holistic community values;
4. Utilizing co-curricular activities, such as intercollegiate and intramural sports, as well as social groups like fraternities/sororities, to promote the six learning objectives.

Throughout this presentation, openness to change, goal revision, and flexibility in achieving the strategic goals are assumed. For example, faculty must be able to interpret the common learning objectives according to their disciplinary and personal perspectives. Likewise, new items will appear on the highest priority action list each year as other tasks are accomplished. This list represents an extension of the strategic goals for Bucknell that must be re-evaluated annually in light of the external environment and internal resources.

The realization of these learning objectives and strategic goals will enhance the learning Bucknell students experience and develop a truly distinctive Bucknell built on its traditional strengths.