

# MAJOR TRENDS FACING NORTH CAROLINA

## IMPLICATIONS FOR OUR STATE AND THE UNIVERSITY OF NORTH CAROLINA



### **Trends in Higher Education**

Dr. Bruce Henderson

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Commission

## **University of North Carolina Tomorrow Brief: Trends in Higher Education, August 2007**

### **Introduction**

The University of North Carolina has long been one of the most highly considered systems of public higher education in the nation. It has tended to lead rather than to follow trends. However, it is clear that some of the national trends in higher education are reflected in our University and our University is likely to be influenced in many ways by the trends influencing higher education in general.

The trends identified below exist in a context in which larger developments such as globalization, demographic changes, shifts to a knowledge economy, and technological change are all important. Because these larger trends have such wide impacts, it is hard to think about their implications without examining more specific trends, many of which are influenced in multiple ways by the broader developments. Rather than focusing on the broader developments, we have decided to focus at the more specific level and then suggest the implications of those trends for the University. Furthermore, many of the trends treated below overlap with each other and also overlap with issues listed in other briefs. That is not an apology but simply recognition of the complexity and interrelatedness of the issues our system faces.

### **Trend 1. The privatization of public higher education.**

States have provided a decreasing portion of the cost of going to public universities.<sup>1</sup> In order to compete with private universities, public universities have begun to act more like private universities. Universities are increasingly seen as competitors within a market for higher education services. The general philosophy of these public universities has shifted from providing a public good toward providing individuals with the capabilities to compete.<sup>2</sup> Across types of colleges and universities there have been regular and substantial increases in tuition and fees as costs for higher education have increased at a rate considerably above inflation. Campuses of all kinds have significantly increased the pressure on faculty and staff to obtain external contracts and grants (particularly those with substantial indirect costs that accrue to the institution).

Almost all the trends listed in this brief could be tied to the privatization trend. Privatization has led to increased pressures for cost effectiveness and accountability. The emphasis on market share encourages mission creep as institutions seek higher visibility and more emphasis on vocationally-oriented programs that are attractive to students and their parents. Ties to the community, schools and community colleges are increasingly important in acquiring market share. Specialization in research attracts more grants and contracts to supplement the loss of state funds. Perhaps not since the G.I. Bill and its related legislation has a trend had such a broad impact on higher education.

1.1 Public universities have begun to act more like businesses. They work to “brand” themselves to make themselves distinctive and attractive to consumers (students).

1.2 Because of the perceived need to increase market share, universities have engaged in an arms race in student-friendly services such as luxury dormitories, recreation centers, mall-like student centers, etc.<sup>3</sup>

1.3 In public universities, as states have provided a smaller portion of the costs of going to university, the burden of paying for an education has shifted to students and their families.

1.4 In some states there has been a legislative backlash that results in limits on what public universities can charge. Public universities are caught in a squeeze between limited resources and competing in the larger marketplace.<sup>4</sup>

1.5 Increasingly, public universities have turned to private fund raising to replace the loss of state funding. Flagship and urban universities have begun large campaigns to build endowments, expand campus facilities, and increase faculty salaries.<sup>5</sup>

1.6 The smaller regional comprehensive universities in many states struggle to compete in the market but have fewer rich alumni and less access to private and federal research funds.

1.7 Many universities have looked to distance and continuing education as a means for increasing their market shares and as cash cows to supplement their other operations (with decidedly mixed results).

1.8 At many universities working within a market climate has led to an emphasis on teaching and research in high status and high visibility disciplines and a de-emphasis of efforts in service disciplines such as public school teaching and nursing.

1.9 As a means for increasing prestige, Universities have attempted to become more selective, increasing SAT or ACT scores, and increasing merit-based rather than need-based financial aid to attract stronger students.<sup>6</sup>

1.10 As universities become more market-driven, they stress knowing more about what the public wants from them. Although some universities seek more public input, there is little consensus about what it is that the public does want or even about whether the public can know what it wants from the universities.<sup>7</sup>

## **Trend 2. Accountability.**

At the same time that states have been decreasing their relative support to universities, they have required increasing degrees of detailed evidence about the effectiveness of a wide range of university operations.

2.1 Because the cost of higher education has increased faster than inflation for decades, controlling costs has become a major priority. These efforts have shown few signs of success, perhaps because the shift to a private market orientation has allowed universities to shift costs to students.<sup>8</sup>

2.2 With increases in costs, the universities' various constituencies have demand more and more detailed evidence that universities are effectively and economically affecting student retention and graduation rates. From the student's (consumer's) perspective, for the market to work, more information upon which to judge comparative cost and effectiveness is needed.

2.3 More states have begun to focus on evidence of educational effectiveness in the form of influences on student engagement and learning, including critical thinking and communication.<sup>9</sup>

2.4 Although faculty resistance to reducing learning to specific measurable objectives has remained strong, there is some evidence that the idea of demonstrating student learning is more acceptable, at least in some universities and in some disciplines.<sup>10</sup>

2.5 Some of the concern faculty members have with both the trend toward being market-driven and the stress on accountability is that universities are being McDonaldized. They worry that the university is more concerned about an over-emphasis of instrumental values such as vocationalism, about a focus on trivial learning outcomes, about a loss of academic freedom, and about an absence of concern with learning and scholarship for their own sakes.<sup>11</sup>

2.6 There are often significant tensions among state priorities, faculty concerns, and market forces about what universities are supposed to be accountable *for*.<sup>12</sup> Universities generally have done a poor job communicating what they do for their constituencies.

### **Trend 3. Mission creep.**

All the campuses of a state's university system include teaching, research, and service as parts of their legislated missions. No one campus will focus exclusively on research or on teaching. As many colleges and universities have grown from single-purpose institutions (e.g., from teacher's colleges or agricultural schools) to modern universities, the expectation that they would be more involved with basic and applied research and public service has also grown. However, the relative emphasis on the three aspects of mission varies considerably within any one system. The relative emphasis on regional versus national or international constituencies varies in a similar way. Traditionally, universities that are more research-oriented have had the highest status.

A long standing trend in higher education has been for universities to attempt to move up the status hierarchy. Some have blamed this trend on popular rankings like those of *US News and World Report*, but what some have called the "monolithic model of excellence" with its emphasis on prestige has usually driven faculties and administrations.<sup>13</sup> The three classic ways universities have used to garner prestige are athletic success (football and men's basketball), increasing selectivity (i.e., increasing admissions test scores), and increasing disciplinary scholarship productivity (acquiring research grants that lead to publishable research). All three of these prestige generators are zero-sum games (to win, someone must lose), so the number of "excellent" universities remains limited and competition is fierce.

3.1 For most faculty members at all kinds of universities, the single most important source of status is success in disciplinary research. Even at universities where relatively modest amounts of

publishing and grant acquisition occur, rhetoric about the importance of disciplinary research has a significant influence on a campus's intellectual climate.<sup>14</sup>

3.2 Until recently, the teaching function of universities has been taken for granted and has not influenced institutional prestige. Service (public service or campus citizenship), although sometimes rewarded, has not added to an institution's prestige or to individual faculty member status.<sup>15</sup>

3.3 Some scholars of higher education argue that the uni-dimensional emphasis on disciplinary scholarship has led to four-year universities looking more and more alike rather than developing distinctive missions.

3.4 There is recent spotty evidence of a broader approach to the definition of scholarship that would provide evidence of forms of scholarship independent of the generation of traditional basic research. The concepts of the scholarship of teaching and learning, the scholarship of integration, and the scholarship of application (or engagement) are being used in some universities to change the means of evaluating and rewarding faculty members. However, most of the available evidence suggests that expectations for attainment in teaching, integration and engagement have been added to rather than substituted for expectations for traditional discovery scholarship.<sup>16</sup>

3.5 Campus leaders who have sought to involve their universities in either extensive public service or particular emphases on teaching (especially inter-disciplinary efforts at either) have often worked around faculty resistance to broadening the concept of scholarship by creating free-standing institutes or centers staffed by a mixture of non-faculty and faculty members.

#### **Trend 4. Changing students.**

Although the notion that students are different in the 21<sup>st</sup> century from what they used to be like can be and has been oversold<sup>17</sup>, there are a number of issues that reflect real changes (also see the briefs on workforce development and demographic changes).

4.1 Students of the future will be more likely to be older, female, Hispanic, and from families who have had little experience with higher education. The idea of "student" will need to broaden to include all kinds of life-long learners.

4.2 Students of the future, especially minority students, are likely to "swirl," to go in and out of higher education, instead of entering and exiting a "pipeline."<sup>18</sup>

4.3 The trend toward more under-prepared students entering college will continue until K-12 schools find ways to better prepare a diverse student body.

4.4 Students will come to the university with more technical expertise, but also will need to learn increasingly more about new techniques and need to learn how to keep current in technology.

4.5 Students will need increasingly to become information literate, with the ability to critically evaluate a wide array of sources of information, including books, media, and blogs.<sup>19</sup> The development of the attitudes and skills traditionally associated with a liberal arts education will continue to be critical.

### **Trend 5. Changing faculties and instruction.**

A number of changes in the nature of instructional delivery and who will be delivering instruction will continue. However, the direction of some of these trends for the future is unclear.

5.1 Instruction is being delivered in a wider array of places and in a wider array of formats, including online courses, various forms of online-in-class hybrids, and versions of continuous progress courses. Although all kinds of distance courses have been available for decades, the Internet has made the delivery of course content, exercises and activities, and exams easier for all instructors.

5.2 Effective instruction requires that students be cognitively engaged. That is not new, but more instructors have access to teaching methods in their disciplines that are more likely to get students actively involved in learning content, thinking critically about content, and being able to read, write and speak about that content in sophisticated ways.<sup>20</sup> (See the brief on soft skills).

5.3 To be effective, faculty members increasingly must have two types of expertise. First, they need to be scholars of their disciplines. Their scholarship needs to be wide and deep, and, increasingly, interdisciplinary. Second, they need to be scholars of teaching, including the best ways to teach a more diverse student body the concepts and skills of someone educated in his or her discipline (including the best forms of technology for teaching).<sup>21</sup>

5.4 Faculty members accrue their intellectual capital in a life of scholarship that results in the renewing and expanding of their knowledge. There has been a trend for universities to hire more and more part-time and non-tenure track faculty members. These faculty members commonly are not given the time for the study of their disciplines, new teaching methodologies, or related technologies. Without that time, those faculty members are likely to use up their intellectual capital with no way to renew it.<sup>22</sup>

5.5 Rumors persist that great numbers of faculty members will be exiting American higher education in the “next” few years. There is no doubt that faculty members are aging (see the brief on demographics). However, faculty members are increasingly likely to work beyond traditional retirement age.<sup>23</sup>

### **Trend 6. Closer university-public school, community college connections.**

It has been clear for some time that universities need to be increasingly involved with public schools and community colleges in a number of ways.

6.1 Many observers have been surprised at how little involvement there has been between universities and the public schools outside the schools of education.<sup>24</sup> However, because

universities are status- and prestige-driven, it is not surprising that universities have remained largely uninvolved. Education as a discipline has always had low status within the university and there has been little federal money available for research in education.

6.2 Despite the low level of involvement, there has been a growing awareness of the need for more engagement by faculty members, including those in the arts and sciences, engineering, and other disciplines.<sup>25</sup> There is a particular need to find ways to get more students interested in math and science.

6.3 A growing number of models of university-school cooperation have evolved and some have been shown to be effective in enhancing student achievement.<sup>26</sup>

6.4 Four-year institutions have been working more closely with community colleges to make sure that students can make the transition as easily as possible in both technical terms and in terms of students being fully prepared for advanced study.

### **Trend 7. Closer university-regional economy and culture connections.**

There is a growing realization in governor's offices, state legislatures, and university central administrations that universities have significant potential to aid regional and economic and cultural development.<sup>27</sup> (See the brief on Research, technology innovation and global competitiveness.)

7.1 Universities are more vocationally oriented than they used to be. They have become increasingly aware of and sensitive to workforce needs.<sup>28</sup>

7.2 Universities, especially those in small urban and rural areas, also increasingly contribute to the cultural life of their regions. From music and theater to recreation and athletics, universities enrich the communities they are in for a variety of audiences.

7.3 In addition to providing support for economic and cultural development, universities have become more aware of their role in serving as critics in raising questions about controversial issues and providing forums for constructive debate.

### **Trend 8. Specialization.**

Graduate and professional education and research are increasingly specialized and expensive. The products of graduate education and research are needed to support economic and cultural growth at national and international levels.

8.1 There is increasing demand for versions of masters-level, continuing education for many kinds of professionals that needs to be available through multiple delivery channels. Maintaining rigor and quality in such programs may be difficult.

8.2 Length of time to complete many doctoral programs has increased and often exceeds six or seven years with concomitant costs to students and institutions.<sup>29</sup>

8.3 States with relatively low out-of-state tuitions and substantial financial support for graduate students tend to attract out-of-state (and out-of-country) students without assurance that those students will remain in the state to use their expertise.

8.4 Demand for highly needed versus oversubscribed graduate programs is uneven and difficult to predict.

8.5 Major funds for basic research increasingly go to a smaller number of institutions.<sup>30</sup>

8.6 Funds for applied research are more broadly distributed and are likely to continue to go to non-university sources.

8.7 Some critics of public higher education have argued that at many universities, shifts toward graduate education and research come at a cost to the quality of education for undergraduate students. The latter tend to find themselves in larger classes, have little personal access to faculty members (as opposed to graduate assistants), and are enrolled in curricula designed for the convenience of faculty members rather than for the provision of a rigorous, engaged education.<sup>31</sup>

## **How are these trends influencing North Carolina and the University of North Carolina?**

### **Trend 1. The privatization of public higher education.**

- the legislature and Board of Governors are attempting to limit tuition and fee increases
- some UNC courses seek growing independence in setting tuition and fees
- UNC campuses are participating in the “arms race” to attract students
- UNC is making a major effort in online education
- there are significant efforts to counter market trends by focusing on high-need areas such as teaching and nursing
- the state of NC and some campuses are increasing need-based financial aid to foster accessibility and diversity
- UNC is becoming more demand-driven

### **Trend 2. Accountability.**

- UNC is already working to be more cost-effective (PACE)
- many campuses are developing ways to assess impact on students but there needs to be more work on assessment of student achievement, particularly in soft skills and work on getting faculty members committed and involved

### **Trend 3. Mission creep.**

- mission creep has occurred
- avoiding further mission creep will require the development of distinctive missions and clarification of the balance of traditional basic research, teaching, and public

service without damaging the central role of scholarship in everything the university does

- some campuses are already examining faculty reward structures to assess the need for changing how faculty members are rewarded

#### **Trend 4. Changing students.**

- campuses need to get ready for the new students, especially in terms of language and culture differences
- the presence of significant numbers of undergraduate students who “swirl” makes curricular continuity difficult to maintain
- life-long learners present special challenges to traditional programs because of their life situations, interests, and goals

#### **Trend 5. Changing faculties and instruction.**

- campuses need better data on the turnover of faculties
- UNC needs systematic faculty development efforts that overcome faculty resistance to learning about new approaches to teaching, including online instruction
- faculty from the applied world who can do applied research and obtain grants and contracts will require higher salaries
- campuses must find ways to guard against overuse of part-time and non-tenure track faculty members and the loss of intellectual capital

#### **Trend 6. Closer university-public school, community college connections.**

- although many campuses are heavily involved with the public schools, the outcomes have not been sufficient, so more and different efforts are needed, especially from units outside the schools of education

#### **Trend 7. Closer university-regional economy and culture connections.**

- most campuses have mechanisms for providing public service, but there may need to be system wide review of these efforts and ways for them to work with each other
- campuses need to develop appropriate reward structures to encourage faculty members to be involved in public service

#### **Trend 8. Specialization.**

- several UNC campuses have significant needs for space and equipment if they are to remain competitive for research funds
- many UNC campuses indicate a need for funding for faculty members and graduate students to increase recruitment and retention efforts
- appropriate levels of specialization are necessary but the system as a whole needs to balance breadth and depth, perhaps related to more explicit mission differentiation<sup>32</sup>

## What specific issues should the Commission focus on?

- how the system-level administration can strike a balance between local campus autonomy and statewide coordination
- the development of a mechanism for helping with the identification and assessment of key system-wide student outcomes, especially soft skills (e.g., a system-level faculty-driven accountability council)
- system-level guidance in the development of distinctive missions with faculty reward systems that are mission based
- mechanisms for continuing faculty development in teaching, research and service within and across campuses with a special emphasis on innovation and experimentation
- mechanisms for involving universities in the public schools in innovative ways<sup>33</sup>
- explicit recognition of the advantages and disadvantages in the use of part-time and non-tenure track faculty members
- the systematic review of the approaches campuses are taking to be involved in economic development
- how to make the provision of opportunities for life-long learning a reality
- ways to ensure public and private support for research and development activities
- how to maintain a high degree of accessibility of the UNC campuses to all citizens of the state

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<sup>1</sup> Duderstadt, (2003, 2005), former president of the University of Michigan where state support declined from 70% of student costs to 7% over a 40-year period, is one of the most articulate sources on this topic.

<sup>2</sup> Zemsky, Wegner, and Massy (2005) see this shift in the disconnect between universities and the public schools. Burke (2005) suggests that the decline in public support may reflect a declining commitment to access among some political leaders (too many people go to college) and to diversity.

<sup>3</sup> See Zemsky et al. (2005) and Spellings (2006) for more detailed descriptions of the “arms race.”

<sup>4</sup> In a report for the National Center for Public Policy and Higher Education, Immerwahr and Johnson (2007) point out that states are not likely to reverse course on privatization or accountability. They also point out that the flagship universities will do well, but that the smaller, less prestigious state comprehensive universities are in a real squeeze in most states.

<sup>5</sup> At least 27 universities, about half of them public, are conducting funding campaigns of one billion dollars or more.

<sup>6</sup> Rizzo (2006) points out that the shift from state to student funding and increases in merit-based aid have benefited middle and upper-middle class families, not the less advantaged. The average family income of students at the University of Michigan now exceeds \$100,000 (Zemsky et al., 2005). North Carolina provides a subsidy to UNC students only a little smaller than that provided 10 years ago (adjusted for inflation) and has made special efforts in the area of need-based aid. However, the 2006 report card for North Carolina from the National Center for Public Policy and Higher Education gave the state an “F” for affordability.

<sup>7</sup> Perhaps the clearest picture available is provided by Immerwahr and Johnson (2007). Also see Burke (2005).

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<sup>8</sup>See Zemsky et al. (2005). The Delaware Study of Instructional Costs and Productivity (<http://nces.ed.gov/pubs2003/2003161.pdf>) showed that the major instructional cost per student at an institution is predicted by the disciplinary mix within the university (engineering is much more expensive than English or sociology) and to a lesser degree to institutional mission (research universities are expensive). There is a “natural” confound in that major research universities are more likely to have more and more different kinds of expensive programs and in that some programs require smaller classes by their nature (e.g., engineering, doctoral-level science classes).

<sup>9</sup> See Miller (2006) for an example of a five-state project and Spellings (2006) for examples of existing assessment approaches.

<sup>10</sup> Accreditation agencies of various kinds have led some of these efforts, but faculty members mostly perceive accreditation as an administrative process that does not involve them (Ewell, 2005).

<sup>11</sup> See Hayes and Wynyard (2002) for discussion of these concerns in their best and worst forms. Fendrich (2007) makes a particularly eloquent argument against the “pedagogical straitjacket” of some common accountability approaches.

<sup>12</sup> For example, the state may have a high priority for increasing the number of K-12 teachers while faculty members at universities (outside their schools of education) consider the preparation of teachers to be a low-status endeavor not coordinate with their interest in more narrow disciplinary scholarship. Or, markets may demand a particular product (e.g., physical therapists), leading to the preparation of PTs being a high university priority. Then the market may shift with an emphasis on a different product (e.g., community-college trained technicians) so that the faculty members in the discipline change the product (e.g., increasing the entry-level for PTs to doctoral degrees) to be more competitive.

<sup>13</sup> Burke (2005) argues that the most effective accountability models will be those that reward multiple models of excellence based on performance, not prestige. Also see Morphew (2002) and Burgan (2006). Newman, Couturier and Scurry (2004a) argue that state systems have been ineffective in limiting program overlap and mission creep and as a result have been unable to control rising costs and inefficiencies.

<sup>14</sup> The problems created for universities outside the research extensive sector by concerns with status and prestige have been discussed at length by both critics and supporters of American higher education. These problems apply to institutions as wholes and to individual faculty members. See Henderson (2007) for a summary.

<sup>15</sup> The balance of faculty and university activities varies greatly across different types of universities. However, the intimidation factor in the status of the research university model results in few institutions being explicit about what they are actually doing (perhaps the exception being that liberal arts colleges that are not reticent to tout their emphasis on teaching).

<sup>16</sup> O’Meara and Rice (2005) documented what has been going on most recently in regard to the relative emphasis on teaching, service, and research. Also see Braxton, Luckley and Helland (2002). At the research universities the greatest struggle is usually in finding a way to deal with teaching. For the masters and baccalaureate schools the struggle is usually in finding a way to deal adequately with research and creative activities. Public service is often an afterthought at all kinds of universities.

<sup>17</sup> A lot of fuss about the role of “learning styles” or “multiple intelligences” or “millennium students” simply has no basis in hard research (see Henderson, 2007). However, there are harder data about the differences between traditional and distance education students and between traditional-age and adult learners. For example, there are data suggesting off-campus, part-time students do not like academic challenge (Payne, Kleine, Purcell & Carter, 2005).

<sup>18</sup> See Zemsky et al. (2005).

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<sup>19</sup> See Breivik (2005) for a good overview of the concept of information literacy and for a rationale for its central role in a knowledge-based society.

<sup>20</sup> Matlin (2002) provides a good source of ideas about how college professors can use what psychologists have discovered about how people learn.

<sup>21</sup> Austin (2002) points out that new faculty members have not been prepared by their graduate schools to be scholars in both of these ways. She argues that graduate education needs to be redesigned to include instruction in teaching and teaching technologies. She also believes they should be taught about providing public and institutional service, about working with diverse groups, and about the core purposes and values of higher education.

<sup>22</sup> Ehrenberg and Zhang (2006) found that the increased use of part-time and non-tenure track faculty was correlated with decreases in graduation rates. UNC has been using such faculty at a substantial rate, but as of 2000 had been doing so at a lower rate than the national average (however, full-time, tenure-track faculty members are well behind the national average in salary and benefits, so there may be less incentive for using less permanent faculty). The major danger of the “unbundling” of the teaching, research and service roles is the loss of the scholarly activity that holds all of them together. Those inside the universities simply have not done a good job of educating the public (or even themselves) about the nature of what they do on a day-to-day basis.

<sup>23</sup> Most UNC campuses do not have firm projections on the need for replacement faculty members in terms of either retirement confidence and projection or likelihood of leaving the state. A 2005 TIAA-CREF Institute study of retirement trends among faculty members (<http://www.tiaa-crefinstitute.org/research/trends/docs/tr103105.pdf>) indicated that while a slight majority expected to retire at 65 or before (51%), at least 28% expected to retire at 70 or after. Most UNC campuses report low salaries are a hindrance in recruiting and retaining faculty members, but the evidence is largely anecdotal (that UNC salaries and benefits are below the national averages in many cases is well-documented, but it is not clear just how that influences recruitment and retention).

<sup>24</sup> See Labree (2004), Newman, Courturier and Scurry (2004a, 2004b) and the Pappas (2006) report to President Bowles.

<sup>25</sup> The Spellings (2006) and Pappas (2006) reports make the need for teachers clear at the national and North Carolina levels, respectively.

<sup>26</sup> A model of university-school cooperation that has been shown to work is Comer’s School Development Program, started at the Yale University Medical School over 30 years ago (Comer, Ben-Avie, Haynes, & Joyner, 1996). Comer’s model has been used effectively in several North Carolina districts.

<sup>27</sup> The Pappas (2006) report made specific recommendations about economically-related programs at particular UNC campuses, about technology transfer, and about mechanisms for regional partnerships. Most UNC campuses already have significant efforts ongoing, but there is much potential for additional work.

<sup>28</sup> See Grubb and Lazerson (2005).

<sup>29</sup> There have been calls to “re-envision” doctoral education because of several growing problems, including the length of time to a degree, the overly narrow education required for high level research, and a lack of preparation for employment (Nyquist & Woodford, 2000). Graduate programs prepare all their students to be researchers, but research-intensive jobs, especially in academe, are rare in many disciplines. The Carnegie Foundation for the Advancement of Teaching has called doctoral education “preparing stewards of the discipline” to indicate its importance. The Preparing Future Faculty program was developed to help ensure that those doctoral students who are entering higher education will receive experience in a variety of academic settings (<http://www.preparing-faculty.org/>). Nationwide, the attrition rate for Ph.D. programs is estimated to be around 50% (Lovitts & Nelson, 2000).

<sup>30</sup> Approximately 85% of federal research and development funds in the late 1990s went to the top 100 successful applicants with over 650 universities fighting for the remaining 15% (Benjamin (2003).

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<sup>31</sup> Some critics cannot be taken seriously, but others are insiders who genuinely seek positive change (see Burgan, 2002; Henderson, 2007).

<sup>32</sup> There are already differences in the relative emphasis on basic and applied research that are related to institutional missions (e.g., more applied research at research-intensive and comprehensive universities).

<sup>33</sup> Ray Cortines, formerly head of the San Francisco and New York City schools once suggested that states shift up to 10% of their funds from the universities to the public schools to be used to buy back services from the universities. He argued that would get the attention of the universities.

## References

- Austin, A. E. (2002). Creating a bridge to the future: Preparing new faculty to face changing expectations in a shifting context. *Review of Higher Education*, 26, 119-144.
- Benjamin, R. (2003). The environment of American higher education: A constellation of changes. *The Annals of the American Academy of Political and Social Science*, 2003, Volume 585, 8-30.
- Braxton, J. M., Luckey, W., & Helland, P. (2002). *Institutionalizing a broader view of scholarship through Boyer's four domains*. ASHE-ERIC Higher Education Report, 29 (2). San Francisco: Jossey Bass.
- Breivik, P. S. (2005). 21<sup>st</sup> century learning and information literacy. *Change*, 37(2), 20-27.
- Burgan, M. (2006). *What ever happened to the faculty?: Drift and decision in higher education*. Baltimore, MD: The Johns Hopkins University Press.
- Burke, J. C. (Ed.). (2005). *Achieving accountability in higher education: Balancing public, academic, and market demands*. San Francisco: Jossey Bass.
- Comer, J. P., Ben-Avie, M., Haynes, N. M., & Joyner, E. T. (Eds.). (1999). *Child by child: The Comer process for change in education*. New York: Teachers College.
- Duderstadt, J. J. (2003). *The future of the public university in America: Beyond the crossroads*. Baltimore, MD: Johns Hopkins.
- Duderstadt, J. J. (2005). *The crisis in financing public higher education-and a possible solution: A 21<sup>st</sup> C Learn Grant Act*. Ann Arbor: University of Michigan Millennium Project. ([http://milproj.ummu.umich.edu/publications/financing\\_pub\\_education/index.html](http://milproj.ummu.umich.edu/publications/financing_pub_education/index.html))
- Ehrenberg, R. G., & Zhang, L. (2006). Do tenured and tenure-track faculty matter? In R. G. Ehrenberg (Ed.), *What's happening to public higher education?* (pp. 37-50). Westport, CT: Praeger.
- Ewell, P. T. (2005). Can assessment serve accountability?: It depends on the question. In J. C. Burke (Ed.), *Achieving accountability in higher education: Balancing public, academic, and market demands* (pp. 104-124). San Francisco: Jossey Bass.
- Fendrich, L. (2007, June 8). A pedagogical straitjacket. *The Chronicle of Higher Education*, 53, B6.
- Grubb, W. N., & Lazerson, M. (2005). Vocationalism in higher education: The triumph of the education gospel. *The Journal of Higher Education*, 76, 1-25.

- 
- Hayes, D., & Wynyard, R. (Eds.). (2002). *The McDonaldization of higher education*. Westport, CT: Bergin & Garvey.
- Henderson, B. B. (2007). *Teaching at the people's university: An introduction to the state comprehensive university*. San Francisco: Anker/Jossey Bass.
- Immerwahr, J., & Johnson, J. (2007). *Squeeze play: How parents and the public look at higher education today*. National Center for Public Policy and Higher Education ([http://www.makingopportunityaffordable.org/pdfs/solution\\_papers/squeeze\\_play.pdf](http://www.makingopportunityaffordable.org/pdfs/solution_papers/squeeze_play.pdf))
- Labaree, D. F. (2004). *The trouble with ed schools*. New Haven: Yale.
- Lovitts, B. E., & Nelson, C. (2000). Attrition from Ph.D. programs. *Academe*, 86, 44-51.
- Matlin, M. W. (2002). Cognitive psychology and college-level pedagogy: Two siblings that rarely communicate. *New Directions for Teaching and Learning*, 89, 87-103.
- Miller, M. A. (2006, May). Assessing college-level learning. *Policy Alert*. The National Center for Public Policy and Higher Education. ([http://www.highereducation.org/reports/pa\\_aclearning/](http://www.highereducation.org/reports/pa_aclearning/))
- Morphew, C. C. (2002). A rose by any other name: Why colleges become universities. *Review of Higher Education*, 25, 207-223.
- Newman, F., Couturier, L., & Scurry, J. (2004a). *The future of higher education: Rhetoric, reality, and the risks of the market*. San Francisco: Jossey-Bass.
- Newman, F., Couturier, L., & Scurry, J. (2004b, October 15). Higher education isn't meeting the public's needs. *The Chronicle of Higher Education*, pp. B6-B8.
- Nyquist, J. D., & Woodford, B. J. (2000). *Re-envisioning the Ph.D.: What concerns do we have?* University of Washington. (<http://www.grad.washington.edu/envision/PDF/ConcernsBrief.pdf>)
- O'Meara, K. A., & Rice, R. E. (Eds.). (2005). *Faculty priorities: Rewarding multiple forms of scholarship*. San Francisco: Jossey-Bass.
- Pappas, A. T. and associates. (2006). *Staying a step ahead: Higher education transforming North Carolina's economy*. (Final report to UNC President Bowles). Pappas Consulting Group, Inc.
- Payne, S.L., Kleine, K. L. M., Purcell, J., & Carter, G. R. (2005). Evaluating academic challenge beyond the NSSE. *Innovative Higher Education*, 30, 129-146.
- Rizzo, M. J. (2006). State preferences for higher education spending: A panel data analysis, 1977-2001. In R. G. Ehrenberg (Ed.), *What's happening to public higher education?* (pp. 3-35). Westport, CT: Praeger.
- Spellings, M. (2006). *A test of leadership: Charting the future of U.S. higher education*. U. S. Department of Education. (<http://www.ed.gov/about/bdscomm/list/hiedfuture/reports/pre-pub-report.pdf>)
- Zemsky, R., Wegner, G. R., & Massy, W. F. (2005). *Remaking the American university: Market-smart and mission-centered*. New Brunswick, NJ: Rutgers.