

Project Report to the Atlantic Philanthropies

Education in the Digital Age: Leadership, Linkages, and Roadmaps

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Executive Summary

During the past funding period, we have made important strides in developing the various leadership groups key to this regional project. One such group involves the presidents of roughly two-dozen liberal arts colleges in the Midwest. We are meeting on a regular basis with this group to help them address issues such as libraries, technology acquisition and management, and faculty development, utilizing the resources of the University of Michigan as a research university. We have similar leadership groups planned for regional public universities and community colleges.

Similarly, a faculty group has been formed to explore the impact of digital technology across the disciplines and activities of a university (involving our provost). A similar discussion involving the leaders of several American and European universities is planned for this summer. We have also scheduled a day-long workshop with the leaders of Michigan's nonprofit foundations for later this spring.

Two major publications, a book and a report, have recently appeared from the work sponsored by Atlantic Philanthropies that serve both as a knowledge resource and the first effort at developing a strategic roadmap for leaders of

higher education (and are provided with this report). These will be refined for specific audiences in the months ahead.

Finally we are continuing to examine broader issues driven by emerging digital technology that could well transform higher education. Among these is the impact of "open source" paradigms on the outreach or engagement role of the university (along with the implications for the ownership of the intellectual property arising from teaching and research).

Narrative

The project is aimed at understanding and influencing the impact of information technology on higher education by: 1) establishing and guiding several key leadership groups aimed at identifying issues and developing action agendas (including national higher education associations, state alliances, cross-disciplinary groups, and foundations); 2) building knowledge resources to support these groups (e.g., web portals, collaboration spaces, workshop experiences, intellectual frameworks); and 3) using these leadership groups and knowledge resources to develop a series of strategic technology roadmaps for various constituencies of higher education (e.g., colleges and universities, national organizations, and stakeholders such as state and federal government).

During the past six months we have moved ahead in each of these areas, essentially following the timeline schedule of the proposal (and updated in the Appendix).

Leadership Linkage Groups

We have formed a leadership network involving the presidents of roughly two dozen independent colleges, beginning first with a day-long workshop on key strategic issues posed by digital technologies, and then moving to the formation of a joint guidance group to define and implement an alliance between these liberal arts colleges and the University of Michigan as a research university. Among the initiatives included in the first year of activity are: an effort to build a "virtual" 3/2 program between undergraduate programs in the colleges and the

graduate programs in our new School of Information; working together to address key strategic issues such as libraries, technology acquisition and management, and faculty development. We are in the early stages of forming a similar leadership network among the 15 public regional universities in the State of Michigan, again first involving their presidents, then moving to working groups on joint initiatives. We hope to do the same with community colleges over the next several months.

Our effort to build a faculty discussion groups across disciplines has been accelerated by the strong interest of the UM provost and president in these issues. Working with the provost, a University-wide faculty group has been launched to explore the impact of digital technology on "transforming the academy".

At the national level, we are working closely with the National Academies effort through the IT Forum, also sponsored by Atlantic Philanthropies, to link our regional efforts with parallel activities involving the presidents of research universities (through AAU) and other national higher education associations. Finally, we have participated in the design of a major international forum involving the presidents of leading research universities from North America and Europe which will meet in Switzerland this summer in a workshop to explore the issue of "re-inventing the research university", with digital technology as a key element of this discussion.

We have also scheduled a major workshop this spring for the leaders of the two-dozen major private foundations in Michigan, aimed both at elevating their awareness of philanthropic opportunities in this area, as well as to understand better their own perspectives of project support in higher education.

Knowledge Environment

Two major documents have been published which will assist our efforts to work with regional, national, and international groups. First, our book, *Higher Education in the Digital Age: Technology Issues and Strategies for American Colleges*

and Universities,¹ was published in December. It has been widely distributed among leaders of higher education, and parts of the book will be excerpted this year in the Educause Review journal. (Copies are being provided with this report).

Second, the National Academy Press has published the report on the first phase of the study of the impact of IT on the future of the research university, *Preparing for the Revolution: Information Technology and the Future of the Research University*.² (Copies of this report are also being provided.) This also provides a very useful resource for our interactions with various groups.

Roadmap Development

Although our book, *Higher Education in the Digital Age*, represents an early attempt to develop a strategic roadmap for university leaders, we intend to use our specific leadership groups to refine and differentiate these guides for various components of the higher education enterprise (e.g., research universities, public universities, independent colleges, community colleges,) as well as key players (trustees, presidents, deans, faculty, students).

Even as we develop some of these more pragmatic strategies, we are investigating in parallel some of the more provocative themes posed by digital technology that could radically transform the nature of higher education. Traditionally one views the implications of rapidly evolving information technology for higher education through its impact on the teaching and research missions the university, e.g., the impact of online or distance learning on pedagogy; the appearance of strong market forces associated with technology-intensive, for-profit or open universities; the extraordinary tools now reshaping the nature of research leading to so-called “e-science” that enable the simulation of physical reality, the formation of vast data archives and digital libraries, and

¹ James J. Duderstadt, Daniel E. Atkins, and Douglas Van Houweling, *Higher Education Faces the Digital Age: Technology Issues and Strategies for American Colleges and Universities*, ACE/Praeger Series on Higher Education, (Praeger Publishers, Westport, CN; American Council on Education, Washington, 2002) 288 pp.

² James J. Duderstadt, Chair, *Preparing for the Revolution: Information Technology and the Future of the Research University*, National Research Council (National Academy Press, Washington, 2002) 80 pp.

allowing new forms of scholarly collaboration and communication. Yet it may be the third traditional mission of the university, that of service to society, that will be most directly affected by this technology.

To be sure, as digital technology relaxes the constraints of space and time, the service activities of the university are already evolving much like teaching and research, with the online extension of service activities to ever broader and more diverse publics, new paradigms of technology transfer, and the central role of this technology in knowledge-based economic development. But it could well be that an even more fundamental restructuring of the engagement of the university with broader society will arise from the array of new IT-enabled and stimulated "openness" paradigms such as open source software development, open learning environments, open universities, open courseware programs, the Open Knowledge Initiative, and similar efforts which challenge the current intellectual organization of the university and its monopoly over advanced educational opportunities and research activities.

One might even conjecture that the use of digital technology through open paradigms could well counter the powerful market forces created by the commercial value of intellectual property created on the campuses. By tearing down the walls between the campus and society, opening up access to learning and scholarship, and enhancing participation in research and discovery to communities far beyond the campus, these paradigms might be instrumental in reestablishing the fundamental character of higher education as a public good rather than a market commodity. These are some of the issues we intend to examine in the months ahead with our various leadership groups.

Summary

With the key leadership groups now in place, along with the appearance of the first set of publications, we will aim toward a more strategic linking of these various elements of our regional strategy in the months ahead. We have become increasingly convinced that collaboration and alliance-building will be key to the ability of institutions of higher education to cope with the challenges and exploit the opportunities presented by rapidly evolving digital technology.