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ABSTRACT

This article recounts the development of a paradigm for a virtual university that is, one in which delivery is inextricably linked to the political, technological, social, and economic context of the institution at the University of North Carolina (Wilmington). It explains how, in just five years, a conservative, traditional, regional institution made the transition from a few professors experimenting with computer-enhanced instruction to development of a framework for virtual instruction and experimentation on an international scale. The essential factors identified include: a well articulated vision, strategic committees or key innovators, availability of technological advancements, promotion and publicity, institutionalization of enabling policies, and dissemination of information regarding the results of new approaches. A major step was the design of a technology college, characterized by use of computer- assisted instruction, the World Wide Web, two-way interactive video conferencing, and individualized instruction using various technologies. The implementation of this technology college led to the Chancellor's Steering Committee on Information Technology which recommended that a high-level administrator be identified and made responsible for coordinating technological services, initiating technological innovations, and seeking partnerships and alliances. Specific events and the interactions of individuals over different approaches during this process are recounted. (DB)

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Like many other regional institutions, faculty leaders and administrators at The University of North Carolina at Wilmington are cautiously viewing the developing landscape of virtual instruction* and responding by constructing an institutional perspective of what quality virtual instruction ought to be. For most institutions of higher education, contemplating virtual instruction means constructing a paradigm of instructional delivery inextricably linked to the political, technological, social and economic context of the institution.

Because such paradigm construction is also inescapably linked to assumptions about what instruction ought to be and the role of the teacher in the learning process, it rarely occurs quickly or without some degree of institutional angst. This article seeks to examine paradigm construction at a comprehensive university by "telling the story." This author assumes that paradigm construction in an organizational context is a political process with political actors competing for diverse goals. The resultant institutional action or policy is a product of covert and overt bargaining games. By employing the political paradigm to explain how the institutional paradigm of virtual instruction was (and still is being) constructed, this article seeks, also, to demonstrate how analysis using frame of references or conceptual lenses highlights certain aspects while obscuring others. It is acknowledged that relating this story from other perspectives is desirable and would emphasis different aspects.

The Background

The University of North Carolina at Wilmington is one of the sixteen constituent institutions of the University of North Carolina. With approximately 10 ,000 students, it is largely an undergraduate teaching, Comprehensive I institution with a graduate student population of approximately 800 students. With the leadership of a new chancellor in 1991, the institution enhanced several academic programs, shed its "home grown" image, recruited star scholars and defined an outreach agenda. In the late 1990s, the institution appeared on several lists as a "best buy" regional institution (in the southeastern United States). In 1997, UNCW celebrated its 50th anniversary.

As in many other universities around the country, faculty at UNCW compete for summer stipends or awards to reexamine their instruction, engage in creative endeavors, and/or conduct research. During the late 1990s, several faculty sought these stipends to reconstruct their instruction using the Web as the primary delivery mode. In the summer of 1998, a diverse university-wide committee and a consultant group presented an institutional self-study that offered recommendations for unifying UNCW's technological initiatives. During the same summer, the university agreed to participate in a "virtual university" experiment with three Japanese universities to determine the cultural and quality issues surrounding distance education on an international scale. (The national and international political maneuvering that occurred during the Japanese experiment will be explored in another article.)

How does a rather conservative, traditional, regional institution make a transition from a few professors experimenting with computer enhanced instruction to constructing a framework for virtual instruction and experimenting on an international scale in approximately five years? On the surface, essential factors in the evolution

appear to be a well articulated vision, strategic committees or key innovators, availability of technological advancements, promotion and publicity, institutionalization of enabling policies and dissemination of information regarding the results of new approaches . Undoubtedly, these factors supported the development of a paradigm of virtual instruction. Yet, lurking below the surface are the conflicting agendas, nuances, and political entanglements that uniquely shape paradigm construction (and institutional action) at UNCW.

The Vision

Because of their varying perspectives, it would be nearly impossible for those involved from the inception to identify (or agree upon) all the behind the scenes political actors, negotiations, or tensions that assisted in the development of an institutional frame of reference regarding virtual instruction and the reorganization to improve the use of university-wide technology. Chancellor Leutze was undeniably the major political actor. Since the early 1990's, he had been championing the information highway as an important technological tool that furnished opportunities for virtual instruction. The two-way interactive video and audio infrastructure encouraged team teaching between faculty located in different regions, minimized barriers related to distance, and significantly opened the doors for reexamining how teaching and learning could be conducted.

As chancellor of a growing interactive, regional university James Leutze employed the power of the presidency (Fisher, 1984) to articulate, persuade, and legitimize the use of technology in education. In the early 1990s, Chancellor Leutze furnished initial elements of the paradigm of virtual instruction by attesting that school districts on the North Carolina Information Highway could

ameliorate what seemed heretofore as intractable problems involving the lack of resources in some districts (usually rural) and the presence of resources in other school districts. For well over a year, his addresses to nearly every group in the multiple county region (Board of Trustees, potential donors, school boards, educators, chambers of commerce, and so forth) included some reference to the benefits of technology: rural/urban equity, efficiency, sharing of resources, and establishment of a seamless web of teaching and learning from kindergarten through graduate school.

In New Hanover County (where UNCW is located), two high schools shared a Japanese teacher, and students at one local high school enrolled in an advanced calculus class with a class of college students at the University of North Carolina at Wilmington. These examples of virtual instruction demonstrated how distance barriers could be eliminated and resources shared utilizing the two-way interactive capacity of the North Carolina Information Highway. Demonstration of the technology, however, was insufficient to encourage many faculty (secondary, university or graduate) to explore or use some of the new technological tools.

For the most part, Chancellor Leutze focused on the benefits to the region to persuade faculty and other educators on the importance of virtual instruction. Boyer (1990) highlights the president's power of persuasion. He states, "Mainly, presidents have, or should have, the power of persuasion. They speak with a powerful voice, and we urge that presidents use the office to define scholarly priorities wisely and create campus forums where such proposals can be thoughtfully debated (78)." A president's persuasive power can be used to influence innovative projects and broaden the definition of scholarship on campus.

Persuasive power, however, had its limits on campus

when it came to faculty embracing the concept of teaching classes on the information highway (using two-way interactive video and other computer assisted instruction). Most faculty assumed that use of the technological tools (such as enhanced computer mediated presentations and the World Wide Web) would require rethinking, and in most cases, reworking how they would instruct their classes. Faculty proclaimed there were little rewards for them to engage in such undertakings. Did these time consuming projects count for tenure?

For the most part, faculty did not perceive a need to reexamine how instruction was delivered. In the North Carolina Information Highway classrooms, there were no traditional boards, rather computers for hypermedia demonstrations and monitors to interact with students in remote locations. The chancellor, though appreciated for his vision, appeared impatient to some. There seemed to be little acknowledgment from the deans and chairpersons on how using technology in teaching would be valued.

A few faculty pioneers, nonetheless, did eagerly explore the new technological tools and sought to participate in virtual instruction by teaching classes to remote students. It is not clear how motivated these faculty were in meeting needs in the region. The majority of the faculty, however, viewed teaching to distant students as time consuming and realized that there would be a different type of presentation needed to engage students at remote locations in interactive learning. There were also those nagging questions that were articulated by more than a few:

What does the use of information technology tools mean for how I teach now or will teach in the future?

Will my role as a faculty member be altered significantly or minimized in virtual instruction (particularly Web based instruction)?

Can I be as effective using these new technological tools?

In early 1994, Chancellor Leutze furnished a copy of An American Imperative: Higher Expectations for Higher Education (1993, The Wingspread Group) to all members of his cabinet and other key administrators and faculty. He referred to the text on a couple of occasions; yet it is not clear if all, or any, persons who obtained the text read it or reflected upon its contents. The text begins with a quote from Albert Einstein, "Everything has changed but our ways of thinking, and if these do not change we drift towards unparalleled catastrophe."

The Wingspread Group makes many observations about the issues, tensions, and challenges facing higher education that are "played out" in some form or other in the construction of the virtual instruction paradigm at UNCW. Some of the questions, and answers to the questions, raised by the Wingspread Group were echoed in many discussions on campus focusing on virtual instruction, as such:

- Are educational programs created for the needs of the students or the interests of the faculty? Are they the same?

- If feedback improves learning, how can feedback to students be improved?

- How do we support faculty initiatives to improve learning and teaching?

- Do (or should) programs develop and support a desire for lifelong learning among our students?

- Have we examined alternative ways to improve student learning or access?

- What other questions should we be asking?

The Committees

Technology College

In the beginning of the 1996 academic year, a small committee was appointed by the chancellor and empowered to design the specifics of a Technology College to be implemented as a pilot project in the fall of 1997. The formation of this committee served as a catalyst for focused discussion on virtual instruction. By this time, also, the Internet had exploded to include significant examples of virtual instruction and various student services organized in cyperspace through interact Web sites.

The committee was comprised of the Associate Vice Chancellor for Information Technology and Director of the Center for Teaching Excellence (a full professor of Chemistry who had pioneered computer mediated instruction on campus for several years), the Director of Distance Education, the Director of the Technology Center in the School of Education, the Associate Dean of Liberal Arts and Sciences, a full professor of Mathematics, an Associate Professor of Computer Science and Information Technology, Executive Assistant to the Chancellor, a student, and the Vice Chancellor for Public Service and Extended Education (also an Associate Professor in the School of Education). In terms of representation, the committee was interdisciplinary and diverse. One member of the committee stated that it was nicely "balanced."

The chancellor called all the committee members "leaders, " highlighting their roles as political actors in the process. The first meeting was characterized by various committee members presenting their perspectives on the Chancellor's vision and his expectations of Technology College. As in most collegial discussions, this clarification process was time consuming and included opportunities for individuals to pontificate about what higher education should and should not

be-- a necessary step in paradigm construction. Underlying these discussions were the tensions between academic affairs and the chancellor, tensions between proponents of traditional classroom instruction and distance learning, and tensions that were just beginning to develop.

It is difficult to recount just when the term "Technology College" was coined in the process. It was a term, however, that Chancellor Leutze used in his discussions with members of the Board of Trustees, with his cabinet, and with select faculty increasingly in the 1995 academic year. Taking advantage of his presidential power, Chancellor Leutze compelled the university beyond intellectualizing into the actualizing of some sort of Technology College that would allow students to take advantage of technology in as many areas as possible in teaching and learning.

The committee was charged with designing a Technology College that would be characterized by the use of computer assisted instruction, the World Wide Web, two-way interactive video conferencing, and instruction individualized with the use of various technologies. Students enrolled in Technology College should be able to interact with others around the world adding a global aspect to Technology College.

Committee members visited other "leading institutions" of higher education to investigate their technological initiatives and to examine their perspectives on virtual instruction. To report that members of the committee had specific notions of what ought to be and ought not to be would be an understatement. Attempting to further specific agendas, committee members reported selectively on the innovations and perspectives they discovered on their trips. Most members of the committee, nonetheless, stated repeatedly that they were committed to working towards actualizing as much as possible of the Chancellor's

vision of Technology College. Some members, nevertheless, affirmed it was their responsibility to protect faculty interests and insure that the resultant Technology College would be palpable to the faculty.

After months of meetings, the committee eventually delineated goals. During the delineation of goals stage, many behind the scenes conversations were held with various members of the faculty, deans, and staff to circumvent political quagmires. The chancellor was updated publicly and privately, and there were numerous attempts to influence the development of Technology College by powerful behind the scenes political actors.

In March 1997, the committee agreed upon four goals for Technology College:

I. Increased educational opportunities for students

2. Streamlined administration
(electronic access to transcripts, grades, registration, financial aid, billing, etc., registration through WWW instead of telephone, electronic advising)
electronic advising

3. Faculty development
(expanded scope of teaching methods- multimedia, WWW, email, videoconferencing,

distance learning and increased opportunities for faculty to gain new skills)

4. **Positioning the university for the future**
(expanded electronic access to UNCW

programs and resources
and testing and evaluating emerging computer and communication networking technologies for the 21st century)

The committee concurred that the Technology College would serve as a test bed for existing and emerging technologies to assess and measure the usefulness of these technologies in higher education. It was hoped that the university would eventually develop partnerships with companies to experiment with developing technological tools designed to enhance the teaching and learning processes.

One committee member consistently articulated a need to focus on the learning processes of students. Information technologies such as the World Wide Web, distance learning, e-mail, and discussion groups could help students discover how they learn best. Some of the anywhere/anytime learning technologies would allow students to set their learning paces and monitor their progress. Additionally, faculty could determine which of these technologies produce the greatest gains in student learning.

Sometime in April, it was agreed that all courses that comprised Technology College would include specific features. These features included data acquisition, interdisciplinary components, use of one or several technologies (World Wide Web, computer presentations, use of distance learning, or CD roms), and the interaction of faculty who teach the courses. A computer lab for Technology College was identified and outfitted with new computers and software for Technology College's students and faculty in the Fall of 1997. A mathematics professor who had pioneered many of the computer assisted instructional programs, and member of the committee, was selected as the coordinator for Technology College.

The progress of Technology College was additionally stimulated by a call for proposals by the University of North Carolina's General Administration. The University of North Carolina sought to encourage the development of technological innovations and distance learning by providing grants to institutions with a plan for helping faculty develop courses utilizing technological innovations. By May 1997, about 28 faculty were identified as expressing interest in the new Technology College. These were faculty who were incorporating some form of technology in their courses or designing technology to use in their courses such as CD Roms. These were also faculty who had engaged in many behind the scenes discussions concerning what Technology College ought to be. One political concession was that Technology College would be initially developed around the courses that faculty wanted to teach (instead of specific student majors).

Faculty who elected to teach in Technology College agreed to adhere to specific guidelines. In return, faculty would receive incentives that could include subsidized travel to technology-related conferences, summer support for course development, use of media preparation facilities to help construct courses and overall support from Academic Affairs. The course assignments of interested faculty comprised the core of Technology College. These included Anthropology 326, Chemistry 101, Mathematics 162 (Calculus), Philosophy and Religion 232, Sociology 105 (Introductory Sociology), and a few upper division courses such as English 490/509 (Hypermedia and Literature). In a Technology College course, students will be required to have Internet access, an e-mail account, use the Internet to receive assignments and communicate with the faculty and other students.

Besides learning the specific content of the Technology

College courses, students are expected to be more actively involved in the learning process. They are expected to form appropriate teams to collaborate, to solve problems, to create solutions, and to apply concepts to daily situations. Ideally, students will be more aware of how they learn best. It is also expected that students will find learning interesting and perceive the need for continual learning. Students will have up-to-date assessments of their existing knowledge and competence as a result of swift feedback from the faculty and software programs. Moreover, students will use various technologies as learning and assessment tools, where appropriate.

The development and eventual implementation of Technology College serves as a significant event in the evolution of technology in teaching and learning at UNCW. The creation of Technology College also exemplifies how presidential power promoted paradigm construction, technological innovations, and political bargaining.

Chancellor's Steering Committee on Information Technology

In March 1998, Chancellor Leutze's charged a 14 member university-wide, diverse committee to recommend a structure to unify UNCW's disparate technology units in order to respond to the changing technological dynamics in higher education encompassing faculty development and support, faculty reward structures, quality instruction, distance education, students' and faculty's access to computers, and institutional policies. Committee members were hand picked by the chancellor and his staff.

The 14 member committee included the president of the Faculty Senate (who stated clearly that the faculty should determine how the university proceeds with virtual instruction) and several ardent supporters of the

chancellor's perspective. A few committee members had also been members of the Technology College committee, so they shared an understanding of the issues and challenges (and represented specific perspectives). The implementation of Technology College laid a foundation for further construction of a paradigm of virtual instruction; the Chancellor's Steering Committee on Information Technology built on this foundation.

Functioning much like an institutional self-study team, the committee invited speakers on various aspects of technology, presented numerous forums for faculty and staff to discuss their technological needs and concerns, coordinated the work of a consultant team that interviewed nearly 100 faculty and staff, commissioned reports on various technological facets, and served as a catalyst for continuing UNCW's construction of the virtual instruction paradigm. The were definite instances of uncomfortable conflicts, and clashes between philosophies and assumptions with a number of political actors. The Dean of the School of Education emerged as the committee's leader; he maneuvered to establish as much credibility with the faculty as possible while fulfilling the chancellor's overall charge.

One of the subcommittees of the Steering Committee was the faculty course development team. Possibly because of the development of UNCW's Technology College, there were faculty interested in developing fully online Web courses. Faculty members of the Steering Committee established criteria for selecting proposals and selected faculty to develop online courses. Faculty were paid generous stipends to develop courses during the summer of 1998.

Faculty course developers worked with the consultant to construct online courses, discuss issues related to

instructional design, faculty reward structure, and the framework for online courses Most faculty members reported feeling a sense of accomplishment and camaraderie at the end of the project. The faculty course development team met weekly and discussed their progress and challenges.

Promotion and Policy

The Chancellor's Steering Committee on Information Technology met constantly through the spring and summer of 1998. The actual steering committee meetings seemed to be a forum for promoting specific agendas. To some the work of the Steering Committee appeared more threatening than Technology College. There were numerous political actors seeking to influence the chancellor, the provost and deans about what institutional action ought to be. The statement "the faculty will not accept that," was used as a not too veiled threat from time to time. In early October 1998, the Chancellor's Steering Committee on Information Technology presented a voluminous report. In addition to stating assumptions regarding virtual instruction, the report recommended that a high level administrator be identified and given the responsibility of coordinating technological services (academic computing, administrative computing, telecommunications, systems, distance learning technology, etc.) as well as the flexibility of initiating technological innovations and seeking partnerships and alliances. This 150 page report (with appendices) was professionally printed and edited by many for numerous political sensitivities. The committee's recommendations were generally accepted by the chancellor. A high-tech presentation of the Steering Committee's findings was delivered to the Board of Trustees and Board of Visitors at the October board meetings.

The Steering Committee's findings expanded upon the construction of the virtual instruction paradigm at UNCW that began in the 1990s. Over the years, as the university community struggled with what quality virtual instruction ought to be at UNCW, numerous faculty and administrators participated in political bargaining that resulted in the development of the paradigm and specific institutional policy actions. It is doubtful whether there were any real revelations in the wordy report. Rather, the report symbolized the end of a long conceptualization and negotiation process and the beginning of a new organizational structure.

This is certainly not the end of the story at UNCW. Interdisciplinary committees will continue to explore technological innovations and refine the paradigm of virtual instruction. The flexibility UNCW so needed to respond to the needs of an increasingly technological society will be institutionalized in an information technology unit. Would UNCW be as far along in constructing its virtual construction paradigm without the perspectives (and negotiations) of the chancellor and other faculty and staff leaders? It is doubtful.

With the increasingly competitive environment in higher education, it seems crucial that institutions of higher education acknowledge (in terms of policy) that solutions to problems are inextricably linked to, and limited by, the conceptual frameworks from which they are analyzed. The dynamics of instruction in the 21st century will demand that paradigm construction be conducted by interdisciplinary teams or committees and that diverse paradigms be employed to inform decisions and explain events.

*two-way interactive video conferencing, online courses, and combination of various computer assisted instruction which allow instruction without traditional classroom seat time or hours

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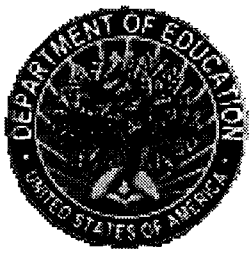

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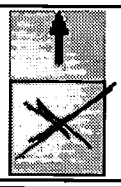	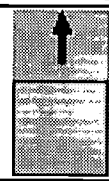	
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