ABSTRACT
          The origin and continuation of the futures research
seminar at the School of Education of the University of North
Carolina at Chapel Hill are discussed. The continuing research
seminar takes place throughout the calendar year for students who
wish to use futures research methods in their dissertations. One of
the major projects of the seminar is the development of an
environmental scanning database. Each student is assigned specific
journals and newspapers to scan in order to augment the data gathered
by students. Each student is also assigned one or more professional
journal(s) to search for pertinent literature dealing with a number
of categories describing the methodological and substantive scope of
the seminar. Each student is assigned categories of the literature
database to maintain. This responsibility includes abstracting
articles in that category for insertion in the electronic literature
database. The software support systems and the ED QUEST planning
model that can be employed by students are briefly considered.
Included are: the environmental scanning taxonomy, a list of seminar
information resources, criteria and instructions for abstracting, a
list of journals scanned for futures research database, and
literature database categories. 14 references. (SW)

The Continuing Seminar on Futures Research
in the School of Education at the
University of North Carolina at Chapel Hill

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The Continuing Seminar on Futures Research
in the School of Education at the
University of North Carolina at Chapel Hill[1]

The futures research program in the School of Education, the University of North Carolina at Chapel Hill, is not a formal program, but is organized as a continuing research seminar that we anticipate will result in up to 10 doctoral dissertations within the next three years. The seminar is offered formally in the spring, but continues year-round on an every-other-week basis. Participants review manuscripts written by seminar participants and by me, discuss methodological and theoretical issues, maintain a scanning data-base, and discuss any problems/high points in our environmental scanning and literature review activities.

Origin of the Seminar

The seminar really began with my introduction to futures research methods and practitioners at the 1980 meeting of the World Futures Society in Toronto. I attended the conference as co-principal investigator of a project funded by the Southeastern Regional Council for Educational Improvement, a consortium of ten chief state school officers. The project was titled "Design of a Data Base of Educational Indicators for Policy Analysis" (Munger and Morrison, 1987). The project monitor, Raymond Hackett, encouraged me to attend even though my approach to policy analysis at that time was to design a causal model, estimate path coefficients based upon historical data, and recommend strategies on the basis of the size of the coefficients.

I attended every session in the methods track of that conference and personally met a number of prominent futurists. Following the conference, I amended the report to the Council to include an annotated bibliography of futures research. In addition, I sent this bibliography to my rater at the U.S. Army Research Institute (ARI) as a project for retirement point credit in my capacity as a reserve officer occupying a research position in the Institute. He not only granted the credit, but recommended that the report be published (Morrison, 1980).

The following year when I reported to the Institute for my normal two week reserve tour, I was assigned the task of designing a study to determine the leadership needs of the Army in the 1990s. I told my supervisor that I could not design the study, but that I could interview the futurists I met at the Toronto conference. My report for that tour consisted of interviews with such leading futurists as Nanus, Dede, Coates, Smith, and Renfro. As a result of these interviews, Bill Smith of the Futures Group obtained a contract with ARI to follow-up my report.

That same year I was invited to deliver a "state-of-the-art" lecture at the Florida State University Institute for Research in Higher Education. I used Renfro's policy-impact analysis model presented at Toronto (Renfro, 1980) and titled my paper "Policy-Impact Analysis: Implications for Higher Education." I sent a copy of this paper to Renfro with a request that he review, edit, and critique the paper so that we could jointly publish it. We discussed this request when I was in Washington at an educational conference. Renfro responded that he wanted to spend his energy developing issues management methodology, which he described as scanning the external environment to identify signals of change of possible import to one's organization. I made the

observation that this perspective complemented the policy-impact analysis model, and, indeed, should go on the "front end" of it. Renfro immediately concurred, phoned the 1982 WFS program chair, and successfully requested that we be granted space in the conference for an hour and a half session, "Merging Two Futures Concepts." In the meantime, I requested that my next period of duty at the Army Research Institute occur during the conference and that my assignment be to write and deliver the paper with Renfro. Both requests were granted.

I made a third request that turned out to be as important as getting on the conference program. That is, I encouraged Renfro to ask his colleagues running pre- and post-conference workshops to allow me to "sit in." In return, I promised to review the workshop as a part of my ARI report, and include the vita of each presenter. The fact that the Futures Group had obtained a contract after my round of interviews the previous year added weight to this petition. Consequently, I did attend two workshops. After attending the post-conference workshop conducted by Renfro, Boucher, and Ewing, I invited Renfro and Boucher to work with me in informing my colleagues in higher education about the application of futures research methods to planning and policy analysis. They accepted, and within the next two years we published a reader (Morrison, Renfro and Boucher, 1983) and a monograph (Morrison, Renfro and Boucher, 1984). In addition, Renfro and I published the results of our session in the The Futurist (Renfro and Morrison, 1982).

For my next tour of duty at ARI, I was asked to spend several months assisting them in developing their long range research plan. During the course of this duty I attended briefings at the Pentagon by vendors of various forecasting systems. I was impressed by the presentation made by the president of Vector Research, who had described an elaborate forecasting model built upon relationships of pertinent variables using historical data. During a break in the briefing, I asked him if his model could allow any consideration of potential events that could affect the relationships between variables or forecasted trends directly. His response was, "You cannot predict the future, and I am not going to try." I decided that I would include a paper that critiqued this approach to planning and forecasting as part of my tour report that summer. This paper was circulated informally to the Army planning community.

My duty during the summer of 1984 was to attend the World Future Society Conference in Washington and report on the extent to which futures methods and techniques were used in Army planning activities. During the conference, I received a call from an officer assigned to a task force charged by the Army Chief of Staff to develop recommendations for planning the Army officer postsecondary education system out to the year 2025. He had read the paper written on my last tour and wanted to explore the possibility of my working with this task force as a technical advisor.

After meeting with him later that week, I agreed to extend my active duty to be a technical advisor and recommended that the task force employ my colleagues Renfro and Boucher as consultants to the project, thus collaborating with first rate futurists on a major futures research project from start to finish. The project was completed the following February.

The following summer, 1985, my ARI assignment was to attend the meeting of the World Future Society and to prepare a proposal using reserve officers assigned to the Institute as environmental scanners to assist in ARI long range planning. A chance encounter with an acquaintance at the Institute, Paul Gade, led to the preparation of a background paper later used as the basis for a Request for Proposals to study alternative recruiting environments. Wayne Boucher wrote a successful proposal; I was included as

a subcontractor. This project provided an opportunity to offer four students research apprenticeships for a study involving environmental scanning, Delphi construction and analysis, cross-impact analysis, and scenario generation. Moreover, we were able to use a beta cross-impact model that ran on an Apple II (PASS--Policy Analysis Simulation System) designed by the Institute for Future Systems. This study was completed last September (Boucher and Morrison, 1987).

During this period (1985-87) I became active in conducting pre-conference workshops on applying methods and techniques of futures research at the annual meetings of the Association for Institutional Research, the American Association of Community and Junior Colleges, the American Educational Research Association, and the Society for College and University Planning. (For descriptions of these workshops, see Morrison and Cope, 1985; Mecca and Morrison, 1988.) Some of these workshops have included students (Morrison, Speller, and McLean, in press; and Morrison, Speller, Clay, Markham and May, in press). I also redesigned my course on the two-year college to focus on using the ED QUEST model to plan for the future of a fictitious community college (Morrison and Neal, in press). In addition, I included an environmental scanning/issue identification exercise in my course on higher education in the U.S. Moreover, in the spring of 1987 I was assigned a seminar that was to be used for designing a course on educational planning.

The Continuing Seminar: General Description

It was in the second rendition of the planning seminar this past spring that the idea of a continuing research seminar was developed, an unassigned seminar that will continue throughout the calendar year for those students who wish to use futures research methods in their dissertations. The seminar per se carries no credit (for professor or student), but independent study credit or internship (research apprenticeship) credit is possible on a student-by-student case. This summer seven students are attending the seminar on a regular basis; three students who live out of the area are sent all seminar communications and are given seminar assignments.

Environmental Scanning Activity

One of the major projects of the seminar is the development of an environmental scanning database. We use a taxonomy in which the dissertation area of each student is included along with typical scanning domains. This taxonomy is displayed in Figure 1. It is relatively simple because the microcomputer data base program we use (see below) allows every word to be a key word identifier; therefore, the more elaborate taxonomies used by other organizations (e.g., the United Way of America Environmental Scanning Data Base) are not necessary. All that is required to file the "hard copy" is a sequential number within each category. We have included the research area of each participant in order to facilitate gathering specific information relevant to that particular area. In essence, each student can receive the benefit of the general scanning efforts of all participants for his or her particular project.

Each student is assigned specific journals and newspapers to scan in order to augment the data gathered by students the previous three years and to keep it up to date (See Figure 2). Scanners are responsible for the initial classification of the articles they submit to the data base and for appending a brief statement of the implications for higher education.

FIGURE 1: ENVIRONMENTAL SCANNING TAXONOMY

Demographic	Social
Technological	Economic
Political, Legal, Regulatory	Environmental
Military	U.S. Army
U.S Air Force	Dental
Hospitals	Church Related Colleges
Business Schools	Departments of Physical Science
Senior Colleges	Public Education
Nursing	

FIGURE 2: SEMINAR INFORMATION RESOURCES

Major Newspapers

The New York Times	*The Miami Herald*
The Wall Street Journal	*The Chicago Tribune*
The Los Angeles Times	*The Christian Science Monitor*
USA Today	*The Chronicle of Higher*
Education Week	*Education*
The Times Higher Education Supplement	

Major Journals

Social/demographic   **Technological**

American Demographics	*Byte*
Public Opinion Quarterly	*High Technology*
Technological Forecasting	*Datamation*
and Social Change	*Computer World*
	Information World

Economic   *Discover*

Business Week	**Political**
The Economist	
Fortune	*Mother Jones*
Forbes	*New Republic*
Money	*The National Journal*
Inc.	*The National Review*
Monthly Labor Review	

All Sectors

Vital Speeches of the Day	*Kiplinger Washington Letter*
Across the Board	*Time*
Naisbitt Trend Letter	*Newsweek*
U.S. News and World Report	*Future Survey*

The "base of operations" for the seminar is in the School's Instructional Materials Center, where the director, Susan Prillaman, has provided file cabinets for our hard copy and a Macintosh Plus computer to manage the electronic data base. In the file cabinets, the front of each category contains an empty folder for "scanners" to insert their material. In addition, each student is assigned an environmental scanning domain with the responsibility of maintaining the indicated files, abstracting articles in these files, assigning a taxonomy identification number to each article, and entering the abstracts on the electronic data base. This procedure (a) encourages submissions (scanners are much more likely to submit information if they do not have the responsibility for abstracting it); (b) ensures that information is reviewed by two persons; and (c) ensures that the information in the filing cabinets is current, up-to-date, and not redundant. (See Figure 3 for their instructions for how to abstract.)

The Futures Research Literature Data Base

Each seminar participant is also assigned one or more professional journal(s) (see Figure 4) to search for pertinent literature dealing with a number of categories describing the methodological and substantive scope of the seminar (see Figure 5). During the spring 1988 semester we used a CD ROM program to search triangle area libraries and the ERIC system for materials that fit these categories. These materials supplemented the manuscripts that we have been gathering for the past eight years, on the methods and theory of futures research and their use in higher education.

The Electronic Filing System

Each student is assigned categories of the literature data base to maintain. This responsibility includes abstracting articles in that category for insertion in the electronic literature data base. Both this and the electronic scanning data base are beta programs that work in conjunction with Hypercard on a Macintosh computer. When the program is activated, a "home card" appears on the screen. There are several entry locations on the card. The first is a field for insertion of the taxonomy number. The second is a three line field for a bibliographic notation, which for consistency, is to be entered in APA format. The third field is a three line "scroll field" for abstracts. Although only three lines at a time are shown on the screen, this field takes up to three pages of notes. The fourth field is another three line "scroll field" for implications of the article for education. Again, although only three lines are shown on the screen, up to three pages of information can be entered in this field. At the bottom of the "card," the viewer sees three "buttons" labeled "trends," "events," and "policies." If the "trend" button is "clicked," a card labelled "trends" replaces the home card on the screen. The first field on this card is for restating all trends reported in the article as Delphi statements. On the left border is a chart icon. If this icon is "clicked," MicroSoft Chart becomes operative so that the user can input trend data, including forecasted data from the article. The resulting graph is pasted on the card. The "event" and "policy" cards have the same format.

FIGURE 3: CRITERIA FOR ABSTRACTING

Identifying A Source Document

• Does the item represent events, trends, developments, or ideas that you have never before encountered?

• Does the item contradict previous assumptions or your own beliefs about what seems to be happening?

• Is the article from a surprising source, such as a liberal or conservative journal?

• Can you link the item to other abstracts you have previously written or seen?

• Do the implications of the item have explicit or implicit bearing on the long-range program or management of the institution?

Writing the Abstract

An abstract is an easy-to-read digest of original material. The goal is to write a concise, accurate presentation of the material that is fully understandable without reference to the original source.

To begin the summary section, ask yourself, "If I had only a few minutes to describe this article to a colleague, what would I say?" "What is the most important idea or event that indicates change?" Your response to these questions should be the lead sentence of the abstract. Follow this sentence with development and explanation. Use quotation marks to make it clear when you are making direct citations from the text. Whenever possible, include statistical data. Limit the summary to no more than one-half page of single-spaced, typewritten copy.

The implications section of the abstract is where you respond to the question, "How will the information in this article affect higher education?" You might also include a list of those emerging issues suggested by the article, a description of future events you see occurring as a result of the trend identified by the article, and/or an identification of issue stakeholders if they are not listed by the article.

Speculation about implications is a part of the scanning and abstracting process. Here you try to determine an item's potential for affecting other facets of the social environment and/or higher education. There are no "right" answers; just write a couple of sentences that indicate your reasons for selecting the article for inclusion into the data base.

Source: modified from Morrison (1987)

FIGURE 4: JOURNALS SCANNED FOR FUTURES RESEARCH DATA BASE

Administrative Science Quarterly   *Long-Range Planning*
Academy of Management Science   *Management Planning Journal*
Business Horizons   *Organizational Dynamics*
California Management Review   *Planning for Higher Education*
Future Survey   *Strategic Management*
Futures   *Sloan Management Review*
Human Relations Journal   *Technological Forecasting and*
Harvard Business Review   *Social Change*
International Journal of Education

FIGURE 5: LITERATURE DATA BASE CATEGORIES

Alternative futures   Change
Delphi   Environmental uncertainty
Environmental scanning   External analysis
Forecasting   Futures Research
Futuring   Information and adaptation
Internal analysis   Long range planning
Msi (bbys, proposals, etc)   Strategic change
Organizational adaptation   Organizational uncertainty
Policy analysis   Policy-impact analysis
Perceptual analysis   Strategies
Strategic decisions   Strategic management·
Strategic planning   Trend-impact analysis
Use of futures methods in education

The major advantage of this program for the seminar is that every word on any card is a "key word identifier." That is, there is a search feature that enables the user to type in a word or series of words (e.g., Hispanic)to produce a smaller "stack" of all cards containing this word. Words further delimiting the data base may be used. If there is not sufficient information on the card for the user, the taxonomy code number enables him or her to find the complete information resource in the hard copy files. Another advantage of this program, particularly when used to abstract the futures research literature data base, is that the bibliographic information can be sorted by last name of the author for each "stack" and printed. Thus, bibliographic data need never be reentered. Finally, it is relatively simple to move information out of the Hypercard environment to a word processing file. For students using IBM compatible microcomputers, this file can be converted to an MS DOS text file in the University's microcomputer support center. Each student is encouraged to use the same word processing program; for example, using Microsoft Word for the Mac and for the IBM allows transfer of format as well as text.

Software Support Systems

Two other software programs will shortly be available to the seminar. SYSTAT Corporation is coming out with SYSGRAPH this summer, which, in combination with SYSTAT, will enable us to input Delphi data and graph medians, upper quartile and lower quartile scores. In addition, Bravo Corporation is under contract with Arizona State University to produce a state-of-the-art cross-impact model that can run on an IBM AT. This program should be operational by September 1st, 1988 (it is promised for October 1st).

Four students in the seminar will gain experience in this software via a research apprenticeship on a project with Arizona State University to evaluate their program for the recruitment and retention of minority faculty, staff, and students. The contract calls for tying evaluation to planning, via a study of the "most likely" and alternative futures for this program. The other students in the seminar who were apprentices on the Army recruiting project will also be able to use the software in their dissertation projects.

Applying the ED QUEST Planning Model

ED QUEST is a planning model that employs a variety of research techniques (environmental scans, judgmental forecasts, cross-impact analysis, and scenarios) to develop and describe a "most likely" and alternative future environments that are then used to develop organizational plans and policies (Morrison and Mecca, 1988). This model forms the basis for a number of case study dissertations that should be completed and ready for presentation at the 1989 World Future Society's conference in Washington. For example, this fall, Thomas V. Mecca should complete his study of the application of ED QUEST in the strategic planning process used by an institutional planning team of a two-year college. This coming spring, James Ptaszynski should complete his study of the relationship of implementing the model to organizational development. Other dissertations that could be completed this coming spring include Maria Clay's application of the model to a department charged with training and development at a university teaching hospital, David Raney's application of the model to planning for a learning resources center in a school of dentistry, and Lynn Baunach's application of the model to a department of physical sciences in a liberal arts college. Dissertations that may be in final stages of completion include Lee May's project on planning the future of a consortium of church-related colleges, Elizabeth Markham's application of the model to a study of the future of the nursing profession, and Carol Binzer's project on the future of university offices of student affairs.

Two students in the seminar are just beginning their doctoral programs. William Helm is a colonel in the regular Army who will be assigned as a permanent professor at the U.S. Military Academy at West Point upon completion of his program. His tentative dissertation is to apply the ED QUEST model to the department of languages at the USMA. Gay Davis is using the seminar this summer for independent study credit to explore her interest of planning in higher education.

Future Prospects

A project in the preliminary stages, which may give sustenance to the seminar and enable us to recruit students with graduate assistantships, is one establishing an environmental scanning program for a state-wide consortium of two-year colleges. A draft proposal has been submitted to the North Carolina Department of Community Colleges. This draft was discussed with the Executive Vice President and the Director for Planning this past spring semester. The Department is interested in contracting with

the University to develop and maintain an environmental scanning data base and to provide training in planning and forecasting for decision-makers in participating institutions.

Although UNC-Chapel Hill does not have a formal program of futures studies, it does have a substantial informal program. Our anticipation that this program will result in up to 10 doctoral dissertations within the next three years is, we hope, a realistic one. We intend to disseminate the results of these studies not only at the World Future Society meeting next summer, but in appropriate annual meetings of such professional associations as the Society for College and University Planning, the Association for Institutional Research, the American Association for Higher Education, the American Association of Community and Junior Colleges, and the American Educational Research Association. In addition, we intend to submit the results of these projects to the journals published by these and other associations, including the *Futures Research Quarterly*. In this fashion we hope to be a part of the resurgence of interest in using futures research methods and techniques in educational planning and policy analysis.

Notes

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