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ABSTRACT

The purposes of this terminal evaluation report are to determine the extent to which the major goals of the Skyline Wide Educational Plan (SWEP) project were achieved, to evaluate the utility of the products of SWEP studies, and to communicate the results to appropriate audiences. Information relative to four major project components is presented; these four components embrace the five major goals of the program (the last two objectives were considered together). The objectives were to formulate a plausible description of the society of the future (1980's and beyond) and to identify the most likely educational implications of that future; to determine constituency priorities relative to the educational programs and processes of the proposed system; to create a general model that could be used as a resource for developing programs in defined systems; to study staffing patterns and new instructional modes so as to ensure delivery of SWEP's educational programs; and to study futuristic educational facilities designs. The report includes evaluations of these objectives, auditor critiques of the first two objectives, conclusions and delimitations of the study, and an extensive appendix containing program instruments. (Author/IRT)

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SKYLINE WIDE EDUCATIONAL PLAN
FINAL EVALUATION REPORT
1973-1974

Research Report No. 74-300

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EXECUTIVE SUMMARY

Objectives of the Program: The project "Skyline Wide Educational Plan" (SWEP) was a multidistrict planning project, involving the Independent School Districts of Dallas and Ft. Worth, with informal liaison with smaller districts of the Dallas-Ft. Worth metroplex. It was designed to ascertain the need for, and feasibility of, and to sketch preliminary plans for an educational system modeled on the Dallas secondary school known as the Skyline Career Development Center. As conceived originally, the project had five major objectives:

1. To formulate a plausible description of the society of the future (the 1980's and beyond) for the world, the United States, and the North Central Texas region, and to identify the most likely implications, for education, of the anticipated "probable future."

2. To determine constituency priorities relative to the educational programs and processes of the proposed system, i.e., SWEP.

3. To develop educational programs in concert with the needs of the future and the priorities of the constituency.

4. To study staffing patterns and new instructional modes so as to insure delivery of SWEP's educational programs.

5. To study futuristic educational facilities designs, including innovative architectural plans, building materials, future energy sources, facilities configurations, and alternative sites.

As the operative concepts were clarified, objective number three was altered: the idea of producing specifications for particular educational programs was replaced by the goal of creating a general model that could be used as a resource for developing programs in defined systems. An additional modification was the elimination, from objective number five, of research into specific alternative sites.

Purpose of the Evaluation: The purposes of this terminal evaluation report are to determine the extent to which the major project goals were achieved, to evaluate the utility of the products of SWEP studies, and to communicate the results to appropriate audiences. Information relative to four major components of the project is presented; these four components embrace the five major project objectives given above, objectives four and five, together with other elements, being united for evaluation purposes as products of the SWEP research. These four components with their related evaluation questions are listed below (with some modifications in the questions from the form set out in Evaluation Design for Skyline Wide Educational Plan, 1973-74, Research Design No. 73-215, as defined in the report):

Component No. One: Future Society

1. What societal propositions were identified for the world, the United States, and the Dallas-Ft. Worth Metroplex for the decade of the 1980's?

Component No. Two: Educational Goals

2. What educational goals were identified as high priorities for the 1980's?

Component No. Three: Educational Programs

4. Was a generalizable model described (a systematic procedure) that could be used as a resource for developing educational programs (curricula) for SWEP?

Component No. Four: Utility of SWEP's Products

3. What are the projected manpower needs for the Dallas-Ft. Worth Metroplex for the 1980's?

5. What are the professional staff implications for such an educational system?

6. What are the facility implications: design, configuration, space, and materials for such an educational system?

8. What is the projected student demography?

Evaluation Results:

Component No. One: Future Society

1. A set of 184 propositions describing the society of the 1980's in the world, in the United States, and in the local area was developed from a review of the futuristic literature. Two parallel 92-item questionnaires were mailed out to a national sample of 290 individuals selected for their expertise in planning and forecasting.

2. One hundred fifty-one (52%) of the sample responded, rating each proposition (on a 5-point Likert-type scale) as to (1) its probability of occurence in the 1980's and (2) its impact on education if it occurs. Results were analyzed to identify those trends or events that fall into the following categories: High Likelihood of Occurrence; Low Likelihood of Occurrence, High Educational Impact, Low Educational Impact, and High Likelihood - High Impact (bivariate).

3. Future scenarios - sketched-in descriptions of the society of the 1980's - were written on the basis of the probability and impact ratings, in the areas of population, life style, technology, careers, and education. The resulting picture of the world of the 1980's represents an application of the methodology of technology forecasting and, being based on the input of future-oriented professionals, should provide valuable insights into the future.

Component No. Two: Educational Goals

1. A set of educational goals which addressed the high-rated propositions was formulated, and a selected panel of respondents drawn from the Dallas-Ft. Worth area was asked to rate their relative importance in a school whose setting is the future society.

2. The method of inquiry was a two-round Delphi interrogation. The first Delphi questionnaire consisted of 105 educational program goal statements and 29 process goal statements, with space for respondents to generate additional goals. This round was completed by 375 (42%) of the more than 900 individuals invited to participate. The second Delphi questionnaire consisted of the original goals plus 12 new program goals, and 16 new process goals, the result of input from the panel on round one. In addition, it provided a computer record of the results of round one; respondents whose opinion on a given goal deviated markedly from the group consensus were asked to reconsider or provide a reason for their deviant opinion. Round two was completed by 225 (60%) of the round one respondents.

3. Respondents rated goals on a double response scale: the first scale (a five-point Likert-type scale) provided priority information; the second scale (a dichotomous yes-no scale) identified the core programs, those that should be required of all students. Results were analyzed to identify educational experiences rated as having highest priority and being most necessary for all students, and those rated lowest in priority and core. The selected goals are described under the following topics: basic skills, citizenship, ethics, aesthetics, careers, health and recreation, life management, and process goals.

4. Analysis of the change in results from round one to round two of the Delphi indicated that this method did serve to increase consensus.

Auditor's Critiques of Components No. One and Two: Owing to the close relationship of the evaluators to the conceptualization, analysis, and products of components number one and two, an outside auditor (an educational research scientist from the faculty of a state university) was

retained to scrutinize the methods and the results of these two components. His critiques found the concepts and methods valid and stated that "the SWEP design, with a few minor changes, could be recommended as a paradigm for other districts." His critiques are included in this report.

Component No. Three: Educational Programs

1. A generalizable model that might be usable as a resource for generating educational programs was developed by the SWEP staff.

2. This model was not evaluated.

Component No. Four: Utility of SWEP's Products

SWEP staff studies in the areas of Manpower Needs, Professional Staff Implications, Facility Implications, and Student Demography were furnished by the project management to be evaluated for their usefulness as resource material and planning aids to decision-makers. Members of the Executive Team of the Dallas Independent School District were asked to review the material (two administrators for each of the four topics) and to evaluate it with respect to eight criteria which serve to measure its usefulness. Responses received from the reviewing administrators were generally favorable, with the section on Student Demography receiving highest favorable rating.

Conclusions and Delimitations:

1. Project SWEP represents a unique effort to apply to long-range educational planning some of the methodology of technological forecasting and futures research.

2. The studies made for the SWEP project have laid the groundwork for real improvements in the planning processes of the DISD. A set of constituency-prioritized educational goals for the future has been produced, as well as a description of the society of the 1980's. If continuously updated and injected into the planning and decision-making processes, these products can help produce an educational system suited to the society and students it expects to serve.

3. Additional analysis of the data in hand and further extensions of the Delphi study are suggested as valuable.

4. Limitations imposed by attempting in one year a project of the magnitude of SWEP operated to reduce the quantity and quality of the SWEP products.

5. Component No. Four of this evaluation depended entirely on the subjective judgments of local administrators and as a result should not be viewed as conclusive.

Overview

"Skyline Wide Educational Plan" (SWEP) was a multidistrict planning project, involving the Independent School Districts of Dallas and Ft. Worth. It was designed to ascertain the need for and feasibility of, and to sketch preliminary plans for an educational system (modeled on the Dallas secondary school known as Skyline Career Development Center) to serve the Metroplex commencing in the 1980's. The original name of the project - Skyline West Educational Park - was changed soon after the project got under way, to emphasize the open-ended, future-oriented character of SWEP. Specified in this venture were five major project objectives; the SWEP project staff was to:

1. Formulate a plausible description of the society of the future (the 1980's and beyond) for the world, the United States, and the North Central Texas region; and identify the most likely implications for education.
2. Determine constituency priorities relative to the educational programs and processes of the proposed system, i.e., SWEP.
3. Develop educational programs in concert with the needs of the future and the priorities of the constituency.*
4. Research staffing patterns and new instructional modes so as to insure delivery of SWEP's educational programs.
5. Research futuristic educational facilities designs, including building materials, innovative architectural designs, future energy sources, facilities configurations, and alternative sites.†

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* This objective was aborted during the course of the project; hence, an evaluation thereof was not conducted. The project staff opted for the formulation of a generalizable model from which educational programs could be generated.

† The portion of obje tive No. 5 calling for research relative to alternative sites was amended. Instead, the staff decided to formulate criteria for the selection of an appropriate site.

The accomplishment of these important objectives was assigned to a full-time professional staff comprised as follows:

Project Director	Dr. Gerald King
Senior Educational Planner	James G. McMath
Senior Educational Planner	M. Browning Combs
Educational Planner	H. B. Bell
Educational Planner	Radford Gregg (Ft. Worth representative)
Facilities Engineer	Dr. Allen Feder
Executive Secretary	Shirley Price
Secretary	Janie Campos

The month of September, 1973, was largely devoted to the conceptualization of a planning model the results of which are reported below:

Major Activities:

A. Begin Project SWEP.

B. Conduct research relative to secondary school programs for the future.

C. Conduct research relative to student demography.

D. Conduct research relative to the professional staff.

E. Conduct research relative to school sites.

F. Conduct research relative to futuristic educational facilities.

G. Develop cooperative arrangements with political subdivisions and maintain liaison with same.

H. Conduct futuristic context evaluation.

I. Speculate on future trends.

J. Identify "high consensus" general assumptions relative to the future.

K. Formulate a set of future-focused educational goals for SWEP.

L. Prioritize educational goals with constituents.

M. Develop educational programs.*

N. Formulate recommendations relative to educational programs, professional staff, and facilities.

O. Publish final project report.

P. Terminate project SWEP.

See SWEP Planning Network (Table 1).

Supporting the staff was the Project SWEP National Review Committee (NRC), which was comprised of an extremely select group of individuals, most of whom have distinguished themselves nationally in education or government. The committee members and their current professional status appear in Table 2 (members of the SWEP staff and local administrators are not included).

On two separate occasions -- January 29 and May 11, 1974 -- the National Review Committee journeyed to Dallas to attend a meeting with the SWEP staff and other officials of the Dallas and Ft. Worth Independent School Districts, including Dr. Nolan Estes and Dr. Julius Truelson, Superintendents of the Dallas and Ft. Worth Districts, respectively. The mission of the NRC was to render assistance in the conceptual and theoretical dimensions of the SWEP plan, and to provide an intellectual forum for debate and instantaneous feedback. Both meetings were extremely informative and productive and, to say the least, thought-provoking.

In addition to the visitations, the NRC was advised periodically of SWEP's progress through correspondence, evaluation reports, and the quarterly reports to the U.S. Office of Education.

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* This was amended; see footnote to SWEP major objective No. 3.

Table 1

SWEP Planning Network

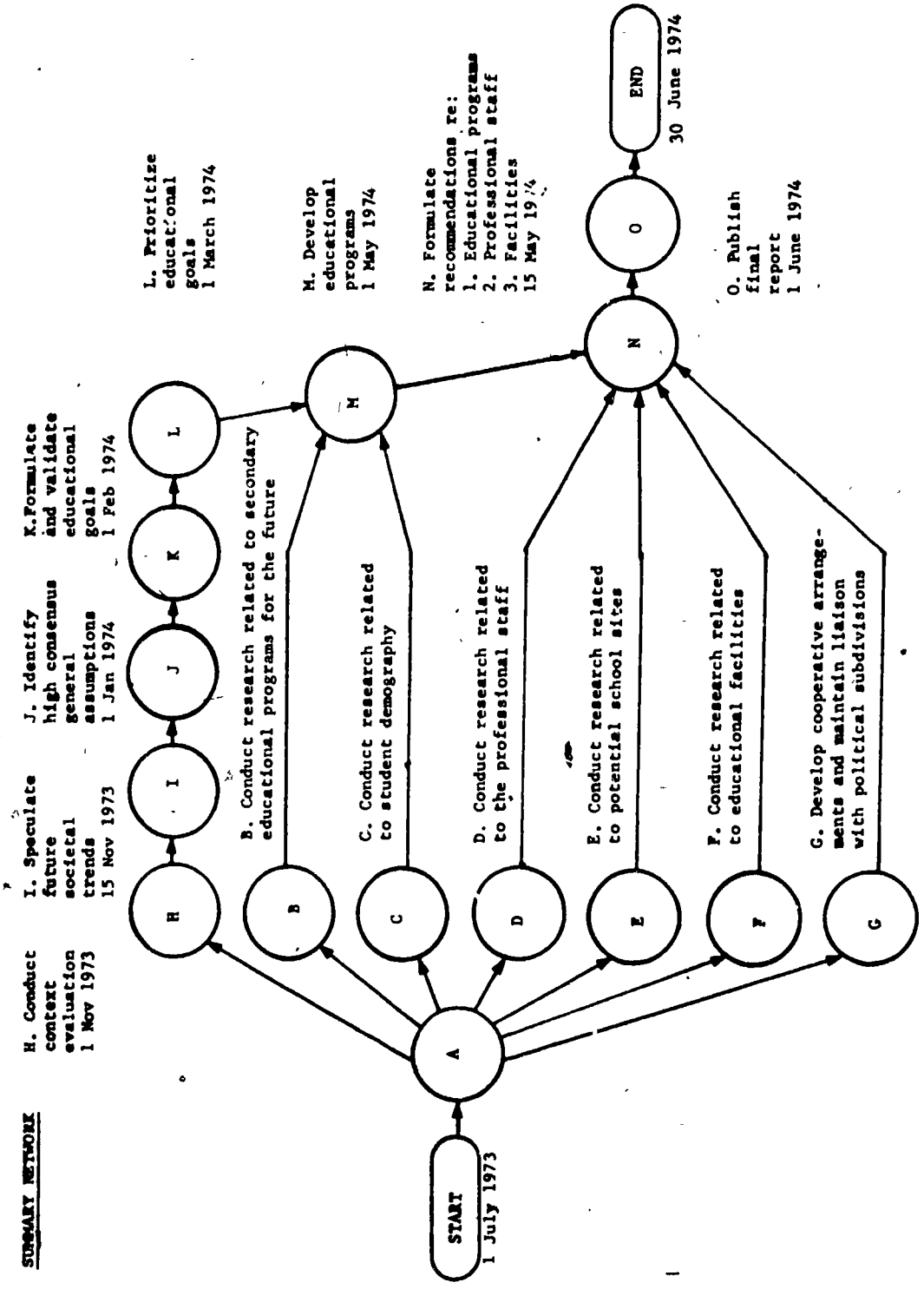

Table 2

Project SWEP National Review Committee

Name	Professional Role	Institution
Dr. Marvin H. Berkeley	Dean, College of Business Administration	North Texas State University
Dr. J. J.	Professor of Education	North Texas State University
Dr. Luvern L. Cunningham	Professor of Education and Public Policy	Ohio State University
Dr. Harold B. Gores	President	Educational Facilities Laboratory
Dr. Lawrence D. Haskew	Professor, Department of Educational Administration	The University of Texas at Austin
Mr. Walter J. Humann	Vice-President	The LTV Corporation
Dr. Charles Hunter	Professor, Department of Urban Studies	University of Texas at Arlington
Mr. David Lerch	Program Officer, Special Projects Branch, Bureau of Equal Educational Opportunity	U.S. Office of Education
Dr. James McNamara	Professor, Department of Educational Administration	Texas A & M University
Dr. J. B. Morgan	Associate Commissioner	Texas Education Agency
Dr. Edgar Morphet	Professor Emeritus, School of Education	University of California at Berkeley
Mr. Jim O'Shea	Executive Director, Career Education Advisory Board	Dallas Chamber of Commerce
Dr. A. M. Rodriguez	President	East Los Angeles Community College
Dr. Harold G. Shane	University Professor of Education	Indiana University
Dr. Maureen Webster	Staff	Syracuse Educational Policy Research Center
Dr. Willard Wirtz	President	Manpower Institute

The formal evaluation of SWEP was assigned to a team consisting of a senior evaluator, an assistant evaluator, and a data technician. This team had a supporting staff including two computer programmers, statistical typists, and a university-based educational research consultant.

The two evaluators assumed an unusual role in SWEP in that they became heavily engaged in many facets of the project. Included in their realm of activities were: participation in the conceptualization and implementation of the macro planning model (the staff's blueprint for action); modeling and conducting research studies, viz., Skyline Wide Educational Plan; the Decade of the 1980's, and Skyline Wide Educational Plan: Educational Goals for the Future (1980's); and participating in weekly staff planning meetings.

This close working relationship between evaluator and project staff represented a potential threat to an objective evaluation, particularly for the products which were derived from the two studies cited above. Consequently, an external auditor (an educational research scientist associated with a state university) was retained to scrutinize the research methods and subsequent results, and, thereafter, to draft formal critiques relative to his findings (one for each study). These critiques are included in this report and are referenced in the Table of Contents.

The formal evaluation of all other SWEP products i.e., Manpower Needs, Professional Staff Implications, Facility Implications, and Student Demography, remained the responsibility of the SWEP evaluation team, and are major topics in this report.

The evaluation of wide-ranging discussion reports on such topics as Manpower Needs, Professional Staff Implications, Facility Implications,

and Student Demography presents a difficulty. Since many specific planning decisions must be made before precise definition in these areas is possible, the only real test of the value of these products, short of inspecting a particular school generated from them, must be a measurement of their usefulness as input and planning aids for decision-makers. In an effort to assess the value of the SWEP products, members of the Executive Team of the Dallas Independent School District were asked to inspect and give opinions on the products. It is a limitation of this evaluation, necessitated by the nature of the project, that a major evaluation component depended on subjective judgments rendered by a basically friendly group of respondents.

The formal SWEP evaluation design, Research Design No. 73-215, delineates nine evaluation questions. They appear below in their original and amended language.*

1. *What societal propositions were identified for the world, the United States, and the Dallas-Fort Worth Metroplex for the decade of the 1980's?*
2. *What educational goals were identified as high priorities for the 1980's?*
3. *What are the projected manpower needs for the Dallas-Fort Worth Metroplex for the 1980's?*
4. *(Original) What educational programs should be offered in such an educational system?*

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* In all cases the general nature and content of the evaluation questions remained unaltered during the project year; however, in the implementation process some of the objectives were slightly modified. As a result it was necessary to modify some of the original evaluation questions. Only the modified versions appear in the remainder of the text.

4. *(Modified) Was a generalizable model developed (a systematic procedure) that could be used as a resource for developing educational programs (curricula) for SWEP?*

5. *What are the professional staff implications for such an educational system?*

6. *What are the facility implications; design, configuration, space, and materials for such an educational system?*

7. *(Original) Where should an educational system of this nature be located?*

7. *(Modified) Were criteria formulated relative to the selection of an appropriate site for SWEP?*

8. *What is the projected student demography?*

9 *Do the SWEP products have utility as planning documents?**

The general format for the reminder of this final report is organized so that one or more of the major evaluation questions and related information, e.g., rationale, evaluation methods, results, utility, etc., constitute a separate component. Four components appear in numerical order below.

Evaluation Component Number One: Future Society

Question No. 1: What societal propositions were identified for the world, the United States, and the Dallas-Ft. Worth Metroplex for the decade of the 1980's? (See: Burns, Robert J., Skyline Wide Educational Plan: The Decade of the 1980's, Dallas Independent School District, March, 1974.)

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* This question was eliminated, since the utility of all of the SWEP documents is addressed in the other evaluation questions.

In its planning efforts for a comprehensive secondary school for the future, the SWEP project staff thought it necessary to attempt to describe the state of our society -- world, country, and region -- for the decade of the 1980's, the notion being to plan an educational system in concert with the needs of tomorrow's students and society.

Methodology

Two 92-item parallel questionnaires -- Forms A and B -- which are reproduced in Appendix A, were developed and subsequently administered to a national sample. The questionnaire items (propositions relative to the future) were gleaned from the futuristic literature, and are traceable to one or more futuristic authorities. Each of the 184 propositions was accompanied by two five-point Likert measurement scales. One was a "likelihood" measure -- the likelihood that an event would occur in the 1980's; the second scale was an "impact" measure -- the magnitude of impact on education as a result of a specific event's occurring. Respondents were also encouraged to identify areas or facets of education that would be heavily affected. Analyses and interpretations were based on computed mean, mode, and standard deviation scores for 151 respondents.

Sample

A national sample of [illegible] individuals, selected because of their professional position, experience, and/or training, was invited to participate in the study. These people are known to have devoted much of their professional time to studying and/or planning the future. One hundred fifty-one (151) responded. The following subsample units were also identified and analyzed: Insiders, Outsiders, Educators, Local Leaders, Futurists, [illegible] Representatives, and Suburban School

Executives. The subsample descriptions are included in the report cited above.

Results

Judgments of the panel as to likelihood of occurrence and probable educational impact were analyzed for the responding group as a whole and for various subsamples. The results for the whole responding group (see Tables 3 and 4, Appendix A) permitted classification of societal propositions into five categories: (1) those with high likelihood of occurrence, (2) those with low likelihood of occurrence, (3) those with high educational impact, (4) those with low educational impact, and (5) those with high likelihood and high impact (bivariate). (The report cited above lists the specific propositions that fell into each category.) The results are presented below in scenario format (portraits of future time periods) focusing on the following themes: (1) population, (2) life style, (3) technology, (4) careers, and (5) education. In addition, the unlikely events and a summary of the write-in comments are included.

1. Population. The world's population will increase, with the "3rd world" (underdeveloped) nations experiencing the largest gains. In the United States, the overall population will increase, with most of the gains attributable to senior citizens and minorities -- especially blacks. The traditional white middle and upper class ("WASP") segment will have fewer children per family; hence, their proportion of the total population will shrink. Even though we are entering a period of scarce resources, the federal government is not likely to enact policy to control family size, and zero population growth will probably not be a socially established goal. The middle-class whites will continue to move out

of densely populated urban centers leaving them inhabited, for the most part, by ethnic minority populations and the poor. Student enrollments are not expected to resume growing again in the 1980's; however, there will be continual internal enrollment shifts with which to deal.

2. Life Style. Life style in the 1980's will be characterized by a shorter work week, more leisure time, less sex role stereotyping as prerequisite for particular jobs, and earlier retirements. The traditional work ethic will remain a dominant value, although hedonism will be more tolerated. Society will be increasingly complex and pluralistic with more social stratification than we experience presently.

Scarce resources will cause us to modify our general consumption practices and modes of transportation (away from almost complete dependence on the automobile in favor of mass transit systems). There will be greater control exercised by the federal government in most areas, especially in health, social welfare, and education.

Mental illness resulting from greater population density is not expected to increase dramatically, nor are group tensions and hostilities expected to increase significantly from today.

3. Technology. American technological advances will continue, especially in the development and applications of television and computers. These and similar electronic devices will continue to revolutionize the major communicative processes, e.g., storing, processing, retrieving, and disseminating of information.

The lives of all Americans will be greatly influenced and, to some degree, controlled by increased applications of the computer, i.e., banking, credit cards, drivers licenses, etc.; consequently, a "computer ethic" is certain to evolve, as was the case with movies and television.

The age of scarce resources will direct our efforts toward the reclamation of the world's finite resources, and to the development of alternative energy sources.

4. Careers. We can expect a gradual transition from a "goods"-producing economy to a "service"-producing economy, with new para-professional roles in the fields of medicine, law, education, and other social services. More technicians will be needed, especially in electronics and allied fields. New careers will blossom as a result of a multitude of services needed by an expected increase of senior citizens in the population, earlier entrance in school and/or child-care centers, and an expanded role by the federal government.

Age will be less instrumental in forcing retirement than now, owing to longer life expectancy and more senior citizen political clout. We can expect several (two or three) careers in a normal lifetime. There will be more part-time work, and greater flexibility in working hours. The largest employers will remain in and around densely populated urban centers.

More women and mothers will be in the work force, and occupational and family roles will be less stereotypic.

5. Education. A high value will be placed on education in the 1980's, with a level of financial support at least as high as it is now. There will not be universal consensus regarding the goals of our public educational institutions, with the exception of providing quality programs in the basic skill areas: e.g., communication (reading, writing, listening, and speaking); computation (basic fundamentals of mathematics such as addition, subtraction, multiplication, division, fractions, and

decimals); basic fundamentals of science; and possibly, thinking and reasoning. The federal government will play a larger role in public education, and it will contribute a greater proportion of the resources than at present; however, a nationally standardized curriculum will be strongly resisted by the states.

Early childhood and continuing (adult) education are likely to burgeon in the 1980's, especially if one accepts the following propositions: more leisure time, more women in the work force, changing occupational roles, and longer life expectancy. Even though the total patronage of the public schools is apt to increase dramatically (owing to early childhood and adult education), the traditional K-12 public school enrollments are not likely to increase; rather, schools will be plagued by continual internal population shifts.

Major educational innovations will probably include: various computer applications, multisensory modes of instruction, humanization of the school environment with more student choices, and career education at all levels K-12 (predominantly in secondary schools).

Unlikely Events. Some propositions that were thought unlikely to occur in the decade of the 1980's were: hedonism (the doctrine that pleasure and happiness is the sole or chief good in life), educational chemotherapy (the use of drugs to increase learning and/or control divergent behavior), world government, guaranteed minimum income, round-the-clock operation in public and private enterprise, return of the middle class from the suburbs to the city, and public schools engaging in programs to develop moral and spiritual values.

Analyses of the Write-in Comments. The foci of this brief summary are the areas and/or facets of education thought most likely to be affected

by the occurrence of specific events.

There are surely undeterminable implications for education that might result owing to the occurrence of these events; one's imagination can conjure up unlimited possibilities. However, when the panel was asked to speculate on the first-order consequences (the most obvious), the following notions -- in order of frequency -- recurringly appeared: (1) increased costs for education, (2) massive curriculum reform, (3) changing teacher role, (4) changing teacher training programs, (5) changing teacher selection practices, (6) changing teacher staffing patterns (differentiate staff to include technical and clerical support), and (7) more flexible facility design to accommodate new programs, viz., early childhood, adult, career, computer, and multisensory.

Conclusions

1. Five categories of societal propositions for the 1980's were identified in the analysis; those categories were: (1) High Likelihood of Occurrence, (2) Low Likelihood of Occurrence, (3) High Educational Impact, (4) Low Educational Impact, and (5) High Likelihood of Occurrence - High Educational Impact (bivariate). Based on the propositions falling in these categories, scenarios depicting future trends in population, life styles, technology, careers, and education were sketched.
2. The educational areas and/or facets most likely to be heavily affected in the future (1980's) were identified and reported.
3. Evaluation Question No. 1 of Research Design No. 73-215: Evaluation Design for Skyline Wide Educational Plan, 1973-74 has been satisfactorily disposed of.

Evaluation Component Number Two: Educational Goals

Question No. 2: What educational goals were identified as high priorities for the 1980's? (See: Burns, Robert J., *Skyline Wide Educational Plan: Educational Goals for the Future (1980's)*, Dallas Independent School District, 1974.)

The SWEP Project represents a unique planning effort, as nearly as has been detected, in that futures methodologies, e.g., Delphi, scenario writing, and cross-impact analysis matrices, were used in concert with the more conventional educational survey methods. In the process, there was an overt attempt to "chain" the relevant data, i.e., to build an ever-expanding data base from sequentially formulated and administered questionnaires, each created from the findings of those preceding it. Stated differently, there was an attempt to ascertain certain constituency priorities relative to an educational system of the future (using the Delphi technique) in light of a set of future-focused images (using preference-type surveys, scenarios, and cross-impact analysis matrices).

The purpose of this section is to scrutinize the research methods and analytical schemes, and to communicate the results of SWEP objective number two: ... to determine constituency priorities relative to the educational programs and processes of the future.

Methodology

The Delphi technique (a series of sequentially administered questionnaires usually involving a panel of experts and/or authorities in the area of interest) was utilized as the primary mechanism for gathering and scrutinizing information. Of particular interest in the study were

the highest priority educational goals (the continuum of experiences that SWEP should provide for its students), and the core experiences, or those experiences that all students should be required to have. Also identified in the process were some suggested operational and management practices (process goals) that SWEP should consider implementing.

Lastly, a minority report was formulated which summarized the diverse opinions, those not in agreement with the group.

Delphi questionnaire number one (Q-1) consisted of 105 discrete program goal statements arrayed in the general categories of: basic skills, citizenship, ethics, aesthetics, careers, health and recreation, and life management; and 29 process goals statements. In addition, a section was provided wherein panelists could generate new goals where they perceived a need. The instrument is reproduced in Appendix B.

The "raw" goal statements, originally numbering in excess of 400, were extracted from the related literature. In the process, they were reduced, revised, and polished, and finally, arrayed in the above-mentioned general categories.

A double response scale was formulated such that the panel could furnish two kinds of information for each goal statement (questionnaire item). The first scale was designed to provide priority information regarding the educational programs; the second scale was designed to facilitate the identification of the core experiences. A five-point, Likert-type response scale was used to assign relative priorities, and a dichotomous-type (yes-no) scale was used for the core dimension.

For Delphi questionnaire number two (Q-2), the general format remained, for the most part, unaltered, except that, as a result of the panel's input on Q-1, the total number of program goals increased from

105 to 117, and the process goals from 29 to 45. In addition, Q-2 included a format for entering minority opinions, and panelists who deviated from the group were asked to furnish a reason. The instrument is reproduced in Appendix B.

Sample

The panel, numbering 375 and 225 for iterations number one and two, respectively, was local in origin, and selected from the ranks of reputed "forward thinkers" in education, business and industry, and government. Care was taken to invite representatives of the three major ethnic groups (Anglo, Black, and Mexican-American), both sexes, residents of Dallas, Fort Worth, and other Metroplex communities, and a wide range of ages.

Results

The results of the SWEP educational goals study are shown in Tables 5 to 8, Appendix B, and are summarized below. The tables are based on the panel's responses to the second Delphi questionnaire; priority rankings depend on the mean ($\bar{X}$) of responses on the five-point Likert scale, and core rankings on the mean percent of "Yes" responses (i.e., "Should be required of all students"). An X in column 3 indicates that the corresponding goal fell in the same quartile (highest, in Table 5, or lowest, in Table 6) of both distributions. (For a complete report of results, see the study cited above: Skyline Wide Evaluation Plan: Educational Goals for the Future (1980's).)

1. Highest Priority-Highest Core Educational Goals. The educational experiences considered both highest in terms of priority and required for all students who attend SWEP (see Table 5) clustered in the general content areas of basic skills (communication and computation), career

development, citizenship, health and recreation, and ethics.

Basic skills. Two themes were identified in this category namely, communication and computation. The skills that surfaced relative to communication were reading, writing, speaking, and listening. The panel indicated that there should be educational experiences available in SWEP to develop these competencies at least to a level necessary to perform normal daily living transactions such as reading a telephone directory, road signs, and newspapers. Also included in this general reading level are popular magazines, job applications, personnel directives, mail order catalogs, and social correspondence. SWEP would be expected to offer programs that will enable students to express their ideas and concepts clearly to others (whether in writing or orally), and understand those which are transmitted to them, on a level at least comparable with a contemporary radio or television news broadcast.

In the area of computational skills, the panel clearly indicated that, as a top priority, SWEP's students should have access to programs that will teach the rudiments of elementary business transactions at least on level with: making change, totaling a bill, computing sales tax, computing salary and salary deductions, and developing a household budget. In this same vein, there should be programs aimed at teaching the proper management of money, property, and other resources.

Career development. In this general area, the panel recognized the need for creating programs designed to arouse the student's career awareness relative to such important matters as projected manpower needs, job entry requirements, performance expectations, compensation, their own personal abilities and characteristics, occupational and educational alternatives, etc. This information is fundamental to making viable career

decisions, and underscores the need for extensive career counseling in SWEP.

Additionally, the panel indicated that SWEP's graduates should have a salable job entry skill so that they will be able to obtain meaningful employment. Running throughout the career development curriculum there should be a continuous effort to foster in the students positive attitudes toward the world of work and desirable work habits.

Citizenship. Some of the formal educational experiences offered at SWEP should be designed to illuminate the exemplar qualities of the United States, and to communicate the notion of continuous improvement of our democratic system. Students should understand the basic organizational structures of our local, state, and federal systems of government, as well as their rights, privileges, and responsibilities relating thereto. There should be programs designed to communicate the notion that individuals must assume responsibility for their own development, obligations, and actions. Finally, SWEP should provide experiences geared toward increasing the level of understanding and appreciation for people of different cultures, races, sex, ages, and life styles.

Health and recreation. In this area, a concern was expressed that SWEP include in the curriculum experiences that would impart knowledge, skills, and positive attitudes relative to mental and physical health. Under this rather large umbrella were specifics such as transmitting knowledge and attitudes concerning the proper use of drugs and the human reproductive system, and experiences to nurture in students a positive self-image.

Ethics. Here, the panelists indicated that SWEP should include in its "menu" of curricular offerings programs which are specifically designed to develop in students positive moral and ethical values, and to encourage respect for the beliefs and values of others.

2. Lowest Priority-Lowest Core Educational Goals. It is important to mention here that, even though these goals (see Table 6) were rated low on both dimensions, this is not to say that they should be eliminated from SWEP's program of studies. To the contrary, in some quarters many of these goals were viewed as extremely valid (according to the reports). What should be communicated, then, is the notion of relative importance; that is, considering all of the noble goals that were presented in the Delphi questionnaires, what should be their relative order in terms of merit? Stated differently, if a situation arose where the curriculum of SWEP had to be pared down for financial reasons, what educational experiences would be trimmed first? The following would be the first to go:

Communication. Rated down were the high-level communication skills such as those required for reading on the level of advanced technical journals, logic, and philosophy; and creative expression (via writing or speaking) of sophisticated ideas, concepts, and thoughts to professional audiences and understanding those which are received.

Computation. In the general area of computation (mathematics), two ideas surfaced. Down-rated were goals prescribing curricula for mathematics on level with the 2nd year of college, and for beginning engineering study; and educational experiences that would develop the skills required to perform tasks such as purchasing, taking inventory, and preparing a payroll.

Foreign language. An examination of the sample in toto reveals that a relatively low priority was assigned to educational experiences concerned with the teaching of reading, writing, and conversation in foreign language. A notable exception to this opinion came from the Mexican-American panelists.

Science. Rated low by the panel were the following science-related goals: physical science, e.g., physics and chemistry, life science, e.g., biology and zoology, and social science, e.g., psychology, sociology, and world history.

Computer technology. Instruction in the applications of the computer including: preparing data for processing, accessing information, writing in computer language, e.g., Basic and Fortran, and manipulating an electric calculator were low priorities.

World government. Several of the goals addressing the notions of world government, major world political and economic systems, and multi-national cooperations received relatively low ratings from the panel.

Ethics. Programs designed to teach the history of world religions and their impact on the civilization of men were a low priority of the panel.

Aesthetics. Goals receiving low ratings in this area were those that will expose students (both as participants and as observers) to the visual, literary, and performing arts.

Career development. In this general area, only two goals were rated low; those were, ... SWEP should have programs that will teach the history of America's labor union movement; and students should receive instruction in handling tools and operating machinery.

Health and recreation. The panel did not support the idea that all students should participate in a variety of team sports.

Life management. The final goals of the low-rated variety addressed the controversial topic of alternative family patterns. Included were open marriage, communal families, and alternative child-rearing modes.

3. Response Shifts from Delphi One to Delphi Two. Of particular interest here was the gravitation, or shifting, of the panel's scores on the priority dimension from Delphi #1 to Delphi #2. There was greater consensus of the panel (less response variation) on Delphi #2 than on Delphi #1 for 130 of the 134 goals, and this was true for both high and low priority goals. The mean response shift of the program and process goals (excluding the 14 goals with no or atypical changes) was 11.1; that is, the proportion of respondents at the modal position rose from round one to round two by an average of 11.1 percentage units. Considering these data, it is fair to conclude that the Delphi technique was instrumental in generating respondent consensus in the SWEP model.

4. Highest Priority Educational Process Goals. The 45 educational process goals, as defined in this study, were those concerned with the managerial and operational aspects of the school. It is interesting to note that the two highest priority process goals (see Table 7) were concerned with students who have very special and unusual needs; i.e., the physically, mentally, and emotionally handicapped, and the academically gifted. Coupled with this, the panel thought that SWEP should attempt to make school attractive to the potential dropout student. They expressed a keen interest in academic and career counseling such that it would be free of sex role stereotypes, and felt that the staff and materials should act affirmatively to overcome sex and racial handicaps.

A staff development component was thought desirable, and should be dynamic and meaningful so that the staff can maintain a high level of proficiency. A wide variety of delivery systems (modes of instruction) should be employed, and the role of the teacher should change from disseminator of knowledge to director of learning activities. In addition, the SWEP programs should be operational on a year-round basis.

5. Lowest Priority Educational Process Goals. An implicit theme found in many of the low-rated goals (see Table 8) was the idea of student control. The panel did not favor a pass/fail grading system, student evaluation of staff, eliminating required attendance when the "basics" are satisfied, and permitting the coming and leaving of students at various times during the school day and/or year. This is in keeping with the recent Gallup public opinion polls relative to education (published by Phi Delta Kappa), which continually rate student discipline as a source of public concern at or near the top of the list.

Other low-rated goals spoke to the granting of credit for religious training away from the school, required television viewing in the home, multilingual education in all disciplines, and nationalism toward countries other than the United States.

Two low priority goals addressed the assignment of teachers and students. The panel did not support the idea of assigning the best teachers to the lowest achievement schools, and they rejected the notion of student tracking: assigning students as early as the ninth grade to either vocational-technical areas or university preparation.

A surprising result was the low rating of the goal, "Develop a system for involving many groups, e.g., school administrators, community

leaders, teachers, and students, in administering the local public schools."

Conclusions

A set of program and process goals were rated by a local panel in a two-round Delphi interrogation, allowing the identification of educational goal priorities for SWEP. Thus Evaluation Question No. 2 is answered in the affirmative.

Auditor's Critiques

As stated at an earlier juncture, the project evaluators were engaged in the conceptualization, development, and implementation of many aspects of SWEP. As a matter of record, the products described in evaluation components one and two of this report, i.e., Skyline Wide Educational Plan: The Decade of the 1980's and Skyline Wide Educational Plan: Educational Goals for the Future (1980's), were entirely generated by the Research and Evaluation Department personnel assigned to SWEP. Because of the evaluator's role, and in keeping with acceptable conventions of objectivity, an outside auditor was retained to critique the formal evaluation design, the future society study, and the educational goal study -- the latter two being the substance of components one and two cited above. The auditor's critiques appear below in their original format.

Auditor's Critique: Component Number One

A Review of the Evaluation Design and Reports for the Skyline Wide Educational Plan

by

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An examination of the Evaluation Design for Skyline Wide Educational Plan (DISD Research Design 73-215) indicates that the major project goal is the development of a report designed to ascertain the need for and feasibility of a comprehensive secondary educational system (facilities and programs) to serve the Dallas-Fort Worth Metroplex commencing in the decade of the 1980's.

A careful review of (a) the specific project objectives, (b) the planning model developed for 1973-1974, (c) the major evaluation questions, and (d) the proposed evaluation reports results in the following observations. The Skyline Wide Educational Project can be viewed as an exploratory technological forecasting venture. It is designed as a response to a real and growing need within urban school districts and other public sector agencies to develop methods for modeling large-scale social systems.

Activities and research strategies outlined in this inquiry suggest that the project design is more likely to utilize guidelines specified in the policy planning and forecasting literature for dealing with "less structured" problems since guidelines found in most of the management science and operations research literature have been overwhelmingly preoccupied with "well-structured" problems and, in some cases, deal only with microanalytic considerations.

When the general guidelines for policy planning and exploratory technological forecasting are used to review this project, it appears that the

project design as well as the reports to date (April 1974) illustrate not only an awareness of these guidelines but also a serious attempt to implement them. For example, the methods of a futures study do not concentrate on "predicting" the future but rather on "developing" alternative futures. Within the SWEP design there is ample evidence to support the position that the methods employed will result in the development of alternative futures that can be presented to decision-makers and policy planning groups.

Analysis to date in SWEP has resulted in policy planning information that clearly outlines both a "value explicit" and a "feasibility" dimension for alternative plans. Moreover, careful attention has been given in the analysis of data to identify and examine actual "decision variables" which can be altered or changed within an instructional system.

When viewed as an attempt to model a large-scale social system, the project design deserves special attention since it represents one of the few attempts in the educational planning domain to begin a technological forecasting study with an extensive examination of the social context of education likely to be encountered in the decade of the 1980's.

To accomplish the initial task, technological forecasting methods such as Delphic interrogations, scenario writing and cross-impact analysis have been creatively applied and arranged in a strategic way whereby project staff were able to maintain a high level of internal consistency in the planning model and devote careful attention to concerns of external validity related to their design.

In terms of a comparative analysis of the design and reports of SWEP, I am unable to find a similar comprehensive technological forecasting study in a large urban school district that does have comparable goals and objectives as well as a corresponding evaluation design and planning model. Hence,

district level comparisons or case studies of context, input, process and product evaluation dimensions are not reported here. However, the position taken by this reviewer is that the SWEP design, with a few minor changes, could be recommended as a paradigm for other districts who wish to design and implement a similar futures study.

In technological forecasting our purpose is not to test a model. We are attempting to *suggest* a model which encompasses and extends our perception of reality sufficiently well to permit choices or decisions to be made. In technological forecasting our methods are designed to permit sufficient integration of a wide range of variables which are often excluded in scientific prediction. Our relationships are more likely to be mediate rather than immediate. Our designs allow for the use of logic and discovery as the principal means to suggest a model and to achieve integration. We are often faced with the problem of inventing theoretical constructs rather than beginning with a test of well developed ones.

Given this integrative property of a technological forecasting study, one minor change that could be recommended for SWEP or other similar endeavors in the immediate future deals with the description of the terminal evaluation report mentioned on page IV of DISD Research Design No. 73-215. Here one might consider the use of a single scenario as a means to integrate the wide array of valuable information gathered on items such as educational programs, facilities, sites, or staff implications. In the current design it appears that each of these information categories will be treated only in separate sections of the terminal evaluation report.

If this option were taken by a prospective user of the SWEP design, the scenario should describe a specific alternative future for a comprehensive

urban secondary educational system. Careful attention should be given to the major aspects dealing with the financial feasibility of such a venture. As a general rule of thumb, the integrative scenario I had in mind would not need to exceed the length of the average book chapter and would focus, but not linger, on major structural and functional properties of the educational system.

Auditor's Critique: Component Number Two

A Review of the Delphi Research Project Used in the Skyline Wide Educational Plan

by

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An examination of the Evaluation Design for Skyline Wide Educational Plan (DISD Research Design 73-215) indicates that the major project goal is the development of a report designed to ascertain the need for and feasibility of a comprehensive secondary educational system (facilities and programs) to serve the Dallas-Fort Worth Metroplex commencing in the decade of the 1980's.

To coordinate the efforts aimed at accomplishing the major project goal, a set of objectives were first specified and a planning model with 11 discrete activities was then developed (See the "Executive Summary" of DISD Research Design 73-215). The Delphi research study which is reviewed here is listed as activity 9b in the planning model.

The relationship of the Delphi research study to other activities in the planning model (both in terms of its implementation schedule for 1973-74 and its unique contribution to the information base for the project) have been specified in the SWEP Planning Network, an item documented in the initial design (See DISD Research Design 73-215, p. 37).

Based on this specification and the ability to follow the SWEP project during the 1973-74 academic year as a "participant observer," the position taken here is that the SWEP Delphi is an integral part of an internally consistent long range planning design. Evidence for this position can be found in several of the interim reports of the SWEP project. For example, all of

the goals used as items in the initial Delphi questionnaire have been matched up with one or more of the "high likelihood-high impact" propositions for the future which were derived in connection with the completion of activity 8 of the planning model. A complete report on the propositional inventory can be found in Robert J. Burns, Skyline Wide Educational Plan: The Decade of the 1980's, March, 1974.

When the general guidelines for the design and implementation of a Delphic inquiry are used to review this research effort, it is accurate on the part of the SWEP staff to describe their Delphi as a "consensus" rather than a "policy-focused" Delphi in that its major objective was to examine and document the priorities held for various educational goal statements by a wide range of "clients" and "interest groups" of DISD.

The technological forecasting literature indicates that possible objectives for a Delphi study are:

- To determine or develop a range of possible alternatives
- To explore or expose underlying assumptions leading to differing judgments
- To seek out information which may generate a consensus of judgment on the part of the respondent group
- To correlate informed judgments on a topic spanning a wide range of disciplines
- To educate the respondent group as to the diverse and interrelated aspects of the topic

These objectives, reported by Turoff (See Technological Forecasting and Social Change, 2 (1970), 149-171), are used here as reference points for ordering comments relating to specific aspects of the SWEP Delphi design and for providing suggestions on how the SWEP Staff might move toward additional analysis of the data gathered from the respondents.

Range of Possible Alternatives. The Delphi questionnaire was constructed so that approximately 107 different goal statements and approximately 40 educational process statements could be analyzed. Ample opportunity was provided in both priority assessment rounds for respondents to include additional statements that might lead to alternatives in the goal structures which were not documented initially by the SWEP staff.

It is suggested here that new statements offered by the respondents be subjected to a separate content analysis that would not only report on the nature of the new statements but also examine their origin. On the latter point, one should examine the type of respondent or the strata of the Delphi respondent group responsible for the submission of various new statements.

Exploring Assumptions. As a general observation, the computerized print outs returned to the respondents as feedback after the completion of round one adequately identified those who hold minority views relating to the distribution of responses for each item. The letter coding scheme used on the computerized individual response print outs was an excellent device for communicating statistical results in a manner that is nonthreatening and easily understood by "lay" policy groups. It should be made available to other researchers who wish to work directly with the public.

It is recommended that adequate attention be given to the minority responses offered in round two. While the tendency in some consensus Delphi studies is to discount the value of these statements or to concentrate the analysis only on quantitative types of information, it is this reviewer's opinion that a careful analysis of minority statements could lead to the documentation of latent dimensions or assumptions about DISD that are seldom uncovered without extensive interviewing.

Consensus of Judgment. Given the use of the five point rating scale and

the option for the respondent to offer also a yes/no response for each statement as to its appropriateness for all students, there exists an adequate statistical base to examine the reliability, validity and value explicitness of individual and group responses.

Correlation of Judgments. Since the SWEP staff made provisions in the design for their National Advisory Committee to participate in a separate Delphi Exercise (identical to the one used with the DISD clients), a comparative analysis (correlation) should be made for the response profiles of both groups. Moreover, since a preliminary analysis of these two Delphic data sets indicated that major differences in the two groups were found in the Delphi "process" statements rather than in the "program goal" statements, a more comprehensive analysis of the "process" statement differences should be one of the first considerations to be treated in the comparative analysis.

An examination of these "process" statement differences (as well as similarities) would, no doubt, lead to the identification of several important insights on how the DISD clients and the national consultants differ in terms of the "means/ends" relationships or the structural properties for a secondary educational system which could serve a large metroplex in the decade of the 1980's.

A Ledger of Informed Clients. It is quite evident to most people who have utilized the Delphi research technique that it can be used as an educational device. Accordingly, the SWEP staff may wish to consider the DISD Delphic respondents as a special client group who now have several new insights as to the diverse and interrelated aspects of educational policy alternatives available to the district.

If one accepts this position, then there exists an opportunity to use

this group effectively in the future in connection with other educational planning tasks. On this point, the SWEP staff may wish to examine how Delphi respondents have been used in charette (small group policy planning or problem-solving sessions) exercises. This process is described in Francis C. Thiemann, ARIOLE: A Planning Guide, Center for the Advanced Study of Educational Administration, University of Oregon, August 1973.

To complete the review, I wish to comment briefly on additional subsequent activities that could follow the SWEP Delphi research study. Remarks offered here will focus only on two major aspects related to this topic. However, I do not wish to discount the value of other recommendations under consideration since it is a generally safe assumption that any research and development project of this magnitude and scope sets the stage for several types of subsequent planning and/or action-oriented activities.

The first recommendation deals with the replication of the Delphi research study in another major urban school district setting. At the present time there is a real and growing need within urban school districts to develop methods for modeling their schools as large-scale social systems. When the SWEP Delphi instrument is used in connection with the propositional inventory (See Burns, Robert J., Skyline Wide Educational Plan: The Decade of the 1980's), it represents a generalizable as well as feasible method designed to meet this modeling need.

Hence, it is suggested that the DISD not only disseminate their project findings to other urban school districts but also provide them with information on their methodology and make available to them both the propositional inventory and the Delphi instrument. In fact, given the unique long-range planning experience of the SWEP project, DISD may wish to enter into cooperative arrangements to mount this type of study in other urban districts.

The second recommendation deals with subsequent activities within the district. If one accepts the position that the purpose of educational planning and evaluation is to improve rather than prove, then the Department of Planning should examine alternative strategies and develop a plan for the dissemination of project findings to DISD personnel and, in a more general way, to the metroplex community.

In terms of district personnel, an inservice activity might be appro-

ce. In fact, the SWEP staff might consider an inservice activity which first requires teachers, curriculum supervisors and administrators to predict how they believe the community in fact did respond to the Delphi instrument. Once these predictions (tacit assumptions they hold for the DISD Community) are made, the actual round four (consensus round) Delphi responses could be shared with them and the accuracy of their predictions could be measured. In terms of the disseminations to the metroplex community, one or more press releases might be constructed to encumber additional community interest in exploring alternative strategies for the improvement of instruction in the district.

Evaluation Component Number Three: Educational Programs

Question No. 4: Was a generalizable model developed (a systematic procedure) that could be used as a resource for developing educational programs (curricula) for SWEP?

A generalized three-dimensional model was developed by the SWEP staff to serve as a planning guide for the creation of a continuum of future secondary schools. Its application to a specific situation is intended to define, in a logical and orderly way, the educational goals, the student needs, the entry and exit procedures, the educational programs, the facilities, and the instructional practices of an educational system. Owing to the theoretical nature of this concept, no attempt was made to evaluate the model.

Evaluation Component Number Four: Utility of SWEP's Products

Question No. 5: What are the projected manpower needs for the Dallas-Fort Worth Metroplex for the 1980's?

Question No. 6: What are the professional staff implications for such an educational system?

Question No. 7: What are the facility implications; design, configuration, space, and materials for such an educational system?

Question No. 8: Were criteria formulated relative to the selection of an appropriate site for SWEP?

Question No. 9: What is the projected student demography?

The five major evaluation questions set out above are grouped for this report as a single component because their rationale, sample, instrumentation, and methodology were alike. It should be pointed out that Question No. 7 is a modified version of the original evaluation

question relating to site selection. The criteria developed for site selection were discussed by the SWEP staff along with Facility Implications, and these two subjects were, therefore, considered and evaluated as a single SWEP product. Therefore, Question No. 7 is not specifically answered separately in what follows; the evaluation of Facility Implications covers such site selection criteria as were produced.

Although the form of the evaluation questions as stated above suggests an answer providing the figures on, for example, student demography for the 1980's, it is not the province of this evaluation report to present the factual information developed by the project. Specific data relating to the above questions may be found in the final report of Project SWEP. This evaluation addresses itself to the adequacy and utility of the data and the theoretical discussions developed around the four topics analyzed: Manpower Needs, Staff Implications, Facility Implications, and Student Demography.

Introduction

The SWEP staff members were all involved in the overall planning of the project, in general staff discussions of the results of the futures and educational goals studies, and in assessing the probable directions of change in educational systems planning. Responsibility was assigned to specific staff members to review the literature, assemble statistics, and ascertain the current "state of the art" in the areas of probable regional manpower needs, professional staffing patterns, facilities location and configuration, and probable future demographic distributions for the Dallas-Ft. Worth area. The research, individual thinking, and staff consensus in these four general areas was embodied in various sections

of the project's final report. Each of these sections represents a theoretical discussion of the facet in question and of the planning decisions required in order to produce a coherent future-adapted secondary school.

The problem faced by the project staff in formulating its final report may be illustrated by an example: A primary decision must be made as to whether a future secondary school will be a comprehensive high school serving a defined and contiguous geographic attendance zone or whether it will be a specialized institution offering unique courses of study for special groups of students drawn from a wide area. Until that decision is made by boards of education and administrative leaders, no concrete plans for programs can be laid. The SWEP staff, therefore, sought to provide, as background or resource material, the facts, figures, and probable trends which decision-makers would need in order to approach the overall primary decisions in an intelligent and informed way.

The foregoing paragraphs, then, serve to define the evaluation problem: how to assess the usefulness to decision-makers of such background material. This was done by seeking the judgments of members of the Dallas Independent School District's Executive Team, whose experience and responsibilities were likely to include planning and decision-making of the type envisaged in the SWEP report. These administrators were asked to review and evaluate the resource materials with respect to a set of criteria which would measure their utility.

The text and tables constituting the resource material offered for evaluation on each of the four topics were selected by the project manage-

ment and were not attributed to any specific staff member. Most of the material is drawn from the Project SWEP final report. The following sections briefly characterize the submitted material; the full array of material offered for evaluation on each topic is filed and available for inspection in the Department of Research and Evaluation.

Sample

For each of the four topic areas involved (Manpower Need . Professional Staff Implications, Facility Implications, and Student Demography), two members of the DISD Executive Team were selected as evaluators. The administrators were assigned as nearly as possible to the topic corresponding to their 1973-74 assignments.

Instrumentation

A brief evaluation response form, adapted from a semantic differential format, was provided, the form being identical for all four general topic areas. The form, with responses indicated, is given in the Results section for each SWEP product and, therefore, is not shown here.

Manpower Needs

Materials Evaluated

The folder prepared by the project management and submitted to two administrators for evaluation contained approximately four pages, including some discussion and two tables: (1) Future Manpower Requirements and Potential Labor Market Entrants by Years of School Completed for the Combined Dallas-Ft. Worth Standard Metropolitan Statistical Area (for 1980), and (2) Total Employment Requirements by Occupation in the Dallas-Ft. Worth

SMSA, 1970-1980, both developed by the Office of Manpower Planning, North Central Texas Council of Governments.

Methodology

Instructions to the two administrator-evaluators preceded the evaluation response form and are reproduced below:

> Your task is to review the projected manpower needs component and, thereafter, to respond to the questionnaire below. Please assume that the decision has been made to proceed with the planning of SWEP (the secondary school of the future to serve the Dallas-Ft. Worth Metroplex) and that you have been appointed to serve on the planning team. Your role is to develop the career education curriculum. To assist you in your new task, you have been furnished the enclosed resource document, which was formulated by the Project SWEP staff. Please read it carefully before responding to the following questions.

Results

On the form reproduced below are shown the responses of the two administrator-evaluators, with circles representing one individual and squares the other.

The information contained in this document is:

1.	not concise	1	2	3	[④]	5	very concise
2.	not clear	1	2	[3]	④	5	very clear
*3.	not accessible	1	2	③	[4]	5	very accessible
4.	not well organized	1	2	3	4	[5]	very well organized
5.	not helpful	1	2	3	[4]	⑤	very helpful
6.	not relevant	1	2	3	[4]	⑤	very relevant
7.	not informative	1	2	3	[4]	⑤	very informative
8.	not important	1	2	3	[4]	⑤	very important

*Not rated by one respondent.

Thus the question as to the utility of the SWEP Manpower Needs product is disposed of. (See the SWEP final report for the complete discussion of manpower needs. A brief extract reflecting the 1980 projections is given in Appendix C, Tables 9 and 10.)

Professional Staff Implications

Materials Evaluated

The folder prepared by the project management and submitted to two administrators for evaluation contained nine pages of discussion using the following categories:

Staff Profile Factors
Skills Factors
Teacher Aides
Competency Strategies
Pre-Service Training
In-Service Training
The Instructional Team
Accountability
Student Needs - Counseling
Facilitator
Central Office Staff

Methodology

Instructions to the two administrator-evaluators preceded the response form and are shown below:

> Your task is to review the Professional staff implications component, and thereafter, to respond to the questionnaire below. Please assume that the decision has been made to proceed with the planning of SWEP (the secondary school of the future to serve the Dallas-Ft. Worth Metroplex) and that you have been appointed to serve on the planning team. Your role is to formulate a process for the selection of the professional staff and to conceptualize an innovative staff development program. To assist you in your important task, you have been furnished the enclosed document, which was formulated by the Project SWEP staff. Please read it carefully before responding to the following questions.

Results

The responses of the two administrator-evaluators are shown below. The information contained in this document is:

1.	not concise	1	2	③	4	[5]	very concise
2.	not clear	1	2	3	④	[5]	very clear
3.	not accessible	1	2	3	④	[5]	very accessible
4.	not well organized	1	2	3	4	[⑤]	very well organized
5.	not helpful	1	2	3	4	[⑤]	very helpful
6.	not relevant	1	2	3	④	[5]	very relevant
7.	not informative	1	2	3	4	[⑤]	very informative
8.	not important	1	2	3	④	[5]	very important

One administrator added the comment that specific kinds of requirements would be helpful as to what other community services will be required. The other administrator thought the concepts might be idealistic but were suitable as goals.

Thus the question as to the utility of the SWEP product on Professional Staff Implications is disposed of. (See the SWEP final report for complete discussion of staff considerations.)

Facility Implications

Materials Evaluated

The folder prepared by the project management and submitted to two administrators for evaluation contained one page of discussion and four studies with the titles and lengths indicated below:

1. A preliminary SWEP Facility Configuration Relative to Contemporary Concepts of Future Education. (7 pages)

2. A Preliminary Model for Determining SWEP Utility Requirements. (5 pages)

3. Fuel Supply, Pollution Control Considerations for an Integral Project Site. (2 pages)

4. Love Field and Redbird Airport as Potential Sites for Project Consideration. (6 pages including 2 maps)

Methodology

Instructions to the two administrator-evaluators preceded the response form and are shown below:

> Your task is to review the facility implications component and, thereafter, to respond to the questionnaire below. Please assume that the decision has been made to proceed with the planning of SWEP (the secondary school of the future to serve the Dallas-Ft. Worth Metroplex) and that you have been apointed to serve on the planning team. Your role is that of educational facilities engineer (the resident expert in all phases of school building contruction), and you are to work in concert with the architects to ensure that the new facility will enhance SWEP's educational programs. To assist you in your new task, you have been furnished the enclosed document, which was formulated by the Project SWEP staff. Please read it carefully before responding to the questions.

Results

The responses of the two administrator-evaluators are shown below.

The information contained in this document is:

1.	not concise	1	2	3	[4]	5	very concise
2.	not clear	1	2	(3)	[4]	5	very clear
3.	not accessible	1	2	3	[4]	5	very accessible
4.	not well organized	1	2	3	[4]	(5)	very well organized
5.	not helpful	1	2	[3]	(4)	5	very helpful
6.	not relevant	1	[2]	3	4	(5)	very relevant
7.	not informative	1	2	3	[4]	(5)	very informative
8.	not important	1	[2]	3	(4)	5	very important

One administrator commented that it was, overall, a very complete report.

Thus the question as to the utility of the SWEP product on Facility Implications is disposed of. (See the SWEP final report for complete studies on facilities and site considerations.)

Student Demography

Material Evaluated

The folder prepared by the project management and submitted to two administrators for evaluation contained some eleven pages of discussion (and notes to tables) covering such topics as ethnic categories in the population of the Dallas-Ft. Worth metroplex, definitions of geographic areas and indicators of socioeconomic status, and trends that may influence student demography such as total population changes, migration, attraction of private and parochial schools, and fluctuations in fertility and birth rate of various ethnic groups. In addition, twenty-two pages of numerical tables give summary and detailed breakdown of past, current, and expected enrollments in 1980 and 1985 by ethnicity, school district, family income, high school attendance area, and the like.

Methodology

Instructions to the two administrator-evaluators preceded the response form and are shown below:

> Your task is to review the student demography component and, thereafter, to respond to the questionnaire below. Please assume that the decision has been made to proceed with the planning of SWEP (the secondary school of the future to serve the Dallas-Ft. Worth Metroplex) and that you have been appointed to serve on the planning team. Your title is assistant superintendent of secondary operations, and one of your many responsibilites includes staying informed of the demographic characteristics; e.g., total number of students, projected enrollments, ethnic composition, shifting patterns, socioeconomic status, age distribution, sex distribution, etc., of the secondary school age students in the district. You are expected to serve as chief counsel to the superintendent and board of education for all student demography-related matters.

Results

The responses of the two administrator-evaluators are shown below.

The information contained in this document is:

1.	not concise	1	2	3	4	(5)	very concise
2.	not clear	1	2	3	(4)	5	very clear
3.	not accessible	1	2	3	4	(5)	very accessible
4.	not well organized	1	2	3	4	(5)	very well organized
5.	not helpful	1	2	3	(4)	5	very helpful
6.	not relevant	1	2	3	(4)	5	very relevant
7.	not informative	1	2	3	4	(5)	very informative
8.	not important	1	2	3	(4)	5	very important

One administrator commented that it was fascinating information and should be most helpful. The other described it as "Excellent job!", but found one table's numeric list of areas confusing. The latter comment was appropriate, since the numbers were keyed to a map which was not provided in the folder, nor was any explanation or identification added by way of substitute.

Thus the question as to the utility of the SWEP Student Demography product is disposed of. (See the SWEP final report for complete set of tables and discussions on the expected student demography.)

Conclusions and Delimitations

The SWEP project, on the basis of the evaluations reported here, including the critiques of the outside auditor, represents a unique effort by a major school district in the United States to approach the planning of a secondary school utilizing some of the techniques developed in futuristic studies. As pointed out by the auditor, the project effort was soundly conceived and

notable for its attention to "chaining" its studies, so that a likely scenario for the society of the 1980's (derived from the survey of a variety of planning experts) was used as the given context within which educational goals could be formulated and prioritized. The goals selected by the constituency then generate, given a specific time and set of constraints, the educational programs, staffing patterns, site, etc., of a future school. The SWEP products relating to Manpower Needs, Professional Staff Implications, and Facility Implications must be regarded as preliminary and suggestive, but have been rated by local administratros as generally well-done and useful to planners. The Student Demography product presents a wealth of information, some factual and some projected, which was enthusiastically received by the two local administrators who reviewed it. For the complete data set and full discussion, the reader should see the SWEP final report and the two studies (referred to in this report) on the future society and on educational goals for the future.

Project SWEP has laid the groundwork for valuable continuing programs, which will be necessary if the full value of the project is to be realized. The Dallas Independent School District can fruitfully utilize the project results, notably the set of prioritized educational goals, which should guide future planning of the District. Further studies based on these goals might include more detailed breakdown of some goals and refined statements of others, plus use of a larger respondent constituency group confined to patrons of the District. The project's major beginning on establishing DISD educational goals should be pursued. It should be noted also that the Delphi technique employed in SWEP encourages consensus and clarifies the nature and vigor of conflicting views, so that it is a powerful tool for planners in public affairs.

A second area in which the DISD should continue to profit from the SWEP project is in the use, in policy and planning discussions, of the picture of the probable future developed in the project. The literature on the art of forecasting suggests that a future scenario based on the best guesses of experts from a variety of disciplines tends to be closer to the mark than one developed from a single individual or narrow group. The SWEP description of the future could well serve to create a future-oriented mind-set for decision-makers whenever the decisional time frame approaches the 1980's. However, the "probable future" changes with current developments; hence any future-societal description must be regularly reviewed and updated. Given the experience and expertise developed locally by Project SWEP, it seems both possible and desirable for the DISD to institute some plan for continuous future monitoring and for regular input of future scenarios to top-level administrators.

A third area which should be pursued is the continuation of research in the methodology of technological forecasting and its application to the problems of educational planning. See the auditor's critiques, especially the critique of component number two, for a set of possible avenues of investigation. The DISD, in Project SWEP, has made a valuable contribution in demonstrating how advanced theory and methodology may be translated to a local school district level; continuation of this approach to local planning problems would be helpful to districts less well equipped with research skills.

Project SWEP was limited chiefly by time: the original conceptualization would require much longer than one year to complete fully, especially given the delays inherent in successive rounds of mailed-out surveys. The SWEP

products evaluated here were rushed to completion against a deadline by staff departing for other assignments, considerable work went unreported (notably the cross-impact analyses of the future society propositions), and specific alternative applications of the model which had been planned were not possible.

A limitation of this evaluation is its dependence on subjective judgments made by local colleagues of the project staff. Their kind cooperation is gratefully acknowledged.

I. D. Number _____

SKYLINE WIDE EDUCATIONAL PLAN SURVEY #1: FUTURE SOCIETY

Instructions: Please read before beginning questionnaire.

The following questionnaire is composed of a set of propositions about future society in the world and the United States in the decade of the 1980's. They are the result of intensive research of the futuristic literature. We need two opinions from you: (1) the likelihood that these events will come to pass in the decade of the 1980's, and (2) the impact they will have on education if they do come to pass.

1. Scoring. Two scales should be used for each statement. The Likelihood of Occurrence scale is in the left margin, and the Educational Impact scale is in the right margin. Please respond to both scales! See scales below:

Likelihood of Occurrence (at left)	Educational Impact (at right)
1 = low likelihood (0-20% chance)	1 = low impact
2 = moderately low (21-40%)	2 = moderately low
3 = average (41-60%)	3 = medium
4 = moderately high (61-80%)	4 = moderately high
5 = high likelihood (81-100%)	5 = high impact

2. The time frame we are interested in is the decade of the 1980's. If you believe an event will have occurred by this time frame (1980-1990), your response on the Likelihood Scale should be a 4 or 5. If you believe an event will not occur, or will occur after 1990, your response should be a 1 or 2.

3. For the Impact Scale the question is, "If this event occurs, what impact will it have on education?". If a significant impact would result, enter 4 or 5. If, on the other hand, little or no impact would result, enter 1 or 2.

4. Optional: Where you rate a proposition as high in impact on education (scored 4 or 5), please jot down a word or phrase (below or to the right) to suggest the area or facet of education you feel will be affected (e.g., school taxes, finances, curriculum, attendance, accountability, etc.).

5. Comparative statements refer to the year 1973 unless otherwise specified.

6. Space is provided on the last page for your propositions. Please feel free to add to the list, scoring new statements in the same manner.

General Information: Please check (X) the appropriate spaces below.

Sex: Male _____, Female _____

Age: under 30 _____, 30-39 _____

40-49 _____, 50-up _____

Occupation: _____
(please specify)

Ethnic Group: _____
(optional)

SKYLINE WIDE EDUCATIONAL PLAN SURVEY #1: FUTURE SOCIETY

FORM A

LIKELIHOOD OF OCCURRENCE		IMPACT ON EDUCATION
	In the world, in the 1980's...	
_____	1. Worldwide social change will be proceeding at a rate about the same as in the last 25 years (1948-1973).	_____
_____	2. The developed nations of the world will have reduced their per capita share of consumption of available world resources.	_____
_____	3. Little progress toward world government will have been made.	_____
_____	4. World population will have continued to increase, with the underdeveloped countries showing greater percentage gains than the developed countries.	_____
_____	5. Frequent crises and a rising level of tensions will characterize the world order.	_____
_____	6. There will not have been a major nuclear conflict.	_____
_____	7. Inflation will be continuing as a long-term trend in the world economy.	_____
_____	8. Worldwide efforts to reduce population growth and pollution will have been generally unsuccessful.	_____
	In the United States, in the 1980's...	
_____	9. Population of the U. S. will be larger.	_____
_____	10. Zero population growth will be a socially established goal.	_____
_____	11. The onset of old age (beginning of handicapping loss of powers) will occur later; as a result, the length of productive adult life will be greater.	_____
_____	12. The trend toward urbanization will have continued, so that fewer people (in numbers and percentage) will be living in rural America.	_____
_____	13. Racial integration will have increased.	_____
_____	14. Middle-class people will be returning to the central city to live.	_____

LIKELIHOOD		IMPACT
	In the United States, in the 1980's...	
_____	15. Increasing complexity of social institutions will demand longer periods of education to prepare competent citizens.	_____
_____	16. Useful and gratifying occupations will be available for persons unwilling or unable to master academic skills beyond a basic core of general studies.	_____
_____	17. Citizens of the U. S. will travel more often to other countries and will be more concerned with world problems.	_____
_____	18. Management of the chief institutions of the society will have become increasingly concentrated in the hands of an elite group of very intelligent, highly trained people.	_____
_____	19. Protection of the environment will be an accepted national goal.	_____
_____	20. Records relating to private concerns of individuals will be centralized and available to many persons and agencies, with resultant loss of privacy to the individual.	_____
_____	21. The role of government at all levels will be greater than it is today.	_____
_____	22. Regional systems of government which integrate the interests of several local governments will be in common use.	_____
_____	23. Many people will not believe or trust their leaders.	_____
_____	24. Governmental procedures for decision-making in environmental matters will have been established and perfected.	_____
_____	25. Self-government will be a cherished right of citizens.	_____
_____	26. Computerized simulation techniques, whose details are not comprehensible to most citizens, will be standard aids to decision-makers.	_____
_____	27. Small-group acts of terror will be more common.	_____
_____	28. Research in the social sciences will have produced powerful new tools that will be used in both the public and private sectors to enhance consensus decision-making.	_____
_____	29. The rate of change in the social context (i.e., in communications, housing and climate control, food production, fundamental processes of human society) will be reduced from the rate experienced in the period 1910-1970 (i.e., the "future shock" effect will be less).	_____

LIKELIHOOD IMPACT

In the United States, in the 1980's...

_____ 30. There will have been unexpected break-throughs in the physical sciences and technology, with potential for profound consequences for society (comparable, for example, to the discovery of penicillin, the development of the computer, and the birth-control pill). _____

_____ 31. Mass transportation will have been developed to a higher degree and will be in much more common use. _____

_____ 32. National library networks will be in operation. _____

_____ 33. Institutionalized research planning will direct technological advances toward socially desirable ends. _____

_____ 34. Economic and political power will be more concentrated and centralized at the national level. _____

_____ 35. It will be recognized that unlimited economic and material growth is not inherently good. _____

_____ 36. Production will be adjusted by government to levels consistent with national goals. _____

_____ 37. Operation round the clock, seven days a week, will be more common in social institutions such as the church, schools, child-care centers, etc. _____

_____ 38. A smaller proportion of the population will have incomes at or below subsistence levels. _____

_____ 39. Management will be much more dependent on information and on sophisticated analytic methods. _____

_____ 40. Corporations will give greater weight to employees' personal concerns in making personnel decisions. _____

_____ 41. There will be increased governmental control of the national economy. _____

_____ 42. Salvage and reclamation/recycling of irreplaceable raw materials and resources will have been greatly expanded. _____

_____ 43. There will be greater emphasis by government and private industry on increased productivity in agriculture and forestry. _____

_____ 44. The occupational distribution will have fewer blue-collar and more white-collar workers than at present. _____

LIKELIHOOD		IMPACT
	In the United States, in the 1980's...	
_____	45. There will be fewer jobs for unskilled workers and laborers than there are today.	_____
_____	46. Differentiated staffing will be more common, with proportionately more jobs for paraprofessional personnel in fields like law, medicine, education, social service, and government.	_____
_____	47. Available jobs will have increased more in rural and suburban areas than in urban centers.	_____
_____	48. Level of skills needed for job entry will be higher.	_____
_____	49. Labor will be opposing the "educational apprenticeship".	_____
_____	50. The role of the school in vocational preparation will be to impart general work skills; specific job skills will be acquired on the job.	_____
_____	51. Flexible hours and part-time jobs will be much more widely available than at present.	_____
_____	52. Few occupations will be regarded as necessarily staffed by a particular sex.	_____
_____	53. Retirement at earlier ages than today will be financially possible for many workers.	_____
_____	54. A monetary value will be assigned to full-time housewife and child-care work so that women not employed outside the home may share in social insurance benefits.	_____
_____	55. Humane and socially oriented ways of treating others will be more needed and more socially rewarded.	_____
_____	56. Creativity and imaginative thinking will be highly prized by the socially powerful elite.	_____
_____	57. Conformity to socially accepted norms will be less valued by a majority of the population.	_____
_____	58. More people will reject the work ethic.	_____
_____	59. "Work or starve" will be less useful as a motivator for people to produce.	_____
_____	60. Organized religion will have diminished in influence.	_____

LIKELIHOOD		IMPACT
	In the United States, in the 1980's...	
_____	61. Schools will take a larger role in developing moral values in students.	_____
_____	62. Regulation of family size by various indirect means will be national policy.	_____
_____	63. Parents will be able to exercise less control over their adolescent children.	_____
_____	64. The percentage of the female population working for pay will have increased.	_____
_____	65. Child-care centers will be provided as a public service, funded by tax monies, for families of all income levels.	_____
_____	66. There will be a wide variety of family styles in addition to the traditional husband-wife-children family unit.	_____
_____	67. Paternity leave, as well as maternity leave, will be an established right of workers.	_____
_____	68. Use of drugs to improve intelligence and memory will be generally accepted.	_____
_____	69. Empirical research will have found more relationships between physiological variables and children's behavior.	_____
_____	70. Greater population density will be increasing emotional tensions and as a result there will be more mental illness.	_____
_____	71. Group tensions and hostilities will be on the increase in our national and community life.	_____
_____	72. Law and society will be more tolerant of variations in lifestyles.	_____
_____	73. More people will seek direct experiences to reduce the feeling of alienation from nature and of sensory deprivation.	_____
_____	74. Most people will feel a sense of depersonalization and loss of control over the conditions of their lives.	_____
_____	75. Student enrollment in public schools has been relatively stable in recent years; but enrollments will have resumed growing.	_____

LIKELIHOOD IMPACT

In the United States, in the 1980's...

_____ 76. Early childhood education will be provided for most children, beginning at age three or four, in a public facility (school, day-care center, or other). _____

_____ 77. The age of compulsory school attendance will be lowered from the present age (currently, in Texas, sixteen years of age). _____

_____ 78. Students will generally attend a neighborhood school at least through the third grade. _____

_____ 79. Education will be viewed as a very important function and have a level of tax-supported funding at least as high as in 1973. _____

_____ 80. The school curriculum will include instruction in skills for coping with a complex society. _____

_____ 81. A basic core of general education will be provided for all students. _____

_____ 82. The learner will be allowed more freedom in selecting his own educational program and modes of learning. _____

_____ 83. Ability to read will be less important as a tool for gaining information. _____

_____ 84. The basic studies will include instruction in acquiring, manipulating, and organizing facts and information. _____

_____ 85. Education in languages, world trade, and world history will be more in demand by students. _____

_____ 86. Learning opportunities for students will be provided throughout the community by business and social agencies, with the school serving as broker, to structure and coordinate the students' education. _____

_____ 87. Students will be paid a "training stipend" if they continue in school or in school-supervised work experience beyond the age of compulsory attendance. _____

_____ 88. Free public education will be a basic right of all citizens regardless of age. _____

_____ 89. Students beyond the compulsory school age will be able to withdraw and reenter public school freely until they have exhausted their educational guarantee (currently, in Texas, 13 years). _____

LIKELIHOOD IMPACT

In the United States, in the 1980's...

_____ 90. Instruction and organization in schools will avoid transmission of sex role stereotyping. _____

_____ 91. State governments will have moved to assume a larger share of the costs of providing school facilities. _____

_____ 92. A larger share of federal education funds will go to the states with the least taxable wealth per pupil. _____

ADDITIONAL PROPOSITIONS

You may have special knowledge or interests that suggest other propositions that have a high likelihood of occurrence and should be included. Please add them here and score as above. Use extra pages if you need more space.

_____ 93. _____

SKYLINE WIDE EDUCATIONAL PLAN SURVEY #1: FUTURE SOCIETY

FORM B

LIKELIHOOD OF OCCURRENCE		IMPACT ON EDUCATION
	In the world, in the 1980's...	
_____	1. The arms race will be continuing unabated.	_____
_____	2. World resources, behavior, and opinion will have more influence on life in the U. S.	_____
_____	3. Underdeveloped nations will be more nationalistic.	_____
_____	4. Interests of elite groups throughout the world and of multi-national corporations will often cut across national interests.	_____
_____	5. Disadvantaged people throughout the world will assert rising expectations of liberty and the pursuit of happiness and of a fair share of the material resources of the earth.	_____
_____	6. Underdeveloped countries will control their natural resources.	_____
_____	7. There will be world-wide recognition of the dangers of population growth and pollution of the biosphere.	_____
_____	8. The United Nations will have persisted and its influence will be enlarged.	_____
	In the United States, in the 1980's...	
_____	9. Minority groups will have improved their relative economic and social status.	_____
_____	10. The rate of population growth will be sharply reduced.	_____
_____	11. Average lifespan will have increased.	_____
_____	12. The population will include a smaller percentage of children and a larger percentage of senior citizens.	_____
_____	13. Population will cluster in and around some 20 to 30 large cities.	_____
_____	14. Society will be more homogeneous, with less cultural and geographic diversity and less social stratification.	_____
_____	15. Residential and work places will be located in close proximity to reduce transportation-related problems.	_____

LIKELIHOOD		IMPACT
	In the United States, in the 1980's...	
_____	16. The increased complexity of society will cause an increasing number (and percentage) of people to be unable to master the knowledge and skill required to be fully functioning citizens (i.e., to earn a living, provide good parenting, vote intelligently).	_____
_____	17. It will be national policy to provide meaningful employment to all who wish to work.	_____
_____	18. A guaranteed minimum income will be provided by government to all who need it, without the test of willingness to work.	_____
_____	19. Social status will be less closely associated with ownership of material things.	_____
_____	20. It will be more difficult for individuals to arrange to be alone and unobserved.	_____
_____	21. New national mechanisms will have been created by the federal government for planning and regulation of health, social welfare, and education.	_____
_____	22. Individuals will have less respect for government, law, and other authority.	_____
_____	23. Ever-expanding and often contradictory information and news will cause more citizens to "tune out" the discussion and decisions of leaders.	_____
_____	24. Intellectuals, and information and planning experts will play a much more important role in shaping and leading public policy.	_____
_____	25. The need for depth, continuity, and balance in long-range planning will have led to regulatory mechanisms that are not under political control, so that important sectors of society will be ruled by a meritocracy.	_____
_____	26. Protest politics will be widely practiced and confrontation of opposing groups will often be violent.	_____
_____	27. Political and social pressures to improve the lot of the senior citizen will have increased.	_____
_____	28. Many political decisions will be made on the basis of ad hoc coalitions rather than traditional party alignment.	_____
_____	29. New information will be continuing to increase exponentially.	_____

LIKELIHOOD IMPACT

In the United States, in the 1980's...

_____	30.	Personal vehicles will be small and inexpensive enough for most adults to own one.	_____
_____	31.	Information handling will be more automated.	_____
_____	32.	Through developments in television, a large number of different channels will be received on home sets for purposes such as education, shopping, and community news.	_____
_____	33.	Improved modes of dissemination will reduce the time lag between discovery and application of new technology.	_____
_____	34.	Economic power will be continuing to shift from the private to the public sector.	_____
_____	35.	Small businesses will fail or be absorbed by large corporations at about the same rate as now.	_____
_____	36.	Operation round the clock, seven days a week, will be more common in manufacturing, retail, and service industries.	_____
_____	37.	The gross national product will be slowing its rate of growth and approaching a stable state.	_____
_____	38.	New technologies will have many complex consequences, requiring organized planning by the responsible authority to evaluate and direct their introduction.	_____
_____	39.	In most institutions consensus and participatory management will be a preferred style.	_____
_____	40.	As a result of government policy and public concern, our pollution problems will have diminished.	_____
_____	41.	Shortages of various inputs (e.g., energy, material resources) will appear, often with little advance notice.	_____
_____	42.	Business decision-making will place more emphasis on social and humane considerations.	_____
_____	43.	Arrangements for joint husband/wife appointments will be more common in employment.	_____
_____	44.	A higher proportion of the total labor force will be employed in pollution control and environmental protection activities.	_____
_____	45.	A smaller proportion of the work force will be needed in goods-producing industries, while a larger proportion will be needed in the service industries.	_____

LIKELIHOOD IMPACT

In the United States, in the 1980's...

_____	46.	There will be more jobs for technicians than there are today.	_____
_____	47.	More resources will be needed to meet the health and personal needs of senior citizens.	_____
_____	48.	More job descriptions will require people with human skills, i.e., openness, compassion, warmth, and tolerance.	_____
_____	49.	Economic organizations will be planned to include young persons and will be designed for educational as well as productive efficiency.	_____
_____	50.	Average income of full-time female workers will be below that of male workers, but the differential will be less.	_____
_____	51.	Certification by demonstration of skills rather than by diploma, degree, or completion of prescribed training sequences will be in wide use and generally accepted in education, professional, and business practice.	_____
_____	52.	A shorter work week and more leisure time will be the rule for most workers	_____
_____	53.	Productivity of workers in both service and goods-producing industries will have increased.	_____
_____	54.	Compulsory retirement at a set age will be enforced regardless of health, ability, or desire of the worker.	_____
_____	55.	Esthetic and intuitive elements of thought will be valued along with the rational and theoretic, as valid ways to apprehend reality.	_____
_____	56.	Capacity for self-direction and self-motivation in individuals will be more necessary than at present.	_____
_____	57.	The "good life" will not be so easily defined as it is today.	_____
_____	58.	More people will reject "useful work" as a necessary part of the "good life".	_____
_____	59.	Hedonism will be the basic philosophy of life for more people of all social classes.	_____
_____	60.	Sexual relationships of varied types will be openly acknowledged and more generally tolerated.	_____
_____	61.	Traditional families in the United States will be smaller.	_____
_____	62.	Parents and children will be in better, more open communication with each other.	_____

LIKELIHOOD IMPACT

In the United States, in the 1980's...

____	63.	Child-care centers will be much more numerous than at present.	____
____	64.	Most child-care centers will provide developmental and educational compcnents for children.	____
____	65.	A higher percentage of mothers of young children will work outside the home.	____
____	66.	Many couples will divide bread-winning, household, and child-care duties on grounds other than sex.	____
____	67.	Drugs will be widely used to enhance learning.	____
____	68.	Chemical control of senility will be possible, so that the "middle" years of ability to be active and useful will be extended.	____
____	69.	It will be possible to achieve chemical control of many undesirable negative, primitive, and aggressive behavioral tendencies in man.	____
____	70.	The society will be more pluralistic, with people insisting on individually selected, widely varying lifestyles.	____
____	71.	Self-identity for many people will be defined less in terms of occupation or locale and more in terms of tastes, interests, or skills.	____
____	72.	Most people will have a basic faith in the future and will be less disturbed about a possible "war of annihilation".	____
____	73.	There will be a greater consensus on standards of personal morality (e.g., respect for rights of others, honesty in money matters, and fidelity to trust.)	____
____	74.	The levels of literacy and education in the population will have risen.	____
____	75.	At present a specified number of years of free public education (elementary and secondary) is guaranteed to every individual (in Texas, 13 years); one or more years will be added to this period.	____
____	76.	Turmoil over desegregation will have largely subsided.	____
____	77.	There will be schools of many sorts with widely varying methods and organizational styles. Public schools will offer choices and students will be free to select the program and style of instruction they prefer.	____

LIKELIHOOD IMPACT

In the United States, in the 1980's...

_____	78.	Educational systems will reflect larger interest groupings (counties, regions, etc.) than at present.	_____
_____	79.	There will be a higher level of social consensus on the desired goals of the schools.	_____
_____	80.	Modes of teaching and learning will be more flexible, utilizing computer-assisted, multisensory and yet-to-be-developed forms of instruction.	_____
_____	81.	There will be national standards for curriculum in the basic general studies offered to all students.	_____
_____	82.	More students will learn to see themselves as "OK", as unique and valuable persons with roles now and in the future and with the ability to shape their own futures.	_____
_____	83.	Basic computational skills will be de-emphasized because personal calculators will be in widespread use.	_____
_____	84.	Futuristic studies will be part of the curriculum.	_____
_____	85.	Career education and work experience will be available for all students at some time during their public school experience.	_____
_____	86.	Computer simulation, games, etc., will permit the student to practice career and management activities, in order to help him choose his adult role.	_____
_____	87.	Education will continue throughout life, to meet changing personal and occupational needs, with many institutions providing it in a variety of ways.	_____
_____	88.	Rapid changes in technology will cause many people to retrain frequently and often shift occupations.	_____
_____	89.	All curriculum areas and school facilities will be either integrated or equally available to both sexes, with equal levels of funding.	_____
_____	90.	State support of public schools will have been adjusted to provide for equalized educational opportunities for all pupils within all school districts and to equalize property tax burdens among the respective school districts of the state.	_____

LIKELIHOOD IMPACT

In the United States, in the 1980's...

_____ 91. The federal government will be providing a significantly increased proportion of the total funds for operating the public schools of the nation. _____

_____ 92. Learning theory and teaching methods will have made major advances so that students will be able to learn more in less time. _____

ADDITIONAL PROPOSITIONS

You may have special knowledge or interests that suggest other propositions that have a high likelihood of occurrence and should be included. Please add them here and score as above. Use extra pages if you need more space.

_____ 93. _____

Introduction to Master Data Tables

SWEP Survey #1: Future Society (1980's)

Sample and Subsample	Number of Respondents, n
Form A:	
Total Sample	81
Insiders	34
Local Leaders (subset of insiders)	6
Outsiders	26
Futurists (subset of outsiders)	14
Educators	12
Urban School Executives	4
Suburban School Executives	8
Form B:	
Total Sample	70
Insiders	28
Local Leaders	6
Outsiders	20
Futurists	12
Educators	12
Urban School Executives	6
Suburban School Executives	6

Key for Master Data Tables:

The following symbols are used in the Master Data Tables 7 and 8:

Q# = questionnaire item number

$\bar{X}$ = mean score

SD = standard deviation

Mo = mode. Two numbers, e.g., 4-5, in the Mo column indicate a bimodal situation. An asterisk (*) in the Mo column indicates more than two modes.

Table 3

Future Society Master Data Table, Form A
Total Population

	Likelihood			Impact		
Q#	$\bar{X}$	SD	Mo	$\bar{X}$	SD	Mo
1.	3.2	1.3	4	3.9	1.0	4
2.	3.2	1.3	4	3.0	1.2	3-4
3.	3.4	1.3	4	2.2	1.2	1
4.	4.3	0.8	4-5	3.4	1.2	4
5.	3.8	0.9	4	3.5	1.1	4
6.	4.1	1.3	5	2.5	1.5	1
7.	4.1	0.8	4	3.6	1.2	4
8.	3.1	0.9	3-4	3.3	1.0	4
9.	4.2	1.1	5	3.7	1.0	4
10.	3.3	1.3	4	3.3	1.2	3
11.	3.8	1.1	4	3.4	1.2	4
12.	3.6	1.2	4	3.6	1.1	4
13.	4.0	0.8	4	3.6	0.9	4
14.	2.7	1.1	2	3.1	1.0	3
15.	3.2	1.2	4	3.7	1.1	4
16.	3.3	1.2	4	3.9	1.0	5
17.	3.6	0.9	4	3.3	1.0	4
18.	2.9	1.1	4	3.0	1.1	3
19.	4.0	0.8	4	3.4	1.1	4
20.	3.2	1.1	4	2.4	1.1	1-2
21.	3.9	1.0	4	3.5	1.1	4
22.	3.6	1.0	4	3.0	1.1	3
23.	3.4	1.0	3	3.0	1.2	3
24.	2.9	1.0	3	2.6	1.1	3
25.	3.2	0.9	3	2.8	1.0	3
26.	3.9	1.0	4	3.5	1.2	4
27.	2.8	1.1	3	2.6	1.1	3
28.	3.2	1.1	4	3.1	1.3	4
29.	2.5	1.2	2	3.0	1.1	3
30.	4.2	0.8	4	3.8	0.9	4
31.	4.2	0.6	4	3.3	1.1	4
32.	3.9	1.0	4	3.5	1.1	4
33.	3.1	0.7	3	3.0	0.9	3
34.	3.4	1.0	4	3.2	1.1	4
35.	3.5	1.2	4	3.2	1.1	3
36.	3.2	1.1	4	2.7	1.1	3
37.	2.9	1.3	2	3.3	1.3	4
38.	3.5	1.1	4	3.1	0.9	3
39.	3.9	1.0	4	3.4	1.1	3
40.	3.5	0.9	4	2.7	1.1	3
41.	3.9	0.9	4	3.2	1.1	3
42.	4.4	0.7	5	3.0	1.2	3-4
43.	3.9	1.0	4	3.0	1.2	3
44.	3.3	1.1	3-4	3.3	1.1	4
45.	3.6	1.2	4	3.7	1.1	4
46.	4.2	0.6	4	4.2	0.9	4-5
47.	3.1	1.1	4	2.8	1.1	2
48.	3.7	0.9	4	3.8	1.0	4
49.	2.8	1.0	3	3.1	1.1	4
50.	3.3	1.3	4	3.3	1.2	4
51.	4.0	1.0	4	3.6	1.1	4
52.	4.1	0.9	4	3.5	1.2	4
53.	4.0	1.0	4	3.3	1.2	3-4
54.	2.9	1.2	3	2.3	1.1	1
55.	3.4	1.0	4	3.2	1.2	4

Table 3 (continued)

	Likelihood			Impact		
Q#	$\bar{X}$	SD	Mo	$\bar{X}$	SD	Mo
56.	3.4	1.0	4	3.2	1.1	3
57	3.1	1.2	3	3.0	1.1	3
58.	2.9	1.1	2	2.9	1.2	3
59.	3.5	1.1	4	2.8	1.2	3
60.	3.4	1.2	4	2.6	1.1	2
61.	[illegible]	1.2	2	3.3	1.2	3
62.	2.9	1.2	4	3.0	1.3	4
63.	3.1	1.1	4	3.4	1.1	4
64.	4.3	0.8	4-5	3.8	1.1	4
65.	3.5	1.1	4	3.5	1.0	3
66.	3.[illegible]	1.1	4	2.7	1.0	2
67.	2.8	1.3	4	2.2	1.2	1
68.	2.2	1.0	2	2.5	1.3	1
69.	3.6	0.9	4	3.5	0.9	4
70.	3.2	1.1	2	3.1	1.2	2
	3.0	0.9	3	3.1	1.0	4
72	3.8	0.9	4	3.4	1.0	4
73.	3.3	1.0	3	2.9	1.0	3
74.	3.0	1.1	3	2.8	1.2	3
75.	2.8	1.1	2	3.1	1.2	4
76.	4.0	1.0	4	4.2	1.0	5
77.	2.8	1.2	4	3.2	1.4	4
78.	3.7	1.1	4	2.9	1.4	4
79.	4.3	0.8	5	3.6	1.3	5
80.	4.1	0.8	5	4.0	0.9	4
81.	4.1	0.9	4	3.4	1.2	4
82.	4.0	0.8	4	3.9	1.0	5
83	2.2	1.2	1	3.3	1.2	4
84	3.9	0.9	4	3.7	1.0	4
85	3.5	0.9	4	3.4	1.1	4
86.	3.5	1.1	4	3.8	1.1	[illegible]
87.	2.8	1.1	3	3.1	1.2	4
88	3.7	1.1	4-5	3.7	1.2	4
89	3.3	1.0	4	3.5	1.1	3
90.	3.4	0.9	4	3.5	1.1	4
	3.8	1	4	3.5	1.1	4
9[illegible]	3.2	0.9	4	3.7	1.1	4

Future Society Master Data Table, Form B
Total Population

	Likelihood			Impact		
Q#	$\bar{X}$	SD	Mo	$\bar{X}$	SD	Mo
1.	3.3	1.1	4	2.8	1.1	3
2.	4.2	0.9	5	4.0	1.0	4
3.	3.7	1.0	4	2.7	1.2	2
4.	3.9	1.1	4	2.9	1.1	2
5.	4.2	0.9	5	3.4	1.0	3
6.	3.5	1.1	4	2.9	1.2	3
7.	3.7	1.0	4	3.5	1.3	5
8.	2.8	0.8	3	2.2	1.0	2
9.	3.9	0.9	4	4.0	0.8	4
10.	3.8	1.1	4	4.0	1.1	4-5
11.	4.1	1.0	5	3.3	1.2	*
12.	4.1	0.9	4	3.8	1.1	4
13.	3.5	1.1	4	3.7	1.1	4
14.	2.8	1.0	2	3.1	1.1	3
15.	3.2	1.0	3	2.9	1.2	3
16.	2.8	0.9	3	3.5	1.0	4
17.	3.?	1.0	4	3.2	1.1	4
18.	2.8	1.2	2	2.8	1.1	3
19.	2.7	1.2	3	2.5	1.1	3
20.	3.6	1.1	4	2.8	1.3	2
21.	4.1	0.9	4	3.9	1.0	4
22.	2.8	0.9	3	3.4	1.1	4
23.	2.8	1.1	3	3.3	1.2	3-4
24.	3.3	0.9	4	3.5	0.9	3-4
25.	2.6	1.1	3	2.9	1.2	3
26.	2.6	1.0	2	2.8	1.3	4
27.	4.1	0.8	4	3.1	1.2	3
28.	3.5	1.0	4	2.8	1.2	3
29.	4.0	0.8	4	4.2	0.9	5
30.	3.8	1.2	5	2.3	1.1	1
31.	4.5	0.7	5	3.9	1.0	5
32.	4.3	0.8	4	4.1	0.9	4
33.	3.7	1.0	4	3.6	1.0	3
34.	3.5	1.0	3	3.2	1.1	3
35.	3.3	1.0	4	2.4	1.0	2
36.	2.5	1.3	1	2.4	1.3	1
37.	3.1	1.0	3	2.8	1.2	2-3
38.	3.9	0.8	4	3.7	1.0	4
39.	3.2	1.0	3	3.2	1.2	3
40.	3.0	1.2	4	3.0	1.2	3
41.	3.8	1.1	4	3.4	1.2	4
42.	3.3	1.0	4	3.1	1.0	4
43.	3.0	1.1	3	2.5	1.2	1
44.	3.7	1.1	4	3.1	1.1	3
45.	4.2	1.1	5	3.9	1.1	5
46.	4.1	1.0	5	4.1	0.9	4
47.	4.3	0.7	4	3.1	1.0	3
48.	3.6	0.8	4	3.6	1.0	4
49.	3.2	1.0	4	3.4	1.1	3
50.	3.9	0.9	4	3.0	1.1	3
51.	4.3	1.1	4	3.9	1.1	5
52.	4.1	0.9	4	3.7	1.0	3-4
53.	3.6	1.0	4	3.0	1.1	3
54.	2.9	1.2	2	2.7	1.4	1
55.	2.9	0.9	3	3.2	0.9	3

Table 4 (continued)

	Likelihood			Impact		
Q#	$\bar{X}$	SD	Mo	$\bar{X}$	SD	Mo
56.	3.4	1.1	4	3.6	1.2	3
57.	3.0	1.2	3	2.8	1.2	3
58.	2.5	1.1	2	2.9	1.2	3
59.	2.7	1.1	3	2.8	1.3	2
60.	3.8	0.9	4	3.3	1.0	3
61.	4.3	0.8	4	3.8	1.1	4
62.	3.2	1.0	3	3.1	1.1	3
63.	4.3	0.8	4	3.9	1.0	4
64.	4.1	0.7	4	4.1	0.8	4
65.	4.2	0.7	4	3.9	1.0	4
66.	3.7	0.9	4	3.1	1.0	3
67.	2.1	1.1	1	2.7	1.5	1
68.	2.7	1.2	3	2.6	1.3	1-2
69.	2.9	1.3	4	2.7	1.3	2
70.	3.5	1.0	4	3.4	1.0	3
71.	3.2	1.0	3	3.2	1.0	3
72.	2.8	1.0	3	2.8	1.0	3
73.	2.8	1.0	2	3.1	1.0	3
74.	4.0	0.8	4	4.0	0.9	4
75.	3.6	1.1	4	3.9	1.0	4
76.	3.3	1.3	4	3.6	1.1	3
77.	3.7	1.0	4	4.3	0.9	5
78.	3.5	1.1	4	3.8	1.0	4
79.	3.1	1.1	3	3.6	0.9	4
80.	4.1	0.8	4	4.3	0.9	5
81.	2.9	1.1	4	3.4	1.3	4
82.	3.4	1.0	4	3.6	1.0	4
83.	3.0	1.1	3	3.2	1.0	3
84.	3.2	1.0	3	3.3	1.1	3
85.	4.0	0.9	4	4.1	0.9	5
86.	3.8	1.1	4	3.8	1.0	4
87.	4.2	0.9	5	4.2	0.8	5
88.	3.8	1.0	4	4.2	0.8	5
89.	3.9	0.8	4	3.5	1.1	3
90.	3.7	0.9	4	3.9	1.0	5
91.	3.3	0.9	0	3.3	0.9	0
92.	3.3	0.9	0	3.4	0.9	0

APPENDIX B

ID #_____

EDUCATIONAL GOALS
FOR A PROPOSED SECONDARY SCHOOL OF THE FUTURE

Skyline Wide Educational Plan: Delphi Questionnaire Number One

This is the first of two questionnaires you will be receiving at approximately one-month intervals. It presents some educational goal statements that have been adopted by many school districts throughout the country. We are not suggesting that these are appropriate for the school we are planning; we invite you to aid in making those decisions. To that end, we are seeking the following information from you:

1. Identify your priorities. Which of these programs, skills, competencies, and/or behaviors do you consider most important for the secondary school we are planning?

2. Identify core, or basic skills. Which of these skills, competencies, and/or behaviors should all students possess upon completion of their education in this school?

3. Identify other goals needed. Please add your own goal statements where you think a need exists. Space is provided at the end of each section of the questionnaire.

Please score the questionnaire as follows:

Priority scale (left column): 1 = no priority, the school should not be engaged in this; 2 = low priority; 3 = medium priority; 4 = high priority, 5 = highest priority, a must for our school.

Core scale (right column): Y = Yes, all students should have this skill upon completion of their education in this school. N = No, this is not appropriate for all students.

NOTE! Goals may be rated as 5, (highest priority) and N, (not appropriate for all); or 3, (medium priority) and Y, (appropriate for all); or any other combination of the two scales. They are intended to be independent of each other, although it is unlikely that a goal receiving a score of 1 (no priority) would receive a Y (yes, appropriate for all).

Respondent information (Please complete the section below):

Your ethnic group:

American Indian.._____
Anglo....._____
Black....._____
Mexican American._____
Oriental....._____
Other_____
(specify)

Sex: Male _____
Female_____

Residence:
Dallas School Dist....._____
Fort Worth School Dist._____
Other_____
(specify)

Occupational and/or group affiliation:

Teacher....._____
School administrator..._____
Student....._____
PTA member....._____
Board of Education....._____
Religious leader....._____
Business & industry...._____
Government service....._____
Other_____
(specify)

In the 1980's will you have children of secondary school age (13-19 yrs.)?
Yes_____
No _____
Don't know_____

My age is: 19 or below___, 20-29___, 30-39___, 40-49___, 50 or up ___.

PLEASE! PLEASE! PLEASE! Return this questionnaire as soon as possible (within one week) so that we can process the results and send you a report. Your ratings for each goal and those of the group will be sent to you with questionnaire #2 in about a month.

SWEP DELPHI QUESTIONNAIRE NUMBER 1 (for the 1980's)
SECONDARY SCHOOL EDUCATIONAL GOALS FOR THE FUTURE (1980's)

IMPORTANT! Each goal statement requires two (2) responses. The left column should contain a number (1-5), and the right column a letter (Y or N). All blanks should be marked.

Goal #	Goal Statement	PRIORITY ratings: 1=none 2=low 3=med. 4=high 5=highest (a must) 1 2 3 4 5	CORE required of all students? Y=yes N=no Y N

AREA I: BASIC SKILLS

Fundamental academic disciplines; includes the primary communicative processes (reading, writing, listening, speaking), basic science, history, and mathematics, and skills in acquiring, organizing, and using information, and in logical and creative thinking.

READING: Students should have developed their reading skills to read with understanding:

1. Minimum transactions required for daily living, such as reading a telephone directory and road signs.....
2. Printed material on the level of a daily newspaper.....
3. Printed material on the level of a technical journal in their area of interest.....
4. Printed material on the level of logic and philosophy.....

(17) (18)

WRITING: Students should have developed their writing skills to a level necessary for:

5. Minimum daily living transactions, such as completing job applications.....
6. Casual communication with friends and associates.....
7. Reporting information with accuracy and clarity to diverse audiences.....
8. Expressing creative and abstract ideas to professional audiences.....

(25) (26)

SPEAKING: Students should have developed their speaking skills to a level necessary for:

9. Minimum daily living transactions, such as carrying on social conversations, and giving simple directions.....
10. Communicating relatively simple ideas and/or thoughts.....
11. Communicating learned ideas and concepts.....
12. Creative expression and communication of abstract ideas and/or thoughts.....

(33) (34)

LISTENING: Students should have developed their listening skills to a level necessary for:

13. Minimum daily living transactions, such as understanding simple directions, and carrying on social conversation.....
14. Understanding facts and simple ideas presented orally, such as being able to follow a radio news broadcast.....
15. Understanding abstract ideas and concepts presented orally.....

(39) (40)

	SCALE PRIORITY 1=none 2=low 3=med. 4=high 5=highest (a must) 1 2 3 4 5	CORE Y= yes N=no, not appropriate for all Y N
MATHEMATICS: Students should have developed their mathematics skills to a level necessary for applying basic concepts needed for:		
16. Minimum business transactions in daily living, such as making change, totaling a bill, and computing sales tax.....		
17. Computing salary and salary deductions, and developing a household budget.....		
18. Handling such middle management tasks as: purchasing, taking inventory, and preparing a payroll.....		
19. Entering engineering study.....		
20. Entering second-year college mathematics study.....		
		(49) (50)
OTHER BASIC SKILLS: Students should:		
21. Have developed an understanding of the necessity for continuous lifelong education.....		
22. Possess reading and writing skills in at least one foreign language.....		
23. Be able to converse in at least one foreign language.....		
24. Possess the ability to discriminate between facts, ideas and opinions, and propaganda in the major communications media and in advertising.....		
25. Understand the basic principles of physical science such as are taught in physics and chemistry.....		
26. Understand the basic principles of life science such as are taught in biology and zoology.....		
27. Understand the fundamental principles of social science such as are taught in psychology and sociology.....		
28. Understand the history of Texas, the Southwest, and the United States.....		
29. Understand the history of the world.....		
30. Be able to apply the basic principles of the scientific method.		
31. Possess skills necessary for logical, critical, and creative thought.....		
32. Possess the ability to locate and retrieve information from data repositories, such as libraries.....		
33. Have learned the skills required for accessing information from a computer.....		
34. Have learned to assemble data in a form acceptable for computer usage.....		
35. Be able to write a computer program using a widely acceptable language such as BASIC or FORTRAN.....		
		(79) (80)

	SCALE: PRIORITY (1=none, 2=low, 3=med., 4=high, 5=highest (a must)) 1 2 3 4 5	SCALE: CORE (Y=yes, N=no, not appropriate for all) Y N
36. Learn to use an electronic calculator before they complete schooling.....		
37. Have a knowledge of the fundamental concepts of economics, such as supply and demand, inflation, depression, recession, profit, and gross national product.....		
		(13) (14)

ADD YOUR GOALS RELATED TO BASIC SKILLS HERE:

AREA II: CITIZENSHIP

Facts, skills, and values needed by a good citizen; includes an understanding of the rights and responsibilities of being a citizen of the United States and of the world.

Students should:

38. Possess a commitment to the continuous improvement of life in the United States.....		
39. Understand the rights, privileges, and responsibilities of United States citizenship.....		
40. Have learned the basic organizational structure of our local, state, and federal government.....		
41. Have respect for the Law and feel responsible for obeying and maintaining it.....		
42. Understand the history of the American culture and its development from older cultures.....		
43. Understand and appreciate people of a different culture, race, sex, age and life style.....		
44. Have acquired the skills and motivation needed to participate in solving the social, economic, and political problems of our society.....		
45. Understand the major world political and economic systems.....		
46. Understand the interrelationships that exist between human activities and the natural environment.....		
47. Have acquired the habit of protecting the natural environment and enhancing the quality of the manmade environment.....		
48. Have developed an understanding of the world governments and their relationships with each other.....		
49. Understand the influence of multinational corporations upon nations and individuals.....		
50. Have developed positive attitudes toward international government.....		
		(39) (40)

SCALE PRIORITY	CORE
1=none 2=low 3=med. 4=high 5=highest (a must)	Y=yes N=no, not appropriate for all
1 2 3 4 5	Y N

51. Understand the critical need for the conservation of scarce resources such as fossil fuels, lumber, and minerals....

52. Understand and value the free enterprise system.....

ADD YOUR GOALS RELATED TO CITIZENSHIP HERE:

(43) (44)

AREA III: ETHICS

Moral, ethical, and spiritual values; includes the ways students perceive themselves and others, and the behavior they exhibit with respect to honesty, fair play, integrity, responsibility, attitude toward moral authority, respect for others, and the like.

Students should:

53. Have developed positive moral and ethical values.....

54. Understand the history of world religions and their impact on the development of man.....

55. Understand the importance of positive moral and ethical values in their relationships with others.....

56. Respect the beliefs and values of other people.....

57. Understand the need for a consensus on moral values.....

58. Be committed to extending to every individual the rights and freedoms they wish for themselves.....

ADD YOUR GOALS RELATED TO ETHICS HERE:

(55) (56)

AREA IV: AESTHETICS

Cultural skills and values; includes the creation and/or appreciation of the arts.

Students should:

59. Have learned the culturally accepted amenities which contribute to a rich and pleasurable social life.....

60. Have developed pride in their own culture, and understand its social structure.....

(59) (60)

	SCALE: PRIORITY (1=none, 2=low, 3=mod., 4=high, 5=highest (a must)) 1 2 3 4 5	CORE (Y=yes, N=no, not appropriate for all) Y N
61. Appreciate the literary, visual, and performing arts.....		
62. Have developed their power of creativity and imagination through participation in the arts.....		
63. Value the arts as an important realm of the human experience...		
64. Have gained an awareness of community programs in the arts, and knowledge of how to participate in them if they choose.....		
		(67) (68)

ADD YOUR GOALS RELATED TO AESTHETICS HERE:

AREA V: CAREERS

Skills and behaviors needed to meet the demands of the labor market; includes ability to make career choices, to decide on suitable training, and to locate, obtain, and hold a job.

Students should:

65. Have acquired knowledge pertaining to projected needs and occupational and educational alternatives; job entry requirements, performance expectations, salary, and so on.....	
66. Be able to assess their own personal abilities realistically in order to make viable career decisions.....	
67. Have had the opportunity to develop a salable job entry skill..	
68. Have acquired the skills needed to locate and obtain employment	
69. Have developed a positive attitude toward work.....	
70. Be able to demonstrate effective work habits.....	
71. Be able to adjust to changes and varied conditions on the job..	
72. Recognize that education is a highly important factor in career development.....	
73. Have had experience in working at a job.....	
74. Understand the history of the labor union movement and the contributions and problems of labor unions.....	
	(17) (18)

ADD YOUR GOALS RELATED TO CAREERS HERE:

	SCALE	
	PRIORITY 1=none 2=low 3=med. 4=high 5=highest (a must)	CORE Y=yes N=no, not appropriate for all
	1 2 3 4 5	Y N

AREA VI: HEALTH AND RECREATION

Knowledge and behavior needed to maintain physical and mental well-being; includes nutrition, personal hygiene, exercise, recreation and hobbies, emotional balance, and the like.

Students should:

75. Have developed a positive self-image.....
76. Have developed their knowledge, skills, and values concerning physical and mental health.....
77. Have learned ways the individual, community, and nation can protect and promote personal and general healthful conditions..
78. Be able and willing to share feelings with other people.....
79. Understand the importance of a proper balance between mental and physical processes (sound mind and body).....
80. Have developed basic first-aid skills.....
81. Have participated in a variety of team sports.....
82. Understand the human reproductive system.....
83. Have developed positive values related to leisure time and recreation.....
84. Understand the need for and value of lifelong recreational interests and physical exercise.....
85. Have developed the basic skills in at least one carry-over sport (one that can be enjoyed for a lifetime).....
86. Have developed a capacity to cope with life's emotional situations.....
87. Have developed a capacity to deal with surprise and uncertainty
88. Have learned the proper use of drugs.....
89. Have learned the skills needed to work in small group situations to solve problems.....
90. Understand the methods by which human reproduction can be controlled.....

(49) (50)

ADD YOUR GOALS RELATED TO HEALTH AND RECREATION HERE·

SCALE	
PRIORITY 1=none 2=low 3=med. 4=high 5=highest (a must) 1 2 3 4 5	CORE Y=yes N=no, not appropriate for all Y N

AREA VII: LIFE MANAGEMENT

Skills and behavior needed to maintain a satisfying style of living; includes interpersonal and practical coping skills (how to purchase wisely, invest, budget, file for benefits, and the like).

Students should:

91. Have learned to manage money, property, and resources effectively.....

92. Have learned the responsibilities required for a marriage to succeed.....

93. Be able to adjust to the rapid changes that may occur in their lifetime.....

94. Assume responsibility for their own development, obligations, and actions.....

95. Have learned the responsibilities involved in parenthood.....

96. Understand and be able to apply the basic principles of safe driving.....

97. Understand our system of taxation (local, state, federal), and what avenues of remedy are available to citizens.....

98. Be able to understand and negotiate our social systems (medicare, unemployment insurance, social security, pensions, and others).....

99. Have developed a capacity to be an efficient participant in the economic system both as a producer and as a consumer.....

100. Have the skills to operate tools, machinery and equipment needed for daily living.....

101. Have acquired basic maintenance and repair skills needed for daily living.....

102. Understand and apply the skills and attitudes needed for fruitful interpersonal relationships in both work and social situations.....

103. Be able to manage their time in an efficient and effective manner.....

104. Have acquired the skills needed for good child care.....

105. Be able to cook, clean, do laundry, etc. in order to care for their daily living needs.....

(79) (80)

ADD YOUR GOALS RELATED TO LIFE MANAGEMENT HERE

ADD ANY OTHER GOALS HERE

The following statements are concerned with many of the process questions with which today's schools must deal in their normal operations. Please indicate your preference regarding these important issues for our proposed school of the future. You are encouraged to write in additional comments in the space provided below.

PRIORITY
1=None
2=Low
3=Med.
4=High
5=Highest (a must)

EDUCATIONAL PROCESSES To achieve desired results, our proposed secondary school of the 1980's should:

1. Provide opportunity for students to enter and leave programs several times during the school year.....
2. Provide for student self-direction and decision-making in the selection of learning experiences.....
3. Describe student achievement in terms of measurable competencies rather than traditional grades.....
4. Operate programs year round.....
5. Involve students in the decision-making processes related to school policies.....
6. Use a variety of teaching modes (methods).....
7. Permit students to come and go during the school day.....
8. Develop student-owned, profit-motivated enterprises that will provide actual services and products.....
9. Eliminate required attendance when students are able to demonstrate competence in a basic core of general education.....
10. Require all students to participate in selected career awareness programs before completing their schooling.....
11. Require all students to have the needed skills to make them productive, taxpaying citizens before completing their schooling...
12. Should provide more resources for conducting research so that decision makers can improve their educational programs.....
13. Have programs geared to benefit the potential drop-out students....
14. Emphasize the traditional value system (Judeo-Christian).....
15. Emphasize the traditional work ethic.....
16. Provide special programs for the gifted students.....
17. Provide special programs for the handicapped students (physical, emotional, and mental).....

(27)

	PRIORITY 1=None 2=Low 3=Med. 4=High 5=Highest (a must)
18. Provide on-campus child care facilities to give students skill and experience in child care.....	
19. Permit enrollment of adults in any program suited to their needs and interest.....	
20. Provide academic and career counseling free of sex role stereotypes..	
21. Provide staff and instructional practices that act affirmatively to overcome sex and racial handicaps.....	
22. Report student progress in terms of achievement on specific objectives.....	
23. Use differentiated staffing with increased use of paraprofessional personnel.....	
24. Use television extensively in areas of instruction and staff development.....	
25. Require students to view certain television programs at home as an integral part of the instructional program.....	
26. Offer instructional programs which can be completed at home using television, computer terminals, and/or yet-to-be-developed communications media.....	
27. Provide easy access to a large data base (larger than our traditional libraries) to assist students in developing their problem solving skills.....	
28. Change the process of instruction from disseminating knowledge to directing learning activities.....	
29. Place more emphasis on staff development for purposes of maintaining high staff proficiency in the use of all available resources.....	
	(39)

ADD YOUR PROCESS GOALS HERE:

Thank you for your contribution! You will have the results within about four weeks. At that time you will be able to compare your opinions with those of the other participants.

ID#_____

EDUCATIONAL GOALS
FOR A PROPOSED SECONDARY SCHOOL OF THE FUTURE

Skyline Wide Educational Plan: Delphi Questionnaire Number Two

This is the second of two questionnaires that you will receive regarding project "Skyline Wide Educational Plan" (SWEP). This questionnaire includes the original goal statements you have previously rated, plus some additional write-in goals submitted on the first questionnaire. In many cases it was necessary to edit the write-in goals to fit our questionnaire format, however, care was taken to preserve the original content.

Instructions:

1. Examine your computer printout, especially the key at the bottom of the page, as it contains the information you need to complete Delphi 2, i.e., your scores (Y) and the total group scores (G) for each goal on Delphi #1.

2. In light of your scores on Delphi #1 and those of the total group, please re-score each of the original goal statements. To do this, you should read the goal statement, check the printout for previous scores on that goal and consider whether you wish to revise your opinion, and finally write in your new score.

3. Minority Report. We are particularly interested in opinions that are not in agreement with those of the majority of the group, consequently, if after re-scoring the questionnaire, your response differs on the "priority" scale by more than one unit (e.g., Y = 3 and G = 5, or Y = 4 and G = 2), please explain briefly why you differ from the group. Space is provided on pages 13 and 14 for your comments. (At least one comment for each.)

4. Of course, the write-in goals submitted by the panel in Delphi #1 are not represented on the computer printout since this is their first rating by the total group.

5. Please use the following scale to rate the goals
   Priority scale (left column) 1 = no priority, the school should not be engaged in this, 2 = low priority, 3 = medium priority, 4 = high priority, 5 = highest priority, a must for our school.

   Core scale (right column) Y = Yes, all students should have this skill upon completion of their education in this school, N = No, this is not appropriate for all students.

   NOTE! Goals may be rated as 5, (highest priority) and N, (not appropriate for all), or 3, (medium priority) and Y, (appropriate for all), or any other combination of the two scales. They are intended to be independent of each other, although it is believed that a goal receiving a score of 1 (no priority) would receive a Y (yes, appropriate for all).

Respondent information: Please check (✓) the appropriate spaces below.

Your ethnic group
- American Indian..._____
- Anglo..... ..._____
- Black..... ..._____
- Mexican American..._____
- Oriental....._____
- Other_____ (specify)

Sex: Male _____ Female_____

Residence:
- Dallas School Dist....._____
- Fort Worth School Dist._____
- Other_____ (specify)

Occupational and/or group affiliation
- Teacher... ..._____
- School administrator..._____
- Student.... ..._____
- PTA member. ..._____
- Board of Education....._____
- Religious leader.. ...._____
- Business & industry...._____
- Government service....._____
- Other_____ (specify)

In the 1980's will you have children of secondary school age (13-19 yrs.)?
- Yes_____
- No _____
- Don't know _____

My age is 19 or below_____, 20-29_____, 30-39___40-49___, 50 or ov_ ___

SWEP DELPHI QUESTIONNAIRE NUMBER 2 (for the 1980's)

SECONDARY SCHOOL EDUCATIONAL GOALS FOR THE FUTURE (1980's)

IMPORTANT! Each goal statement requires two (2) responses. The left column should contain a number (1-5), and the right column a letter (Y or N). All blanks should be marked.

Goal #	Goal Statement	PRIORITY ratings: 1=none 2=low 3=med. 4=high 5=highest (a must) 1 2 3 4 5	CORE required of all students? Y=yes N=no Y N
	AREA I: BASIC SKILLS		
	Fundamental academic disciplines; includes the primary communicative processes (reading, writing, listening, speaking), basic science, history, and mathematics, and skills in acquiring, organizing, and using information, and in logical and creative thinking.		
	READING: Students should have developed their reading skills to read with understanding:		
1.	Minimum transactions required for daily living, such as reading a telephone directory and road signs.....		(17) (18)
2.	Printed material on the level of a daily newspaper.....		
3.	Printed material on the level of a technical journal in their area of interest.....		
4.	Printed material on the level of logic and philosophy.....		
	WRITING: Students should have developed their writing skills to a level necessary for		
5.	Minimum daily living transactions, such as completing job applications.....		(25) (26)
6.	Casual communication with friends and associates..		
7.	Reporting information with accuracy and clarity to diverse audiences..		
8.	Expressing creative and abstract ideas to professional audiences..		
	SPEAKING: Students should have developed their speaking skills to a level necessary for:		
9.	Minimum daily living transactions, such as carrying on social conversations, and giving simple directions.....		(33) (34)
10.	Communicating relatively simple ideas and/or thoughts.		
11.	Communicating learned ideas and concepts.....		
12.	Creative expression and communication of abstract ideas and/or thoughts..		
	LISTENING: Students should have developed their listening skills to a level necessary for:		
13.	Minimum daily living transactions, such as understanding simple directions, and carrying on social conversation..		(39) (40)
14.	Understanding facts and simple ideas presented orally, such as being able to follow a radio news broadcast..		
15.	Understanding abstract ideas and concepts presented orally.....		

	SCALE PRIORITY 1=none 2=low 3=med. 4=high 5=highest (a must) 1 2 3 4 5	CORE Y= yes N=no, not appropriate for all Y N
MATHEMATICS. Students should have developed their mathematics skills to a level necessary for applying basic concepts needed for:		
16. Minimum business transactions in daily living, such as making change, totaling a bill, and computing sales tax.....		
17. Computing salary and salary deductions, and developing a household budget.....		
18. Handling such middle management tasks as: purchasing, taking inventory, and preparing a payroll.....		
19. Entering engineering study.....		
20. Entering second-year college mathematics study.....		(49) (50)
OTHER BASIC SKILLS. Students should:		
21. Have developed an understanding of the necessity for continuous lifelong education.....		
22. Possess reading and writing skills in at least one foreign language.....		
23. Be able to converse in at least one foreign language.....		
24. Possess the ability to discriminate between facts, ideas and opinions, and propaganda in the major communications media and in advertising.....		
25. Understand the basic principles of physical science such as are taught in physics and chemistry.....		
26. Understand the basic principles of life science such as are taught in biology and zoology.....		
27. Understand the fundamental principles of social science such as are taught in psychology and sociology.....		
28. Understand the history of Texas, the Southwest, and the United States.....		
29. Understand the history of the world.....		
30. Be able to apply the basic principles of the scientific method.		
31. Possess skills necessary for logical, critical, and creative thought.....		
32 Possess the ability to locate and retrieve information from data repositories, such as libraries.....		
33. Have learned the skills required for accessing information from a computer.....		
34. Have learned to assemble data in a form acceptable for computer usage.....		
35. Be able to write a computer program using a widely acceptable language such as BASIC or FORTRAN.....		(79) (80)

	SCALE	
	PRIORITY	COPE
	1=none 2=low 3=med. 4=high 5=highest (a must) 1 2 3 4 5	Y=yes N=no, not appropriate for all Y N
36. Learn to use an electronic calculator before they complete schooling.....		
37. Have a knowledge of the fundamental concepts of economics, such as supply and demand, inflation, depression, recession, profit, and gross national product.....		
		(13) (14)

AREA II CITIZENSHIP

Facts, skills, and values needed by a good citizen, includes an understanding of the rights and responsibilities of being a citizen of the United States and of the world.

Students should

38. Possess a commitment to the continuous improvement of life in the United States.....	
39. Understand the rights, privileges, and responsibilities of United States citizenship..	
40. Have learned the basic organizational structure of our local, state, and federal government....	
41. Have respect for the Law and feel responsible for obeying and maintaining it..	
42. Understand the history of the American culture and its development from other cultures..	
43. Understand and appreciate people of a different culture, race, sex, age and life style..	
44. Have acquired the skills and motivation needed to participate in solving the social, economic, and political problems of our society.....	
45. Understand the major world political and economic system	
46. Understand the interrelationships that exist between human activities and the natural environment	
47. Have acquired the habit of protecting the natural environment and enhancing the quality of the man-made environment....	
48. Have developed an understanding of the world governments and their relationships with each other...	
49. Understand the influence of multinational corporations upon nations and individuals..	
50. Have developed positive attitudes toward international government	
	(49) (50)

	SCALE PRIORITY 1=none 2=low 3=med. 4=high 5=highest (a must) 1 2 3 4 5	CORE Y=yes N=no, not appropriate for all. Y N
51. Understand the critical need for the conservation of scarce resources such as fossil fuels, lumber, and minerals....		
52. Understand and value the free enterprise system.....		
		(43) (44)

AREA III: ETHICS

Moral, ethical, and spiritual values, includes the ways students perceive themselves and others, and the behavior they exhibit with respect to honesty, fair play, integrity, responsibility, attitude toward moral authority, respect for others, and the like.

Students should

53. Have developed positive moral and ethical values.....		
54. Understand the history of world religions and their impact on the development of man.....		
55. Understand the importance of positive moral and ethical values in their relationships with others..		
56. Respect the beliefs and values of other people....		
57. Understand the need for a consensus on moral values.....		
58. Be committed to extending to every individual the rights and freedoms they wish for themselves.....		
		(55) (56)

AREA IV: AESTHETICS

Cultural skills and values, includes the creation and/or appreciation of the arts.

Students should

59. Have learned the culturally accepted amenities which contribute to a rich and pleasurable social life.....		
60. Have developed pride in their own culture, and understand its social structure.....		
		(59) (60)

	PRIORITY (1=none, 2=low, 3=med., 4=high, 5=highest (a must)) 1 2 3 4 5	CORE (Y=yes, N=no, not appropriate for all) Y	N
61. Appreciate the literary, visual, and performing arts.....			
62. Have developed their power of creativity and imagination through participation in the arts.....			
63. Value the arts as an important realm of the human experience...			
64. Have gained an awareness of community programs in the arts, and knowledge of how to participate in them if they choose.....			
		(67)	(68)

AREA V: CAREERS

Skills and behaviors needed to meet the demands of the labor market; includes ability to make career choices, to decide on suitable training, and to locate, obtain, and hold a job.

Students should:

65. Have acquired knowledge pertaining to projected needs and occupational and educational alternatives; job entry requirements, performance expectations, salary, and so on.....		
66. Be able to assess their own personal abilities realistically in order to make viable career decisions.....		
67. Have had the opportunity to develop a salable job entry skill..		
68. Have acquired the skills needed to locate and obtain employment		
69. Have developed a positive attitude toward work.....		
70. Be able to demonstrate effective work habits.....		
71. Be able to adjust to changes and varied conditions on the job..		
72. Recognize that education is a highly important factor in career development.....		
73. Have had experience in working at a job.....		
74. Understand the history of the labor union movement and the contributions and problems of labor unions.....		
	(17)	(18)

	SCALE	
	PRIORITY	CORE
	1=none 2=low 3=med. 4=high 5=highest (a must)	Y=yes N=no, not appropriate for all
	1 2 3 4 5	Y N

AREA VI: HEALTH AND RECREATION

Knowledge and behavior needed to maintain physical and mental well-being; includes nutrition, personal hygiene, exercise, recreation and hobbies, emotional balance, and the like.

Students should:

75. Have developed a positive self-image.....
76. Have developed their knowledge, skills, and values concerning physical and mental health.....
77. Have learned ways the individual, community, and nation can protect and promote personal and general healthful conditions..
78. Be able and willing to share feelings with other people.....
79. Understand the importance of a proper balance between mental and physical processes (sound mind and body).....
80. Have developed basic first-aid skills.....
81. Have participated in a variety of team sports.. .....
82. Understand the human reproductive system.....
83. Have developed positive values related to leisure time and recreation.....
84. Understand the need for and value of lifelong recreational interests and physical exercise.....
85. Have developed the basic skills in at least one carry-over sport (one that can be enjoyed for a lifetime).....
86. Have developed a capacity to cope with life's emotional situations.. .....
87. Have developed a capacity to deal with surprise and uncertainty
88. Have learned the proper use of drugs..... .....
89. Have learned the skills needed to work in small group situations to solve problems..... .....
90. Understand the methods by which human reproduction can be controlled.....

(49) (50)

SCALE

PRIORITY	COR
1=none 2=low 3=med. 4=high 5=highest (a must)	Y=yes N=no, not appropriate for all
1 2 3 4 5	Y N

AREA VII: LIFE MANAGEMENT

Skills and behavior needed to maintain a satisfying style of living, includes interpersonal and practical coping skills (how to purchase wisely, invest, budget, file for benefits, and the like).

Students should:

91. Have learned to manage money, property, and resources effectively.... ... .
92. Have learned the responsibilities required for a marriage to succeed.....
93. Be able to adjust to the rapid changes that may occur in their lifetime..... .. ..
94. Assume responsibility for their own development, obligations, and actions.. ....
95. Have learned the responsibilities involved in parenthood.....
96. Understand and be able to apply the basic principles of safe driving.. .. ..
97. Understand our system of taxation (local, state, federal), and what avenues of remedy are available to citizens..... . .....
98. Be able to understand and negotiate our social systems (medicare, unemployment insurance, social security, pensions, and others)..... ....
99. Have developed a capacity to be an efficient participant in the economic system both as a producer and as a consumer.. ....
100. Have the skills to operate tools, machinery, and equipment needed for daily living.....
101. Have acquired basic maintenance and repair skills needed for daily living..... .. . .
102. Understand and apply the skills and attitudes needed for fruitful interpersonal relationships in both work and social situations..... ....
103. Be able to manage their time in an efficient and effective manner.. . . ..
104. Have acquired the skills needed for good child care. ... .
105. Be able to cook, clean, do laundry etc., in order to care for their daily living needs..... ....

(79) (80)

The following statements are concerned with many of the process questions with which today's schools must deal in their normal operations. Please indicate your preference regarding these important issues for our proposed school of the future.

PRIORITY
1=None
2=Low
3=Med.
4=High
5=Highest (a must)

EDUCATIONAL PROCESSES: To achieve desired results, our proposed secondary school of the 1980's should:

1. Provide opportunity for students to enter and leave programs several times during the school year.....
2. Provide for student self-direction and decision-making in the selection of learning experiences.....
3. Describe student achievement in terms of measurable competencies rather than traditional grades.....
4. Operate programs year round.....
5. Involve students in the decision-making processes related to school policies.....
6. Use a variety of teaching modes (methods).....
7. Permit students to come and go during the school day.....
8. Develop student-owned, profit-motivated enterprises that will provide actual services and products.....
9. Eliminate required attendance when students are able to demonstrate competence in a basic core of general education .....
10. Require all students to participate in selected career awareness programs before completing their schooling.....
11. Require all students to have the needed skills to make them productive, taxpaying citizens before completing their schooling...
12. Should provide more resources for conducting research so that decision makers can improve their educational programs.....
13. Have programs geared to benefit the potential drop-out students....
14. Emphasize the traditional value system (Judeo-Christian).....
15. Emphasize the traditional work ethic.....
16. Provide special programs for the gifted students.....
17. Provide special programs for the handicapped students (physical, emotional, and mental).....
18. Provide on-campus child care facilities to give students skill and experience in child care.....
19. Permit enrollment of adults in any program suited to their needs and interest..... .....
20. Provide academic and career counseling free of sex role stereotypes.
21. Provide staff and instructional practices that act affirmatively to overcome sex and racial handicaps.....
22. Report student progress in terms of achievement on specific objectives.....

(32)

	PRIORITY 1=None 2=Low 3=Med. 4=High 5=Highest (a must)
23. Use differentiated staffing with increased use of paraprofessional personnel.....	
24. Use television extensively in areas of instruction and staff development.....	
25. Require students to view certain television programs at home as an integral part of the instructional program.....	
26. Offer instructional programs which can be completed at home using television, computer terminals, and/or yet-to-be-developed communications media.....	
27. Provide easy access to a large data base (larger than our traditional libraries) to assist students in developing their problem solving skills.....	
28. Change the process of instruction from disseminating knowledge to directing learning activities.....	
29. Place more emphasis on staff development for purposes of maintaining high staff proficiency in the use of all available resources.....	

(39)

WRITE-IN GOALS

Following are the write-in goal statements submitted by the Delphi panel on questionnaire #1. They have been edited by the project staff to ensure format and language continuity, and to eliminate redundant statements. Care was taken, however, to preserve the intended content of the additional statements. Please score these goals in the same manner.

(for the 1980's)

Goal #	Goal Statement	PRIORITY 1=none 2=low 3=med. 4=high 5=highest (a must) 1 2 3 4 5	CORE required of all students? Y=yes N=no Y N
	STUDENTS SHOULD:		
	AREA I: BASIC SKILLS		
106.	Be able to converse in Spanish.....		
	AREA II: CITIZENSHIP		(11) (12)
107.	Understand how to use one's vote, the party system, and the influence of bloc or coalition voting practices.....		
108.	Understand the customs and courtesies which show respect for our flag and national anthem.....		
109.	Be required to show respect for our flag and national anthem.....		
	AREA IV: AESTHETICS		
110.	Have developed an appreciation for the beauty of nature.....		
111.	Have explored the value of the arts as lifelong, continuing enrichment of leisure time.....		
112.	Have had the opportunity to appreciate the art, music, and dance that relates to one's ethnic background.....		(23) (24)
	AREA V: CAREERS		
113.	Have the opportunity to participate in apprentice-type internship programs in a variety of fields.....		
	AREA VI: HEALTH & RECREATION		
114.	Have learned how to eat a balanced diet, and the harmful effects of improper diets.....		
115.	Know the organizations available in the community for various needs (such as free or inexpensive clinics for psychiatric and birth control assistance).....		
	AREA VII: LIFE MANAGEMENT		
116.	Know how to obtain the services of various professionals such as doctors, dentists, lawyers, bankers, and stock brokers.....		
117.	Be aware of different life styles such as "open marriage", relationships that don't include marriage, communal family groups, and alternate methods of child-rearing.....		(33) (34)

WRITE-IN GOALS con't.

The following write-in statements are concerned with many of the process questions with which today's schools must deal in their normal operations. Please indicate your preference regarding these important issues for our proposed school of the future.

PRIORITY
1=None
2=Low
3=Med.
4=High
5=Highest (a must)

EDUCATIONAL PROCESSES: To achieve desired results, our proposed secondary school of the 1980's should:

30. Separate students at the ninth grade level into two groups--one group to receive technical-vocational training and one group to be prepared for university study.....

31. Assist and encourage students to do volunteer and civic work (hospitals, museums, social agencies and others).....

32. Allow activities which show nationalistic emphasis toward nations other than the United States.....

33. Grant credit for courses in religion completed by students in their church or synagogue.....

34. Increase staff development activities in basic interpersonal skills.....

35. Allow students the option of receiving pass/fail progress reports..

36. Offer mini-courses in many interest areas.....

37. Increase the use of resource people from business, industry, professional, government, and other agencies.....

38. Develop courses for independent study and research.....

39. Develop methods for student evaluation of staff performance.....

40. Develop a system for involving many groups, e.g., school administrators, community leaders, teachers, and students, in administering the local public schools.....

41. Offer multilingual programs in all subject areas at all grade levels.....

42. Develop a system of accountability for all teachers and administrators.....

43. Require all students to take a course in how to study.....

44. Assign the best teachers to schools with lowest achievement and provide them special incentives.....

45. Provide pre-professional training in sports through highly competitive athletic programs.....

(55)

MINORITY REPORT

Instructions: Identify the goals for which your responses and those of the group differ by more than one unit (e.g., Y = 5 and G = 3) and state the major reasons for your opinion.

Write Educational Goal No. Here	State Major Reasons My major reasons for scoring this goal as I have (different from a majority of the group) are:
______	______________________________
______	______________________________
______	______________________________
______	______________________________
______	______________________________
______	______________________________
______	______________________________
______	______________________________
______	______________________________

98

OPEN-END QUESTIONS

Instructions: Please read the questions below, and write in your answers.

1. What is presently included in the curriculum that should be omitted?

2. As you know, some of the ideas presently learned by students require practice to maintain proficiency. Computational skills in arithmetic is such an example. What other skills fit into this category?

3. What efforts, if any, should be made to allow students to maintain proficiency in such skills?

4. What practices currently used by schools should be omitted or changed?

5. How can curriculum developers receive necessary input from teachers, students, administrators and other resource persons to insure that students are getting the best possible educational programs?

OPEN-END QUESTIONS con't.

6. What program areas are receiving too much emphasis and excessive funds?

7. What program areas are receiving too little emphasis and insufficient funds?

8. Should secondary schools include studies of the future in the curriculum?

9. Should each student be led to gain a clear vision of his/her possible role in the developing future?

THANK YOU FOR YOUR TIME AND EFFORT. You will receive the results in approximately six weeks.

Project SWEP Staff

Table 5
SWEP Educational Goals
Highest Priority and Core Distributions

Goal #	Statement	1 Highest Priority rank	1 Highest Priority ($\bar{x}$)	2 Highest Core rank	2 Highest Core (%)	3 Highest Priority--Highest Core†
1.	Minimum transactions required for daily living, such as reading a telephone directory and road signs.	1-3	4.8	1-7	96	X
5.	Minimum daily living transactions, such as completing job applications.....		4.8	1-7	96	X
9.	Minimum daily living transactions, such as carrying on social conversation, and giving simple directions		4.8	1-7	96	X
2.	Printed material on the level of a daily newspaper.....	4-8	4.7	1-7	96	X
10.	Communicating relatively simple ideas and/or thoughts		4.7	1-7	96	X
13.	Minimum daily living transactions, such as understanding simple directions, and carrying on social conversations.....		4.7	8-9	95	X
14.	Understanding facts and simple ideas presented orally, such as being able to follow a radio news broadcast.....		4.7	10-13	94	X
16.	Minimum business transactions in daily living, such as making change, totaling a bill, and computing sales tax		4.7	1-7	96	X
6.	Casual communication with friends and associates.....	9-13	4.6	8-9	95	X
39.	Understand the rights, privileges, and responsibilities of United States citizenship.....		4.6	1-7	96	X

Table 5 (continued)

Goal #	Statement	Highest Priority rank	Highest Priority ($\bar{x}$)	Highest Core rank	Highest Core (%)	Highest Priority--Highest Core
41.	Have respect for the Law and feel responsible for obeying and maintaining it.....		4.6	10-13	94	X
53.	Have developed positive moral and ethical values		4.6	10-13	94	X
56.	Respect the beliefs and values of other people		4.6	10-13	94	X
17.	Computing salary deductions, and developing a household budget...	14-19	4.5	18-21	92	X
38.	Possess a commitment to the continuous improvement of life in the United States.....		4.5	14-17	93	X
69.	Have developed a positive attitude toward work....		4.5	18-21	92	X
70.	Be able to demonstrate effective work habits		4.5	---	--	--*
75.	Have developed a positive self-image.....		4.5	22-27	91	X
88.	Have learned the proper use of drugs.....		4.5	14-17	93	X
40.	Have learned the basic organizational structure of our local, state, and federal government.....	20-31	4.4	14-17	93	X
43.	Understand and appreciate people of a different culture, race, sex, age and life style.....		4.4	22-27	91	X

Table 5 (continued)

Goal #	Statement	Highest Priority rank	Highest Priority (x̄)	Highest Core rank	Highest Core (%)	Highest Priority--Highest Core
55.	Understand the importance of positive moral and ethical values in their relationships with others		4.4	22-27	91	X
65.	Have acquired knowledge pertaining to projected needs and occupational and educational alternatives; job entry requirements, performance expectations, salary, and so on.....		4.4	---	--	--*
66.	Be able to assess their own personal abilities realistically in order to make viable career decisions.....		4.4	22-27	91	X
67.	Have had the opportunity to develop a salable job entry skill.....		4.4	---	--	--*
68.	Have acquired the skills needed to locate and obtain employment.....		4.4	---	--	--*
72.	Recognize that education is a highly important factor in career development.....		4.4	---	--	--*
76.	Have developed their knowledge, skills, and values concerning physical and mental health		4.4	14-17	93	X

Table 9 (continued)

Goal #	Statement	Highest Priority rank	Highest Priority (x̄)	Highest Core rank	Highest Core (%)	Highest Priority--Highest Core
94.	Assume responsibility for their own development, obligations, and actions.....		4.4	18-21	92	X
95.	Have learned the responsibilities involved in parenthood.....		4.4	---	--	--*
96.	Understand and be able to apply the basic principles of safe driving.....		4.4	---	--	--*
79.	Understand the importance of a proper balance between mental and physical processes (sound mind and body).....	---	---	18-21	92	--*
82.	Understand the human reproductive system	---	---	22-27	91	--*
91.	Have learned to manage money, property and resources effectively..	---	---	22-27	91	--*

*Indicates that the corresponding goal was not rated in the same quartile on both dimensions. In all such cases the rankings were in adjoining quartiles.

†X indicates that the goal in question fell in the highest quartiles of both the priority and the core distributions.

Table 6
SWEP Educational Goals
Lowest Priority and Core Distributions

Goal #	Statement	1 Lowest Priority rank	1 Lowest Priority ($\bar{x}$)	2 Lowest Core rank	2 Lowest Core (%)	3 Lowest Priority--Lowest Core†
35.	Be able to write a computer program using a widely acceptable language such as BASIC or FORTRAN.....	1	2.1	3	5	X
19.	Entering engineering study.....	2-3	2.4	1-2	4	X
20.	Entering second-year college mathematics study.....		2.4	1-2	4	X
106.	Be able to converse in Spanish.....	4	2.5	8-10	15	X
23.	Be able to converse in at least one foreign language...	5-6	2.6	7	14	X
34.	Have learned to assemble data in a form acceptable for computer usage.....		2.6	5	10	X
8.	Expressing creative and abstract ideas to professional audiences	7-8	2.7	4	8	X
117.	Be aware of different life styles such as "open marriage", relationships that don't include marriage, communal family groups, and alternate methods of child rearing.....		2.7	23	48	X

Table 6 (continued)

Goal #	Statement	Lowest[1] Priority rank	Priority ($\bar{x}$)	Lowest[2] Core rank	Core (%)	Lowest[3] Priority--Core Lowest
33.	Have learned the skills required for accessing information from a computer.....	9-10	2.8	6	13	X
50.	Have developed positive attitudes toward international government		2.8	---	--	--*
4.	Printed material on the level of logic and philosophy.....	11-13	2.9	8-10	15	X
12.	Creative expression and communication of abstract ideas and/or thoughts.		2.9	11	17	X
22.	Possess reading and writing skills in at least one foreign language.....		2.9	8-10	15	X
36.	Learn to use an electronic calculator before they complete schooling.....	14-17	3.0	14-15	26	X
49.	Understand the influence of multinational corporations upon nations and individuals.....		3.0	14-15	26	X
74.	Understand the history of the labor union movement and the contributions and problems of labor unions.....		3.0	24	54	X

Table 6 (continued)

Goal #	Statement	1 Lowest Priority rank	1 Lowest Priority ($\bar{x}$)	2 Lowest Core rank	2 Lowest Core (%)	3 Lowest Priority-- Lowest Core
81.	Have participated in a variety of team sports.....		3.0	21	39	X
25.	Understand the basic principles of physical science such as are taught in physics and chemistry.....	18-21	3.0	16	27	X
30.	Be able to apply the basic principles of the scientific method		3.0	19	35	X
62.	Have developed their power of creativity and imagination through participation in the arts.....		3.0	20	36	X
64.	Have gained an awareness of community programs in the arts, and knowledge of how to participate in them if they choose.....		3.0	---	--	--*
15.	Understanding abstract ideas and concepts presented orally.....	22-33	3.1	13	24	X
18.	Handling such middle management tasks as: purchasing, taking inventory, and preparing a payroll...		3.1	12	21	X
27.	Understand the fundamental principles of social science such as as are taught in psychology and sociology		3.1	25-26	55	X

Table 6 (continued)

Goal #	Statement	Lowest Priority rank	Lowest Priority ($\bar{x}$)	Lowest Core rank	Lowest Core (%)	Lowest Priority--Lowest Core
29.	Understand the history of the world.....		3.1	---	--	--*
45.	Understand the major world political and economic systems.....		3.1	17-18	34	X
48.	Have developed an understanding of the world governments and their relationships with each other.....		3.1	27	57	X
54.	Understand the history of world religions and their impact on the development of man.....		3.1	---	--	--*
61.	Appreciate the literary, visual, and performing arts.....		3.1	---	--	--*
63.	Value the arts as an important realm of the human experience.....		3.1	---	--	--*
100.	Have the skills to operate tools, machinery, and equipment needed for daily living.....		3.1	---	--	--*
111.	Have explored the value of the arts as lifelong, continuing enrichment of leisure time.....		3.1	---	--	--*
112.	Have had the opportunity to appreciate the art, music and dance that relates to one's ethnic background		3.1	---	--	--*
7.	Reporting information with accuracy and clarity to diverse audiences.....	---	---	17-18	34	--*

Table 6 (continued)

Goal #	Statement	Lowest Priority rank	Lowest Priority ($\bar{x}$)	Lowest Core rank	Lowest Core (%)	Lowest Priority--Lowest Core
3.	Printed material on the level of a technical journal in their area of interest.....	---	---	22	42	--*
113.	Have the opportunity to participate in apprentice-type internship programs in a variety of fields	---	---	25-26	58	--*
26.	Understand the basic principles of life science such as are taught in biology and zoology	---	---	28-29	58	--*
31.	Possess skills necessary for logical, critical, and creative thought..	---	---	28-29	58	--*

*Indicates that the corresponding goal was not rated in the same quartile on both dimensions. In all such cases the rankings were in adjoining quartiles.

†X indicates that the goal in question fell in the highest quartiles of both the priority and the core distributions.

Table 7

SWEP Educational Goals
Highest Priority Process Goals

Goal #	Statement	Priority Rank	Mean Score
17.	Provide special programs for the handicapped students (physical, emotional, and mental).....	1	4.6
16.	Provide special programs for the gifted students	2	4.5
6.	Use a variety of teaching modes (methods).....	3-4	4.4
13.	Have programs geared to benefit the potential drop-out students.....	3-4	4.4
21.	Provide staff and instructional practices that act affirmatively to overcome sex and racial handicaps.....	5-6	4.3
29.	Place more emphasis on staff development for purposes of maintaining high staff proficiency in the use of all available resources.....	5-6	4.3
20.	Provide academic and career counseling free of sex role stereotypes.....	7	4.2
4.	Operate programs year round.....	8-11	4.0
11.	Require all students to have the needed skills to make them productive, taxpaying citizens before completing their schooling.....	8-11	4.0
22.	Report student progress in terms of achievement on specific objectives.....	8-11	4.0
28.	Change the process of instruction from disseminating knowledge to directing learning activities	8-11	4.0

Table 8

SWEP Educational Goals
Lowest Priority Process Goals

Goal #	Statement	Priority Rank	Mean Score
45.	Provide pre-professional training in sports through highly competitive athletic programs	1	2.0
32.	Allow activities which show nationalistic emphasis toward nations other than the United States	2	2.2
30.	Separate students at the ninth grade level into two groups -- one group to receive technical-vocational training and one group to be prepared for university study	3-4	2.4
33.	Grant credit for courses in religion completed by students in their church or synagogue	3-4	2.4
41.	Offer multilingual programs in all subject areas at all grade levels	5	2.5
35.	Allow students the option of receiving pass/fail progress reports	6	2.6
44.	Assign the best teachers to schools with lowest achievement and provide them special incentives.	7	2.7
7.	Permit students to come and go during the school day	8	2.8
25.	Require students to view certain television programs at home as an integral part of the instructional program	9	2.9
1.	Provide opportunity for students to enter and leave programs several times during the school year	10-14	3.1
8.	Develop student-owned, profit-motivated enterprises that will provide actual services and products	10-14	3.1
9.	Eliminate required attendance when students are able to demonstrate competence in a basic core of general education	10-14	3.1

Table 8 (continued)

Goal #	Statement	Priority Rank	Mean Score
39.	Develop methods for student evaluation of staff performance.....	10-14	3.1
40.	Develop a system for involving many groups, e.g., school administrators, community leaders, teachers, and students, in administering the local public schools.....	10-14	3.1

Appendix C

Projected Manpower Needs

The following information was abstracted from a 1973 North Central Texas Council of Governments research report entitled Comprehensive Manpower Plan for the Cities of Dallas-Fort Worth and Surrounding Area, 1974. Of particular relevance to Project SWEP were the following two manpower projections: 1) employment requirements, and 2) occupational needs. The tables and narrative below provide explanations relative to these topics.

Table 9

Employment Requirements for the Dallas-Ft. Worth SMSA (1970-1980 Projections)

Personnel	Number
Expansion	317,320
Replacements	211,042
Total	528,362

The figures in the above table indicate that by the year 1980 the Dallas-Ft. Worth SMSA will have a need for an additional 528,362 employees. This figure is based on expansion and replacement variables.

Table 10

Occupational Needs for the Dallas-Ft. Worth SMSA (1970-1980 Projections)

Order of Need	Occupational Category	Additional Number
1	Clerical (stenos, typists, secretaries, office machine operators)	107,009
2	Professional, technical (engineers, medical and dental technicians, health workers, nurses, teachers, accountants, physicians and surgeons, draftsmen)	89,532
3	Operatives (drivers and deliverymen, semiskilled metal working, semiskilled textile)	79,254

Order of Need	Occupational Category	Additional Number
4	Service (firemen, police, guards, food service workers, private hospital workers, hospital attendants, janitors, practical nurses)	70,712
5	Craftsmen (mechanics, excavators, metal workers, plumbers and pipefitters, electricians, carpenters, painters)	67,645
6	Managers (creditmen, purchasing, proprietors)	51,006
7	Sales Workers	38,000
8	Laborers (except farm and mine)	13,108
9	Farmers and farm workers	871

According to these projections, most of the additional manpower needs for the Dallas-Ft. Worth region will be clerical, technical, professional, operatives, service, medical and health, paraprofessionals, and craftsmen.

It is interesting to note that most of these particular occupations (professionals excepted) do not require a college education.

Implications:

1. By the year 1980 there will be more total jobs in the Dallas-Ft. Worth region than people to occupy them.
2. Most of the additional employment opportunities will require a formal education of high school or less.
3. The Dallas-Ft. Worth region appears to be in a period of transition from a goods-producing economy to a service-producing economy.

The complete report may be obtained from the North Central Texas Council of Governments, Arlington, Texas.