The proposed procedures are focused on an assessment of the needs of consumers of education — specifically, the parents of high school age students. Each parent is interviewed and specific goals are extracted from the interview. Parents are then asked to respond to each goal in the aggregate of goals by agreeing, disagreeing, or remaining neutral. They then place the statements in rank-order. Following this task, all statements are categorized and the categories themselves placed in rank order. The data provided should allow establishment of goal profiles, which may identify specific educational clienteles. Profiles may be established by demographic data or in a post hoc manner where similar individual profiles are combined to characterize a group. These procedures eliminate the necessity of making a priori assumptions concerning the structure of any educational clientele or concerning the needs and goals which will be elicited. (Author)
Parental Viewpoints of Goals in Secondary Education:

The Methodological Procedures

Prepared for the Rocky Mountain Educational Research

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Parental Viewpoints of Goals in Secondary Education: 
The Methodological Procedures

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An area of increasing concern in educational research is
the assessment of the needs of consumers of education. This
is an especially valid area for research in the Southwest,
where various minority and interest groups have specific
beliefs as to what education should provide. It must be
acknowledged, however, that as simple as it is to recognize
that the needs of any given area may be quite diverse, it is
equally difficult to attempt to assess these needs in any
systematic and meaningful manner.

Existing methods, such as polls and questionnaires, usually
provide incomplete and potentially biased information. Public
opinion polls, and most questionnaires, pose specific questions;
if the writer of the questions was ignorant of the nature
and range of the needs of the consumers, all the poll provides
is some ordering of preference (Hill, 1973b). One such tech-
nique (Blood, Thomas, & Brown, 1969), the Discrepancy - Score
Approach, uses a questionnaire concerning discrepancies re-
garding students' needs as perceived by the student, the parent,
and the teacher, and a teacher-parent interview concerning
the effectiveness of the school. This technique has the
inherent weaknesses stated above. The question may also be raised as to the willingness of the parent to be completely open and honest with the teacher.

Although the professional educator may give lip-service to finding out the consumers' needs for education, in reality, the package that the school offers is most often determined by the goals of the educator and by budgetary limitations. As a result, most school programs are directed toward the average student, and do not cover the range of needs which may exist. The professional usually meets with the consumer (in this case, the parent) only if the consumer has some type of complaint. There is no effort to provide for a free and open atmosphere where both positive and negative opinions and needs can be aired. Parents themselves seem reluctant to do anything about the situation: "They sit and gripe, but don't want to cause problems. They just don't want to rock the boat." But community support for the schools is a necessity; actual involvement, determining the role of the schools and the package which is offered by the school, is required.

Accountability has become an area of increasing concern; there have been efforts to bring about community involvement in policy decisions through Federal programs (Right to Read, ESEA Title I) which require parental participation. This paper is a summary of a method devised to allow education
consumers to articulate and structure their needs so that they may be communicated to the professional educator.

Framework

In an attempt to devise a system which allows for the complete articulation of the needs of the consumers of education, the National Institute of Education (NIE) contracted with the Humanic Designs Corporation and the Institute for Social Research and Development, to explore various methodological approaches. This section of the paper provides an overview of the research and concepts proposed; and is presented in two subsections. The first presents definitions of terms; the second presents the basic assumptions underlying the research.

A. Definitions

Terms which are used in this paper are defined as follows:

1. **Needs** of education refer to a perceived lack or deficit in education, or to something that, if withdrawn from the educational system, would lead to a perceived lack or deficit.

2. **Goals** of education are the preferred outcomes which persons or groups want educational institutions to produce.
The assumption is made that each person has a hierarchy of needs and goals for education. The needs are seen as necessary for the achievement of the preferred outcome (goal); in some respects, the need can be regarded as the means to an end, while the goal is the end in itself.

3. **Need Structure:** A need structure is the entire set of needs which a person or group has. The structure is composed of particular needs, arranged in categories, and ordered according to priorities.

4. **Goal Structure:** A goal structure is the entire set of goals, which are ordered according to priorities, and which have particular needs, seen as essential for their outcome, assigned to them.

5. **Educational Professionals:** Those persons who make their living in the field of education. This includes political decision makers such as school board members.

6. **Consumers:** Those persons on whom professionals depend for their funding and support. This includes students who are old enough to facilitate or disrupt school operations. In this research, the consumer is limited to the parents of secondary school age children; the parent is referred to as the respondent.
B. Assumptions

Three basic assumptions concerning the intent for devising a method for eliciting consumers' needs and goals are made. These are as follows:

1. Consumers have needs and goals for education. This assumes that consumers have some expectations for schools and that these can be elicited and organized.

2. Methods used must be open to the possibility that needs and goals may vary widely from group to group, person to person, or that all consumers may have the same needs and goals.

3. The possibility that consumers may have some needs of which professionals are not aware, and consequently, are not reflected in educational policy, must be considered.

Goals, as a psychological construct, can be measured only indirectly from the behavior or responses they produce. Investigators can summarize these measures by characterizing the goals of a person or group by establishing goal profiles. The profiles must be unbiased, comprehensive, efficient, hierarchical, ranked according to priorities, and able to reflect changes in goal structures over time. These characteristics are explained below.

a. Unbiased. The style and content of the consumers' needs and goals must be accurately reflected. Their thinking must not be directed or channelled by the investigators.
b. **Comprehensive.** Goal and need structures must cover the entire range of educational outcomes desired by the consumers.

c. **Efficient.** Goal and need structures must cover the range with the smallest number of mutually exclusive categories possible.

d. **Hierarchical.** Profiles of goal and need structures must distinguish different levels of generality. As stated above, particular needs are assumed to represent hypotheses about how to achieve goals. It is not the intent of this research to force profiles to reach any set level of generality.

e. **Ranked according to priorities.** There may be general agreement on nature, range, and/or hierarchical structure of needs and goals without agreement on their relative importance.

f. Able to **reflect changes** in goal structures over time. It is probable that needs and/or goals will change over time. The methodology devised must be able to accommodate this.

The methodology must allow each parent (respondent) to be profiled according to the range and content of his/her goals and needs, the content and hierarchical structure of the categories into which he/she placed these needs, and the
priorities he/she established among the goal categories.
Further, the method must be flexible enough to allow each
school system to determine its local needs, and, at the same
time, be rigorous enough to allow comparison at a district,
city, state, and national level. Such a methodology will
simply provide information; of course, there can be no guarantee
that professionals will use this information in making policy
decisions. It is the opinion of the investigators, however,
that such information is both useful and essential in facilitat-
ing communication between the consumer and the professional
educator.

The Study and its Early Results

This research is a preliminary attempt to explore the
ideas outlined in the preceding sections and to provide evidence
about the usefulness of continued research with the methodology
under development. Three phases of the research were pro-
posed by NIE: a prepilot, a pilot, and the Main Study. All
research is being conducted in Albuquerque, New Mexico and
is focused on the nine high school districts in the city.
The prepilot procedures will be detailed in the first sub-
section; planning and extensions for the pilot and Main Study
will be presented in the second subsection.
A. The Prepilot

It is essential, before any needs or goals can be assessed, that individual interview data be obtained from each respondent. This interview must be structured in such a way as to allow each respondent's complete range of goals to be elicited. Then specific procedures must be found to aid the respondent in categorizing and ordering the needs and goals. For this methodology to succeed, the respondents must be convinced of the validity of any such attempt, and it must be framed so that it is understandable to any given parent in a school district. The initial intent of the research was to use a modification of the Delphi Technique; the prepilot was an attempt to assess these techniques, specific instruments, and various methodological questions which arose.

Twenty respondents were employed; they were paid $2.00/hr. for their time. All respondents had an education of twelfth grade or less and an income of $7500 or less. This permitted a testing of instruments on individuals who, it was felt, would find this task especially difficult. It was assumed that if they could handle the task, it could be used successfully with persons with more education. Four interviewers were employed; each interviewer was responsible for five respondents.
The Design

Four stages of research were envisioned. These are detailed below:

1. The Elicitation Stage.

The elicitation stage is a conversational interview, carried out in the respondent's home. Four interview instruments were tested in the prepilot and later evaluated for range and completeness of goal statements. Respondents were asked to talk about the high school their children attend and to discuss all aspects of what the schools can and should be doing. Each interview was recorded and later transcribed. Interviews averaged one hour. Two investigators read each interview and pulled all need and goal statements (for the sake of brevity, all statements pulled will be referred to as "goal statements.") The use of two investigators allowed a cross check on completeness and accuracy of phrasing so that the intent of the respondent was clearly reflected in the final wording.

This stage is the key to the success of the succeeding stages. Only if adequate data are obtained and couched in a manner accurately reflecting the intent of the respondents, will the following stages be valid.

Each statement was worded as a proposition, i.e., "students should do (or need to) X." Each statement was
limited to one idea. If the respondent said, "Teachers need to be better qualified and enjoy teaching more," the sentence was broken into two goal statements. A statement such as "Schools should not teach religion" was worded in a positive manner - "Schools should teach religion" on the rationale that each respondent would be given an opportunity to rank the importance of each statement in a later stage. After all statements were pulled from the interviews, obviously redundant statements were consolidated so that one statement was left which reflected the intent of all. After this reduction there were a total of 99 goal statements for the prepilot.

2. Simplification.

A pair comparison was performed on all goal statements, giving 4851 pairs. As it was obvious that no one respondent could read and rate all pairs, the pairs were divided into ten sets. In order to increase the n, twenty more respondents were recruited, so that four persons rated each pair.

The original intent was to rate pairs on similarity of meaning; however, after several trial interviews, it became obvious that respondents did not comprehend the task. The directions were rewritten and respondents were asked to rate pairs on similarity of purpose, on a scale which ranged from "the same," "very similar," "somewhat similar," "a little similar," to "the opposite."
Following the initial research plan, there was an iteration of the pair comparison. The iteration showed each respondent his/her own position and the position of the other three who rated the pair, if the positions were more than two scale units apart. Each respondent was given the opportunity to change his/her original position if he/she wanted to. Analysis showed that the scatter of ratings was reduced by 28.19%.

3. Categorization

Responses on the pair comparison iteration were analyzed by the Johnson hierarchical clustering technique (1967). This technique produces maps showing groups of statements which were rated as being similar in purpose.

Lists of these groups were made for respondents. Respondents were asked to read the statements in each group and attempt to provide a name for the group. They were then given the opportunity to delete any of the statements from the group. Following that, respondents were asked to go back and provide a name if they had not been able to do so at first.

Analysis of categorization data indicated that respondents provided only the most rudimentary names, often deleting all but two or three of the statements. It had been planned to iterate this stage also, giving respondents a choice of all names suggested, but upon analysis of the data, this step was eliminated.
4. Prioritization

Each respondent was to be given the category labels established in step 3 and asked to rank them in order of importance. This step was also eliminated, due to the failure to obtain adequate category labels.

B. Pilot and Main Study

The pilot is currently being conducted, and elicitation interviews are being conducted for the Main Study. Therefore, this section will deal with actual and anticipated changes in the methodology.

1. Elicitation

The four elicitation instruments were reduced to one. The pre-pilot goal statements were primarily concerned with the teaching-learning process; nothing was said concerning the administrative or political-cultural school functions. It was felt that the level of education of the respondent determined the range of goals expressed; as a result, it was decided to explore a wider range of areas in the elicitation instrument. As the pilot also has twenty respondents of twelfth grade education or less, the initial lack of expression of areas of goals can be evaluated to determine if this lack was due to an inability to express these goals or due to a lack of concern. The instrument has two general questions and then a series of specific open-ended questions concerning curriculum, affective education, school management, school services,
community involvement, discipling, health and safety, teachers, and career training. This instrument, after elimination of redundant statements, produced 228 goal statements in the Pilot.

The Main Study has 81 respondents, 9 in each school district. School districts were stratified according to median education level; an equal number of high and low educational level respondents were selected. Sampling and recruitment procedures generally followed those used by the National Opinion Research Center in Chicago.

2. Goalogram

As 228 goal statements were elicited in the Pilot, giving 25,878 pairs, it was obvious that the pair comparison as such was unworkable. Regardless of this, there had been difficulty with the instrument itself. Respondents had trouble understanding what they were to do. The concept of "Opposite" was often interpreted as opposite in meaning rather than purpose. Several of the respondents rated on agreement: if they agreed with both statements in the pair, they marked similar; if they disagreed with one, they marked opposite. The task itself proved to be tedious; the average time for completion was 6½ hours - one respondent took 18. Interviewers were forced to leave the instrument with most of the respondents, casting doubt in several cases as to whether the respondent had actually
done all the rating.

The question of the validity of iteration also arose. The Delphi technique, originally a forecasting technique, was proposed to prevent group pressures and authority figures from influencing individual opinions, while permitting each person to have access to all information relevant to the decision through iteration. Through the process of repeated iteration, a consensus opinion of the group (usually experts) was reached. The present research differs in several respects. Laymen are being used, not educational experts. And, the purpose of the research is to find out what the parents think, not to influence or change their opinions in any way. Iteration, as used here, was for the purpose of aggregating needs into categories. The pair comparison iteration had shown that the majority of respondents tended to "go with the group," indicating that some pressures to conform were being felt.

As a result, the pair comparison instrument was shelved and a new instrument, the goalogram, introduced in the Pilot. Respondents were asked to place each goal statement into one of three stacks: "Good - I agree with these and think they should be carried out;" "Bad - I do not agree with these and do not think they should be carried out," and "Indifferent - I do not care about these at all." The "good" statements and the "bad" statements were then ranked separately from most
important to least important. After this was done, each "good" statement was placed on a scale from +1 to +100; indifferent statements were placed at zero; each "bad" statement was placed on a scale from -1 to -100. To implement this task, each statement had been numbered and printed on a narrow (½") card. As the tendency to agree or disagree with the statement was so prevalent in the pre-pilot pair comparison, it was felt respondents would be quite receptive to this agreement - ranking procedure. Indications were that this was the case; the task averaged 1½ hours for 228 statements, and respondents indicated they could "see why" we were having them do this.

3. Categorization.

It was decided that the investigators would establish category labels, rather than asking respondents to do this. The basis for the labels would come from the pre-pilot and pilot elicitation data. The basic problem arose as to whether to have labels on a conceptual level (goal) or on a program level (need). An analysis of the goal statements showed that both types of statements were being elicited. It was felt that a complete range of categories was necessary so that all statements could be assigned. The decision was reached that goal and need are, in reality, two separate and distinct levels, and they both should be represented.

**Program Categories.** The investigators established the "communication" chart shown in Figure 1.
This lists the four general areas of concern: administration, teachers, community, and students. Many of the statements reflected some type of communication process between these groups. The chart in Figure 1 was established to handle this type of dynamic process. Respondents are asked to place each statement in one of the boxes. For instance, if the respondent felt the statement represented any type of communication between the teacher and the administration, he would place the statement in box 6. All boxes are actually color coded; the chart has been silk-screened on a hinged board, 40" x 40". If the statement does not deal with communication in any way, the statement is placed in one of the outside boxes. For example, if the statement says that teachers need to be more dedicated, it would be placed in the box to the left of Teachers.

After all statements have been distributed in this manner, a separate list of categories is given to the respondents. These are broken into two general areas: Curriculum and Support Functions. Curriculum includes such subheadings as: a program for cultural heritage; a program to aid the underprivileged; a program to expose the student to the world of work; a program to expose the student to adult life, etc. Support functions include discipline, guidance, facilities, "pure" communication, school-community cooperation, and qualities (refers to basic characteristics of each of the four groups).
Each statement in a "box" is then placed by the respondent into one of the categories. This is done for all "boxes." Statements are again numbered and printed on cards \( \frac{1}{2} \)" wide. Tallies of placements are made by the interviewer.

Lists for each category are made and taken back to the respondents. The respondent then ranks each statement within a category from most important to least important.

**Purpose Categories.** These categories deal with goals of education: a general outcome which is perceived as necessary for the student to be able to live in society when he leaves high school. Although these categories are now in the planning stage, some general ideas have come to light. Categories will probably include such labels as: To achieve social maturity; to be able to get a job; to be able to continue education in preparation for a job; to be able to manage his/her own affairs; to be able to appreciate one's cultural heritage.

Respondents will be asked to place each statement under one of the categories and then to rank order the statements within each category, according to importance.

4. **Prioritization.**

Ranked lists for each category (both program and purpose) will be determined. These will be given to the respondents, who will be asked to rank order the program category labels and then to rank order the purpose category labels.
Implications

A basic purpose for the development of the methodology is to provide a means for meaningful communication. Information can, and perhaps should, be provided to policy-makers, administrators, citizens, faculty and staff of schools, and students in those schools. The form for this communication must be readily communicable and easily understandable.

It is felt the steps proposed will allow this type of communication. Providing a list of categories with ranked statements for each provides the flexibility (statements can change from area to area) and standardization (labels remain fixed) needed for comparison purposes. It also allows the category labels to be operationalized. Further, ranking statements within program and within purpose categories and having a gross ranking of all statements on the goalogram will provide some idea of the relative significance of the needs and goals of the respondents.

The data provided by this methodology should allow establishment of goal profiles, which may identify specific educational clienteles. A clientele may be defined as a group of persons whose goals are alike in the following ways (Hill, 1973a):

a. Agreement on the nature of the outcomes of education.

b. Agreement on the hierarchy among needs and goals.
c. Agreement on a system of priorities.

Each clientele established would represent one source of input to policy-makers. Profiles may be produced by demographic data (income, ethnic group, age, school district, etc.) or in a post hoc manner where similar individual profiles are combined to characterize a group (Hill, 1973b). These procedures eliminate the necessity of making a priori assumptions concerning the structure of any educational clientele or concerning the needs and goals which will be elicited.

One future application of the methodology would be to compare professionals' conceptions of goals for education with the parental goals. Areas of consensus and conflict can be identified. The study could be further expanded to include persons who pay taxes but are not parents, students, teachers, and special interest groups such as potential employers of students.

The ongoing research is intended to provide data which will indicate the feasibility of continuing with this procedure. The study is not intended to provide a complete description of the needs and goals of Albuquerque parents of high school age children. The samples used simply provide for an exploration of the methodological procedures.
Figure 1. Program Category Instrument
Footnotes

1. This statement is a quotation taken from a project interview of a parent.

2. The National Institute of Education Request for Proposal developed a first design for the research (Hill, 1973a). Since that time, the design has undergone extensive evolution. The present proposed design is the result of such close collaboration that no individual contribution can be cited. Contributors include Paul Hill and Carlyle Maw (NIE), Leonard Smith and Curtiss Priest (HDC), and Peggy Blackwell (UNM). This paper, however, does include statements and opinions for which the author is solely responsible.

3. Several of the definitions were drawn from the Request for Proposal; Assumptions and the 6 constraints placed on the goal profiles are also paraphrased from the RFP (Hill, 1973a).

4. Many of the original procedures were derived from versions of the Delphi Technique developed by Dalkey (1972). The method, however, is not Delphi, but the investigators must credit Dalkey with providing the impetus for the proposed methodology.
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