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HUBBARD, NANCY GAIL. The Development and Use of Tape Recordings as Motivation for Older Youth Towards Concept Learning in Health Education. (1971) Directed by: Dr. Marian Solleder. Pp. 198

Drawing from media techniques and the new curriculum designs available, it was the purpose of this study to develop and evaluate tape recordings as motivation for older youth towards concept learning in health education. In addition, there were supplementary materials prepared, which consisted of background information about the subject, concepts and teaching objectives, discussion questions, factual information, and student and instructor evaluation sheets.

The concepts for the study were selected from the School Health Education Study's Health Education: A Conceptual Approach to Curriculum Design. The tapes and accompanying materials were used and evaluated as a motivational medium with senior high and freshmen college youth to encourage understanding and an appreciation of effective health behavior.

From the evaluation sheets, written comments by the students gave evidence that a vast majority showed progress towards this understanding and appreciation, and had knowledge and comprehension of the health concepts and subconcepts presented.

The writer found that audio media integrated into the design of a concept approach can be developed and used effectively to motivate greater comprehension and appreciation of selected attitudes and health behavior in the topical areas of mood-modifying substances, growth and development, nutrition and family life. Tape recordings can conveniently bring the "live" experiences of

others into the classroom and provide meaningful, stimulating illustrations, pertinent to particular needs and problems of youth. The degree of effectiveness depends to a great extent upon the number of similar factors from the experiences of the specific group and the illustration given. Such material can, however, deal with some critical issues of living, helping students to evaluate the health decisions that they must make to lead constructive and satisfying lives.

by

Robert C. Williams

A Thesis Submitted to
the Faculty of the Graduate School of
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Master of Education

Greensboro

1971

Approved by

Thomas C. Williams
Thesis Advisor

THE DEVELOPMENT AND USE OF TAPE RECORDINGS AS
MOTIVATION FOR OLDER YOUTH TOWARDS CONCEPT
LEARNING IN HEALTH EDUCATION

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A warm appreciation goes to the five friends who gave graciously of their time to relate personal experiences that others might understand and gain some insights in how to live more effective lives.

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truly educated individual is one who has reasonable knowledge of his environment, who can perform those tasks that are relevant to his well-being and the well-being of people around him, who is able to anticipate the effects of causes, and who can help to resolve the effects by working with the cause. The purpose of health education does not stand apart from the purpose of education, for health education's central emphasis is "to liberate man's potential strength, energies and creative powers so that his actions become deeply satisfying and humanly constructive." (WHO, 1953). It is concerned with knowledge that will free the individual from ignorance, unscientific practices, and prejudice, and so motivate him that he will make the best decisions regarding his health behavior and thereby open the doors to achieving personal effectiveness and fulfillment.

This task of education and health education has been both facilitated and hindered by a technological revolution. The revolution has multiplied the problems of education, immigration, population, and job displacement, producing family

CHAPTER I

INTRODUCTION

In education man's purpose is to move towards personal fulfillment and to nurture rational and responsible men and women without which our democratic society cannot endure. A truly educated individual is one who has reasonable knowledge of his environment, who can perform those tasks that are relevant to his well-being and the well-being of people around him, who is able to anticipate the effects of causes, and who can help to resolve the effects by working with the causes. The purpose of health education does not stand apart from the purpose of education, for health education's central emphasis is "to liberate man's potential strength, energies and creative powers so that his actions become deeply satisfying and humanly constructive." (80:25) It is concerned with knowledge that will free the individual from ignorance, unscientific practices, and prejudices, and so motivate him that he will make the best decisions regarding his health behavior and thereby open the doors to achieving personal effectiveness and fulfillment.

This task of education and health education has been both facilitated and hindered by a technological revolution. The revolution has multiplied the problems of urbanization, impersonalization, population, and job displacement, producing family

disintegration and mental breakdowns. Yet research in social psychology, education and technology may well have, or find many of the answers that will unlock these barriers, and so motivate and direct behavior towards the fulfillment of human potential.

Today, technology is providing the educator with a variety of media techniques and new materials which can broaden and revitalize school learning experiences. The application of new findings in psychology and sociology have enlarged the understanding of growth and development of children and the learning process as it relates to behavior. The knowledge of these psychological and social factors, along with an overwhelming abundance of pure facts, has been at the root of the curriculum change occurring in the schools. Technological media are being utilized in this new framework for learning. A new era in education is developing, concerned with new and different objectives for and with the learner, means of reaching these objectives, kinds of experiences, content selection in relation to concepts, and ways of organizing educational experiences. (20:28) The traditional approach with rigid categories is being challenged and slowly changed, with the hope of increasing personal effectiveness. Society needs the creative powers of man as much as each man needs to achieve personal fulfillment.

Statement of the Problem

In all areas of education, but particularly in the area of effective health behavior, there is a need for more successful communication in the teaching-learning situation. There is

a need to motivate for changed behavior, to impress upon the students the lessons of experience--that one can profit and learn through the experiences of others.

Drawing from media techniques and the new curriculum designs available, it was the purpose of this study to develop and evaluate tape recordings as motivation for older youth towards concept learning in health education. Through a series of fifteen minute tape recorded life experiences with accompanying teachers' guides and background materials, four selected health education concepts have been developed. These tapes have been used and evaluated by students and instructors as a means of encouraging understanding and appreciation of effective health behavior in senior high and freshman college youth.¹

¹The four tapes, "Ross," "John," "Cindy," and "Susan," prepared in this study are available to the reader for loan from this writer, and the School of Health, Physical Education and Recreation of the University of North Carolina at Greensboro, Greensboro, North Carolina.

CHAPTER II

REVIEW OF LITERATURE

The role of education is to provide children and youth with the opportunities to develop the particular knowledges, understandings, and skills that will enable them to live meaningful and constructive lives. This is a tremendous task in communication and motivation. In the modern society of today, education can and should use the available technical tools, and the understandings gleaned from behavioral sciences about how people learn. This study was concerned with a specific tool as motivation for health concept learning. The review of literature highlights three areas: educational communication and media, motivation in teaching and learning, and curriculum as a framework for learning.

EDUCATIONAL COMMUNICATION AND MEDIA

With the advent of the atomic bomb and the lunar landings, it has become evident that for survival and progress of nations we will increasingly depend on the widespread use of technology. Technology has revolutionized agriculture and food production, leisure time activities, communication and transportation systems, medical care, and most of all, the multitudinous industries that produce the products used by man for his

necessities and conveniences. Although education ranks as one of our largest businesses, accounting for a large portion of local, state and federal taxes, its planners and teachers are only beginning to apply technology to its tasks. (64:367) The potential for broader application is tremendous, and imperative if education is to improve its quality and affect both people and economics in this vast endeavor of living.

Historically, since 1906, the field of educational technology has been marked by a rapidly expanding scope from first "visual education" to "visual-sensory aids" in the 1930's, as a result of the phonograph and radio. By the early 1940's the term, "audio-visual education" (aids, materials, methods, and instruction) became firmly established and brought in a broader view of audiovisual programs which recognized the unity of all instructional materials without highlighting any one medium. As new technologies were developed, there was added a changing emphasis from audiovisual materials and equipment orientation to process orientation which recognized the many influences on the teacher and learner involved in interaction and communication.

(89)

With the growth in scope have come disagreements and confusion with the descriptive terms within the field and of the field itself. In his 1963 study, Ely helped to clarify the terminology associated with the field in general and with several areas of specialization. (21) The 1960's have emphasized the terms of "educational media," "audiovisual instruction," "learning

resources," "instructional technology," and "educational communications," the latter term suggesting greater comprehensiveness and conceptualization of its concern with the learning of facts, attitudes and skills. (140:194) Some feel that the term, "audiovisual media," indicates an excessive concern for gadgets, that a more realistic and honest approach should involve concern with the nature of the message whether pictorial or verbal, the intent of the communicator and the response brought about by the communicator. (67:54) Haymen and Dawson believe that "media" are not everything heard, seen, read, or just mechanical machines, or the analysis of verbal and nonverbal stimuli and responses. They define "media" in the following terms:

. . . a particular gestalt formed by the coalescence of various media 'elements' which could, but do not necessarily include cameras, projectors, words, sounds, but which do form a particular mode of language and consequently communication. (35:56)

Twyford presents a conceptual picture of communication interrelations with the specific means for communication such as teaching machines, projectors, laboratory equipment, television, tape recorders, and language laboratories as one type, and books, programmed materials and libraries as another type; however, all are related to the field and process of educational communication. (140:195)

Functions and Values of Educational Media

In 1962 a task force assembled by the National Education Association's Division of Audiovisual Instruction (DAVI) developed

a position paper on the function of media in the public schools.

(114) The paper states:

A technological culture, by definition, is one that finds technological solutions to its problems. This means that the environment of the technological culture which contributes to the problems of education also contains the elements that can help to solve them. (114:11)

Two major functions of educational media are outlined in this DAVI paper:

The first function of technological media is to supplement the teacher through enhancing his effectiveness in the classroom. Educational media are both tools for teaching and avenues for learning, and their function is to serve these two processes by enhancing clarity in communication, diversity in method, and forcefulness in appeal. Except for the teacher, these media will determine more than anything else the quality of our educational effort.

Function No. 2 is to enhance overall productivity through instructional media and systems which do not depend upon the teacher for routine execution of many educational processes or for clerical-mechanical chores. (114:11-12)

Twyford includes the above functions in his list, and in addition, adds the functions of enriching existing instruction and assisting in teacher preparation by permitting study of recorded presentations. (64:367)

DeCecco lists five values of audiovisual materials and media: concreteness, immediacy, wide distribution, easy comprehension in comparison to the printed page, and conservation of time, as it is quicker to hear than to read. (19:381-383) Wesner sees value in extensive use of audiovisual aids in teaching slow learners who are handicapped by poor reading skills and too much emphasis on textbook material. (69)

We are in the midst of social and technological explosions in knowledge as well as in techniques by which this knowledge is communicated. A teacher can no longer be the sole information instrument nor can he keep pace with the expanding world of information. Traditional methods fail to compete with the increasing variety of up-to-date communication techniques to which students are exposed outside of school and even before they enter school. (71:3) Wittich suggests four impediments to efficient teaching and learning that have implications for educational media:

1. The rapid growth in school population, particularly at the high school level with large classes, makes it increasingly difficult for teachers to arrange learning experiences that will meet individual needs and interests.
2. There has been an expansion of the number of subjects in the school curriculum with an accompanying knowledge explosion within each field. A teacher cannot know all knowledge even in one field, nor can he rely on books as the chief instructional medium.
3. The task of sorting out the best materials and ideas for various teaching purposes is increasingly more difficult.
4. The influence of picture-story magazines, radio, movies, and television is increasing and competing for the time and attention of the student. These interference factors grow and reinforce one another to create a demand for attention which seriously challenges the traditional techniques used in the classroom. (71:4-11)

To know the world one should have an opportunity to experience it, but as Everotte notes, it becomes increasingly more difficult as the world becomes more complex:

It has been determined that the most effective learning takes place when the individual has direct experience

with the subject under study, 'learning' being defined as 'changed behavior.' In other words, a student learns best by doing. Not all subject matter, however, can be taught through direct experience. (23:744)

Thus a compromise in a form of substitute experiences must be utilized to enable students to conceptualize their world. A variety of classroom procedures and teaching materials heightens interest and enthusiasm with which pupils approach work. New graphic materials facilitate learning and decrease boredom and disciplinary problems. (71:25)

Audiovisual media also appear to be of some value in motivating underachievers. Research into the number of school dropouts remains complex and perplexing. Of those who enter high school about one-fourth fail to graduate. (57:8) Warner indicated that most high school students are average or above in intelligence. (142) Williams indicated lack of interest and poor success as major reasons for dropping out. (143) Wittich believes that the traditional lecture-reading techniques are factors in this lack of interest. A study in the use of interrelated media in improvement of instruction showed the same student group gained substantially more by multi-media instruction than by lectures and that multi-media material was retained to a greater degree. (71:31) Wittich emphasizes its values:

The greatest strength of many audiovisual techniques lies in their ability to provide a solid background of readiness upon which more efficient reading programs of instruction can be based. The result is heightened interest, a better vocabulary and increased reading comprehension. (71:34)

While in theory educational media's purposes have been valid, in practice they have been superimposed on existing patterns of teaching and squeezed in where time permitted. Seldom has a film or tape been considered an essential, critical part of the course. Media have had to first demonstrate their value outside of the classroom in industry, commercial television, and skill and language teaching in the services, to gain a greater acceptance. (3) Only recently have attempts been made to discover and systematize the instructional functions of the various instructional media and to determine their relationships to specific learning objectives such as learning factual information, principles and concepts, and developing desirable attitudes and motivations. (29)

Research in media for educational communication is extensive but there has been no rush by teachers to integrate it into instructional areas. (64:368) Jackson believes that the use of technological devices in schools will increase, but doubts that a "revolution" in their appropriation and use will occur due to the inflexibility of many of these devices, the attitudinal biases of teachers and lack of strong evidence of overwhelming effectiveness. He contends that educational technology may either have a liberating or stultifying effect on the teacher's work, depending in part on the particular technique used and the administrative practices governing its development and use. (36)

The degree of learning or the amount of knowledge has generally been considered the measure of effectiveness of materials

or methods. Where learning has been most specific and visual, such as a construction skill, it has been easy to evaluate and measure; however, in broad areas such as health practices where not only knowledge is involved but attitudes and understandings, with behavior spread out over periods of time, this evaluation is exceedingly difficult. (58)

Pointing out that the objectives of health education are changed attitudes and behavior, Baber believes that progress in health education can be achieved through the use of technological methods. He comments on devices in four areas:

1. Data processing and record-keeping equipment--these devices are helpful in storing and analyzing masses of data on communities' and the nation's health; health records are readily available on individuals or groups, allowing educators to focus on specific needs in the community.
2. Audiovisual aids--since new devices have been used in science through the impetus of government money, so such methods are readily applicable in health education; trends are in both mass instruction and individual instruction.
3. Programmed learning and teaching machines--there is a growing availability and use of these in areas other than health; health educators must review objectives and determine where these can best be utilized.
4. Combination technological and classroom organization development--good instruction uses a variety of resources: criteria for selection and use of equipment and materials must reflect short and long range goals of health education programs; preservice and inservice training of educators is necessary, with reorientation toward a team approach integrated with use of specialists. (74)

Most of the media studies reported in health education are with college students, comparing instruction via closed-circuit television with conventional methods. (7, 55, 156, 159, 160, 161)

In a 1969 study of 1,087 students in grades six through nine in a suburb of Buffalo, New York, closed-circuit video tapes were used effectively in teaching units on alcohol, quackery and smoking. The experimental television group showed significant increase in health knowledge. (154) Young, in her review of research, described several studies using television in selected types of medical and health situations such as programs on growth and development of the preschool child for mothers while in clinic waiting rooms and diet procedures programs for diabetic patients. She also reviewed studies using programmed texts for heart patients. (151:50-55) Shevlin compared programmed materials with traditional methods in a secondary school health unit on alcohol education, finding this technique effective in terms of greater knowledge. (131) White analyzed college students' attitudes towards multimedia instruction in health education and found 75 per cent favorable, but no difference in knowledge testing. (70) The use of experimental demonstration in nutrition learning among high school students resulted in greater interest and motivation for changed behavior. (158) Thompson used slides for illustrating and stimulating discussion in teaching first aid. (62) On the use of audiovisual devices and other approaches in teaching health education, Kaufman stated that research indicated certain approaches to be more effective in teaching health education, however, she advised:

. . . in judging the degree of effectiveness of any procedure, it is always necessary to consider the

particular method or technique in terms of preconceived goals of individuals and groups. (14:171)

Young concluded that research in media for health education has been more technique oriented than problem oriented, with a need to determine the nature of interaction resulting from media, the particular conditions of learning and the instructional goals. (149:58)

In his evaluation of research studies in the use of educational media, Twyford supported Kaufman's and Young's conclusions:

On the basis of available research the effectiveness of a particular instructional material is more dependent upon the nature and quality of the message than on the characteristics of the channel of communication. (64:371)

He suggested that as much as 85 per cent of course learning may occur from sources other than the teacher. This fact may serve to facilitate or hinder teaching effectiveness and certainly, for media research, has implications indicating the difficulty of evaluation. (64:371) In his summary of research studies of film courses, teaching machines, and television instruction in lieu of classroom teaching or as segments of courses, Twyford reported these to be as effective, and in many situations superior to regular classroom instruction. (64:370)

Although research in media has generally been concerned with effectiveness, it has rarely been concerned with cost or sociological or psychological factors of acceptance. An unexplored field also is the application of systems analysis to the combined sources of learning, the entire instructional unit.

This would include analysis of all learning resources, the integration of media materials into the system, the particular students, the behavioral objectives set for the students, and the degree to which these objectives were obtained.

In Lange's report of the 1968 DAVI Convention, Robert Gagné presented four principles to consider in the use of media, which may serve to summarize the major concepts concerning media today:

1. No single medium has properties that make it best for all purposes.
2. The most important single criterion for a choice of medium is the nature of the learning task itself.
3. The specific instructional functions must be matched with a given medium for a specific time.
4. The most striking effects of instructional planning are to be sought in various combinations of media.
(108:557)

A concluding thought may well be Allen's belief that fifty years of research show that the role of audiovisual media can contribute to learning, but more extensive research is needed, as to where and how specific media should be used. (3:219) There is a danger of thinking that there is some magic in technique. It is easy to put materials and methods, whether textbook, film, lecture or television, ahead of the objective. The better approach is to identify the specific problem, set short and long range goals toward the solution, and then see how educational technology can help.

Audio Media: Tape Recordings as a Tool for Teaching

Audio media make use of sounds, or essentially, words, as a means of communication. Words, formed into languages, have been a major key to advancement into higher forms of civilization. Words underlie thinking and conscious planning. Human experiences are received through the senses, are processed, organized, and labeled with words. Related to past experiences and evaluated with consequences which are projected into the future, words are gathered together to form ideas and result in action. Indeed, "most recent writers who deal with speech would seek to shed new light on civilization by recognizing that words have always been deeds." (50:829) Words have always been the essence of creative ideas without which creative things could never exist. The reality of past, present, and future experiences and events is reflected in words. Robinson so aptly expresses the force and magic of words.

The main emotional structure of civilization--so poignant and so unique an element in human life--is largely reared in words. They serve to establish new orders of sensitivity and excitability. Words increase the clarity of our memory to a tremendous degree and at the same time they vivify imagination, which could exist on no considerable scale without them. With these word-created adjuncts we can elaborate our hopes, fears, scruples, self-congratulations, jealousies, remorse and aspirations far beyond anything that seems justified to the onlooker; we can project them backward into the past and forward into the future. Words can rear more glorious palaces and dig deeper, darker dungeons than any made with hands.
(50:829)

An audio device can provide a controlled situation giving audio experiences ranging from simple sounds or words to complex

interpersonal dialogues and situations. Such devices, to transport and record sound, range from the telegraph, telephone, radio and phonograph, to complex and sophisticated stereophonic, high fidelity players and recorders. With the comparative ease of listening as opposed to reading, and the accuracy of this verbal message, these devices have been incorporated into industry and business, medical treatment and care, educational techniques and administration, and today are readily available for home use and pleasure. Radios, phonographs and tape recording and player equipment have become inexpensive and easy to transport and use either with a battery or an AC adaptor cord. They have become the pocket equipment of the businessman, teenager and housewife, and yet school systems have been slow to adapt these particular techniques to extensive use in the classroom.

Brown pointed out the following values of audio materials: they can interest, stimulate, motivate, set the stage for discussion or debate, and provide variety for the study of a problem. While other type media may serve these same functions, the unique advantages of audio materials are the following: they encourage concentration on listening skills; they can portray nonverbal factors such as fear, anger, excitement, joy or concern through voice and tone qualities; through the actual voice they permit the listener to more readily "live" and understand the experiences of the speaker. (11:184-96) Erickson listed similar values for audio technology, with the additional value of providing problem-solving activities from real situations. (22:15)

Research in the use of audio materials is not extensive and is related primarily to language teaching. (79, 100) Cook demonstrated the radio as an effective tool to teach Spanish. (16) Cutler found instruction over the telephone as effective as face-to-face instruction. (83) Galas used foreign language records to permit inadequately trained teachers to teach. (31) Lorge found greater learning through the use of language laboratories in studying French. (39) Newman and Highland showed tape recordings and workbooks as effective as an instructor rated as above average in ability. (45)

While research supporting conclusively the values of audio material is limited, there is a fairly extensive list of illustrations of unique methods in which the tape recorder and tapes have been used. Many of these lend themselves readily to the field of health education. In a study of first grade children in Easton, Massachusetts, tapes were used to tell stories and give directions. Results showed that auditory discrimination, interest and word lists improved. (110) Klyhn found tapes of stories, songs and poems helpful in providing a flexible, convenient medium of instruction for disadvantaged urban elementary children. (106) Another study with elementary children in Gary, Indiana, where they listened to sounds and recorded conversation, indicated that this medium can increase listening and thinking skills and stimulate enthusiasm for learning. (102) Duffey used taped mathematics lessons with student response sheets for seventh graders. The values for this particular application were felt to be as follows:

it reinforces the development of analysis, comparison and judgment-making skills; the problem of student absences is minimized; individualized instruction to various ability levels is facilitated, allowing the teacher to concentrate on instructional needs of slower students; it helps those who need repetition and practice in skills; recently acquired concepts can be reinforced through practice sheets and additional lessons; it increases success through carefully graded progressions. (87) With handicapped children, particularly those with limited sight or blindness, tapes and recorders have been invaluable. The Hadly School for the Blind in Winnetka, Illinois, a school exclusively for correspondence courses for over fifty years, has developed a variety of 125 courses from grade five through college, adult vocational and avocational levels. The sound of a human voice in tape-recorded letters between students and faculty has provided a feeling of closeness and concern, an important form of encouragement. (94) Peins used tape and recorder as a therapy method to effectively improve an eighth grade stutterer. (122) Teachers have used taped records of a child's oral reading to better explain reading difficulties in parent-teacher conferences. (78) Numbers of schools and colleges across the United States have sophisticated systems of audio devices, audio equipped carrels and classrooms with completely automatic systems of selection and use of tapes prepared by the local faculty. Tapes are generally of three major types: instructional, remedial and drill, and independent study. They cover subjects in chemistry,

physics, art, music, business education, foreign languages, reading, English, literature, statistics, and speech. Norwalk, Connecticut schools have 3,000 to 4,000 master tapes with worksheets on basic concepts, prepared by the classroom teachers. (115)

The American Field Service initiated in 1957 a tape-slide unit to increase understanding and communication between peoples of different lands. Voices of the host families, school friends and community sounds added much to reality and understanding. (148)

Freshman education majors at the University of Vermont recorded urban and rural children's ideas, problems, and feelings in the area of social studies, then discussed their findings together. This was an attempt to put education students into the total environment, to help them use media for an extension of man rather than a master of man. (123)

Tewes used recordings as effective discussion starters in a research study of 588 adults in twenty-six groups. She found that the recordings lessened the need for a trained leader and encouraged adults to identify with common problematic situations. (137)

There have been a number of projects in which recorders and tapes have been used in health or health-related fields. Borke used this device to study family behavior over three generations. Recorded tapes gave the actual behavior transactions and how family members perceived others and themselves in their tasks at school, work, and home. (76)

Taped lectures and discussions of current information in surgery, pediatrics, ophthalmology, and others have been of value in continuing

education for physicians. (1) Mentzer reported the use of tape recorders, loop projectors, microscopes, and individual slide viewers in an integrated science course combining human anatomy, physiology, microbiology, and chemistry for medical-surgical nursing students. He felt that this technique allowed students to progress at their own rate, permitted a small student-instructor ratio, and helped develop a self-directed approach and greater motivation for learning. (113) Hartsell and Dunham used tapes in medical and nursing teaching programs to present doctor-patient relationships and illustrate diseases and personality characteristics in patients. The advantages of such tapes were that they give exposure to actual data and subjects demonstrating desired behavior not always available at a convenient time; presented a controlled situation to illustrate concepts and methods; allowed immediate feedback from students; and could be conveniently repeated for large numbers of students. (88, 98) Schley reported recently the use of audio-tutorial materials as the primary means of instruction in college health science classes. Magnetic tapes, filmstrips and semi-programmed student response sheets, with one weekly small group discussion and specific grade requirements have cut the dropout and failure rate 19 per cent between 1966 and 1969. (128)

In pointing out the emphasis on new media and aids for science, Barber stresses that health education, as a science-related field, needs to utilize these techniques. He noted a review of research projects initiated under Title VII of the

National Defense Education Act from 1958 to 1962 in which there were forty studies devoted to live and recorded audio media, fifty-one to motion pictures, and seventy-nine to television. None stressed health education as a primary concern, but findings do have implications for development of improved health education. (74)

Audio media resources are increasing. The Division of Audio-Visual Instruction, through the National Education Association, offers a National Audio Tape Catalog listing tapes available from the National Center for Audio Tapes at the University of Colorado. Private business concerns are also becoming involved in the production of such media.

In summary of the multiple methods of utilizing tapes as a teaching tool, Thompson and Graves both offer similar guidelines for effective use. Tapes should present basic concepts or principles. They should be short, developing only one concept, serving as components of larger instructional systems. Having the advantages of versatility, low cost, and convenience in time and place, they allow for repeated use and discussion without offending the speaker. (34, 138) Graves suggests the use of small discussion groups and student exploration in reading and casework as complementary tools to tapes. He believes that the most successful tapes will leave the listener slightly frustrated and curious, motivated for discussion and additional learning. (34)

Summary

Words, these are the symbols of communication. They form the basis of almost all types of media, but they are the sonorous essence of audio media. By means of words, a person verbalizes his beliefs, attitudes, and values, giving expression to the perception of himself, others, and the world in general. Weisgerber believes that it is a person's perception of reality, not reality itself, that determines what a person will believe and do. For this reason, it is imperative that a teacher give students numerous opportunities, through a variety of media techniques, to examine their attitudes, values, and beliefs. (67:538) Tapes can offer specific, convenient, direct, realistic illustrations for discussion that are helpful in building attitudes and developing appreciation of values indispensable to learning and behavior.

MOTIVATION: OVERVIEW OF THEORIES AND ITS ROLE IN TEACHING AND LEARNING

Motivation is one way in which educational communication via various media devices can facilitate the learning process. "Motivation gives both direction and intensity to behavior. Motivation to learn gives direction and intensity to human behavior in an educational context." (93:23) The term is widely used in education as an explanation for why students do or do not perform in academic situations, yet it has no direct referent, only an inference from the observation of individuals behaving in situations. Motivation appears to be an idea or concept that we have introduced to explain behavior; however, it is difficult or

impossible to select one specific fact or characteristic of behavior that can be identified as motivated behavior. There is little agreement among writers as to the defining criteria, rather, the definition of motivated behavior seems to depend more on theoretical entities than on anything in behavior. (10:2) The difficulty lies in attempting to fasten observable and measurable facts to the physical world which is far too limited. These criteria exclude the conscious and subconscious subjective experiences of individuals and the social environment in which motivation may be found. (73:34)

In experimental psychology the problem of motivation and the problem of learning have been intimately linked with the resulting difficulty that dealing with one quite often involves reference to the other. While the study of learning is concerned with change in behavior as a result of past experiences, the study of motivation is to identify and understand the effects of all the important influences which determine the direction of action, its persistence and vigor. (5:2) The study of motivation may also be distinguished from the study of perception. Atkinson states that perception's primary emphasis is:

. . . to show how the characteristics of physical stimuli together with other factors with the individual at the time influence what is seen, heard or felt. What an individual perceives in a given situation is another of the factors to be considered in the study of motivation; but the study of motivation does not include analysis of the perception process per se. (5:2)

Motivation, thus, must be viewed from many angles, not a fixed view, for this unit of psychological study is the individual within a physical and social world.

For many centuries it was held that man and animals were qualitatively different species; man was a rational creature while animals operated by instinct. With Darwin's revolutionary theory of evolution the qualitative distinction between man and animals was shattered, but provided the impetus for scientific study of man and animals with important implications for the broad problem of motivation. They were that the study of animal behavior could explain, to a degree, human behavior and that instinctive qualities might be attributed to man as motivating behavior. The resulting interest in differences then led to study and attempted measurement of intelligence, aptitude, interests and preferences which represented individual differences in motivation. (5:8)

In developing fields of study, those in vocational guidance looked for motivational factors in special interests and attitudes while experimental psychologists pointed to various states as hunger, fear, and sexual activity as motivational forces. (5:9) Today most educational psychologists acknowledge primary motivational needs, although they see man as led into complicated social relationships which in turn give rise to secondary needs, motives, and drives, such as social approval, achievement, affiliation, and security. In theory, these are learned motivation and have educational significance. (19:81)

Following Darwin's theory of evolution, the late nineteenth century became a period of speculation into the relationship of the "mind" to the "body." In his historical review, Atkinson covered William James' motivational concepts of desires,

feelings, instincts, and habits, and Sigmund Freud's concepts of unconscious and conscious feelings, thoughts, and intentions.

(5:35-36) The works of Kurt Lewin, Edward Tolman and Clark Hull are reviewed to show the concept of motivation as being far more complex and purposive, with a need for more specificity and objectiveness in study than previously thought necessary. (5:107-112, 148-201, 273) At the present time, Weiner sees four theoretical positions to explain motivation, each with experimentation, research and empirical findings, each differing in its application to classroom behavior and learning. The first two, the associative theory based on classical conditioning and controlled stimuli, and the psychoanalytic theory with its emphasis on subjective conscious and unconscious instincts, have lost acceptance to two other theories, the drive theory, represented by Clark Hull and the cognitive theory associated with Edward Tolman and Kurt Lewin. (66:878-882) The drive theory proposes that behavior results from organic disequilibrium or psychological needs. The needs activate habits and habits determine the direction of behavior. Since drives appear to be varying in intensity, this has led to systematic investigations into individual differences with the recognition that anxiety, tension, and complexity are factors affecting intensity. (66:879) It is interesting to note that the well-known psychologist, Maslow, has proposed an ascending "hierarchy of needs" in which he believes that the lower levels of physiological, safety, and love needs must be satisfied before an individual can reach out

to the needs of esteem and self-actualization. (15) The cognitive theory holds that behavior is motivated by anticipated goals and anticipated threats. Study here has been made into the factors of human decision and achievement motivation. There are still others who do not agree with these views. Some stress cultural and social origins of motivational forces arising out of family, religion, and culture. There is growing objective evidence that cultural differences in motivation do exist, though there is no evidence that they are due to heredity. (42:923-924)

Current research that is directly relevant to the problem of motivation lies in a number of areas, all related to the problem of measuring individual differences in strengths of motivational dispositions. Atkinson identified these areas as choice under conditions of risk, the concept of fear as an acquired drive, and achievement. (5:202-255) In his review of research in motivation, Weiner covered recent studies in the areas of curiosity, affiliative behavior, frustration, aggression, and imbalance (having to do with states of tension resulting from differences between statements and behavior, i.e., "Smoking causes cancer;" "I smoke."). (66:883-884) He also noted other areas not as closely related to motivation but having it as one of the multiple facets:

1. **Learning:** It is questioned whether motives can be learned and if the level of motivation during learning influences the degree of learning.
2. **Perception:** Studies in the last twenty years have been on how the effect of values, needs, and individual differences influence perception.

3. Memory: Research indicates the intensity of affect is a more potent determinant of retention than its positive or negative quality. (66:885-886)

Young stated that the task of finding determinants of human behavior is broader than the analysis of motives and that it should include the social and cultural environment. The process is complex and can be viewed in such compound terms as psychophysical, biosocial, biochemical, and sociopsychological. (73:22, 26) Atkinson found that research in motivation has only supported further the idea that the principles of motivation must be broadened still further because the individual is not isolated or stationary but a living organism who is constantly active. (5:301)

Thus in the first half of the century, motivation has moved from an empirical study of the problem to an attempt to integrate the study of various aspects of individual differences in personality and the experimental analysis of the process. (5:255) There is evidence that "performance improves as motivation increases, . . . however, motivational variables are perhaps the most elusive concepts with which psychologists work." (30:37) All those who study the complex problem of motivation deal with such concepts as drives, needs, goals, threats, levels of aspiration, habits, set and intention, perception, memory, curiosity, reinforcement, rewards and punishment, self-concept, attitudes, interests, anxiety, competition and cooperation, peer influence, and social and cultural aspirations--all of which are variables that interact and influence the direction and vigor of

behavior. (6:351-449, 9:116-196) With these intangibles, psychologists and educators struggle in identification and measurement in their effort to determine the direction of behavior.

In the school setting motivation research is primarily concerned with individual differences in achievement, needs, problems, attitudes and interests, how these affect behavior change, and ways in which related variables may be enhanced by the teacher. (9:351) In spite of the number of theories and amount of motivation research, the classroom management of motivation remains something of an art, guided far more by general principles than by specific concrete techniques. (9:383)

Ausubel suggested a number of these research-based principles which aid in controlling and influencing motivation in teaching and learning: appeal to needs of self-esteem, affiliation, and aversive stimulation in developing intrinsic motivation to learn; assess individual needs; develop the cognitive drive; appeal to goals, aspirations, and interest of students; use competition but with discretion; analyze the learner's reward and punishment schedule. (9:383-385)

At this point it might be noted what behavioral research has to say in the relationships between motivational variables in learning and effective communication in the school setting. Educators should be fully aware of these principles if they expect to modify attitudes and bring about understanding and changed behavior:

1. For communication to be effective it must fit into an existing framework of attitudes, interests,

and needs. It must be important to the student or he will modify it to his own pattern of beliefs.

2. Proper timing in the use of techniques and materials is important to build up states of readiness.
3. Increased receptivity follows learning and thus is the means of reinforcing desirable attitudes and resultant behavior.
4. The opportunity for action should be provided while motivation is high.
5. Fear can be a motivator but extreme anxiety may have the opposite effect.
6. Mass media can be helpful in channeling already existing motivation into action.
7. Teaching broad principles is more effective for long term gain than concentration on specific action which may in time become obsolete or outdated. (9:13)

In a recent article titled, "The Teacher and Motivation,"

Waetjin summarized the challenge of motivation in teaching:

1. There is a multitude of different kinds of motives, unique for each person in different situations, which must be recognized and utilized by the teacher.
2. The devices or techniques used for motivation need to be selected with thought given to the learner and the situation.
3. The act of teaching is too often oversimplified. To teach effectively, the teacher must have a knowledge of motivational theories as guidelines for his teaching behavior. (141:12)

Finally, he says, "to get at the very heart of motivation, teachers must be knowledgeable about the functioning of the cognitive structure and its relationship to learning." (141:12)

The Role of Motivation in Teaching for Health Learning and Behavior

The principles and concepts for motivation in other areas are most applicable to health teaching, learning, and behavior. As motivational factors are, however, too intangible and elusive to identify for almost any type of learning, they are even more difficult to determine in the broad area of health and health behavior where decisions and behavior are extended over a period of time, even a lifetime. Health is a relative quality of life that has its ebbs and tides influenced not only by physical and inherited factors, but by emotional factors within and social factors outside the individual, all of which defy measurement and evaluation. As the Commission on Philosophy for School Health Education emphasizes:

The concept of health embraces the entire being. He (man) is a multi-dimensional unity, with each component--chemical, physical, spiritual, intellectual or emotional--exciting as an element within a complex of interrelationships. (80:25)

Health is a personal matter and must be taught in the context of the lives people live. Motivation for positive health behavior is a complex challenge because not only must the student be motivated to learn and understand facts, but he must also exhibit positive changes in health decisions and behavior. (41:583)

In a thirty year review of studies in the relationships of motivation to health behavioral changes, Russell found development being given impetus from the work of the Behavioral Studies Section, United States Public Health Service, the efforts and

accomplishments of medical sociologists and other behavioral scientists who teach in medical and public health schools, and the work of international organization such as the World Health Organization which has been confronted with different cultural motivations. (51:106) His findings from these public health studies showed that individual differences, interests, needs, physiological and psychological factors such as fear and risk, perception, and social and cultural factors are motivational variables in what people do about their health. It should be noted that while these variables are influential in other types of behavior, they are forces also in health behavior, often in some unique ways. Since health teaching is concerned with motivation for changed behavior, these studies have definite implications for health educators:

1. Differences and deficiencies in physical environment, differences in social standards, competing interests, and the need for social approval are all factors influencing health behavior.
2. Individuals operate from their perception of reality and weighing of values rather than objective reality.
3. Two significant variables of health behavior are the degree to which an individual believes himself susceptible to a given health problem and the extent to which he believes the problem would have serious consequences for him.
4. The mental, physical, and social state of the individual can affect motivation towards health behavior in definite and often unpredictable ways.
5. Emotions and inclinations to act are countered and augmented by group pressures and the individual's perception of them.

6. Strengthening an individual's beliefs of susceptibility along with convenient, acceptable opportunities for action will result in more behavioral change.
7. Groups voluntarily taking recommended action can be helpful in changing attitudes and increasing individual motivation towards the favorable health behavior.
8. Health facts and understandings are still bases for making choices for behavior changes. (51:107-108)

The psychological factor of fear as a motivator or inhibitor of behavior is reviewed in a later study by Russell and Robbins. They concluded that selected use of fear is effective in compelling attention. At times this has probably been a major scare device of health teachers while more recently it has lost favor. Evidence seems to indicate that careful, selected use may be the best guide. (126) In her 1967 review of studies related to health education practices, Young supports Russell's 1963 points on perception of reality as affecting behavior. She also stressed the concept that perception defies adequate testing due to its link with a multitude of past experiences. (153:9-11) It is significant that some of the contributions of educational media are to clarify perception, values, and attitudes. Media may also aid in strengthening a person's belief of susceptibility, thus providing motivation for changed behavior.

There are other studies not usually titled motivational studies but certainly related to health motivation and behavioral changes. For the most part these have attempted to identify, usually for the purpose of curriculum planning, individual

differences in needs, interests, attitudes, and problems in the broad area of health and in specific areas such as smoking, drinking, dental care, and others. These health needs and problems can be thought to reflect unsatisfied basic and secondary physiological and psychological needs. Most authorities concede the existence of basic needs of love, security, recognition, and self-worth, and physiological needs of food and warmth, which can be reflected by stated attitudes and interests. If unmet, these needs may result in health problems. The underlying assumption is that unfulfilled needs and unsolved problems can supply a greater motivational impetus towards health learning and eventual resolution. Research in other areas has shown the existence of somewhat general social-cultural motivations. It follows that if these many variables can be further identified, we will be a step further in understanding the intricate processes by which individuals perceive and are motivated to accept and take action regarding their health.

There are overlaps in the concepts of interests and attitudes, problems, and needs among health educators and researchers. While the distinction is not clear, there are a number of studies which have assessed, by various techniques, the health needs, interests and problems of high school students. (60, 65, 86, 124, 127, 135, 155) Some have used this knowledge as a basis for planning health education programs. Kime and Steig have each used developmental tasks as a source of health interests, finding these

interests are significantly greater than variables of sex, intelligence and socio-economic background. (59, 105) Myers and Fulton have developed safety attitude scales. (28, 118) Richardson reported test instruments for measuring health attitudes of college students in a wide variety of topical areas. (157) Using a dental attitude scale, Murphy found cultural factors must be considered in determining the validity of such a scale for dental health. (116) This may also indicate that not only is there a wide spectrum of social and cultural variables influencing behavior but that social and cultural factors influence specific attitudes towards most specific types of behavior. Globetti reported a study of attitudes of high school students reflecting their need to know about alcohol and drinking behavior. (95) This may indicate that the social need for approval in regard to specific behavior acts as a motivational variable to learn and make decisions about drinking, and that such attitudes must be discerned in order to have an effective curriculum. Flapan attempted to identify childbearing motivations as derived from past and current life situations rather than instinctive or maternal drives. (90) Irvin tested three different classroom approaches with seventh grade students' knowledge, attitudes and beliefs about smoking, finding greater changes in attitudes than knowledge, the classroom teacher more effective than a special teacher, and small peer-led classes effective. (103) This may indicate the need to consider certain motivational techniques more effective for a specific topic. Here, too, research needs to be conducted to discover if these

techniques not only result in changed attitudes but also help prevent the initiation of smoking.

There is an increasing number of studies concerned with individual differences in achievement performance and motivation. McClelland believes everyone has a need to achieve. This may be a basic need and may influence the self-concept and the need of self-worth, variables which are related to the problem of mental health and an individual's ability to learn how to effectively live in this world. After considerable work in developing this need in businessmen, McClelland is applying similar methods to school children using educational technology. He proposed four interesting techniques to use with students in developing this achievement motivation which could also be useful to health teachers in improving the self-concept and motivating changed behavior:

1. Achievement syndrome: Help students recognize how the achievement-oriented person thinks, talks, acts and why high need to achieve is relevant to success.
2. Self-study: Give exercises in having a person think what kind of person he is and wants to be.
3. Goal setting: Have students set realistic, specific, time-limited goals.
4. Interpersonal supports: Develop "in group" feelings and give support to group change. (111:9-10)

A degree of achievement may be needed to insure continual motivation. Actual achievement and expectations among white and Negro children were studied by Guggenheim, who found these were the same for high and low self-esteem pupils in the first trial, but decreased more rapidly with low-esteem pupils when achievement

failed. (97) In an extensive study of 20,000 young persons, motivational differences were found to be expressed in individual differences in self-concepts, values, and time perspectives. (92) Might these above studies support the idea that health educators must consider and work with the needs of self-worth and achievement for effective teaching and resultant changes in behavior? Frymier has developed and tested with 2,647 students a motivational index to indicate individual differences of personality, values, and curiosity. The results show subjective characteristics of underachievers that are significant to health educators: intense dislike for school, unhappiness and fear, concern for objective materials, lack of confidence in self, and resistance to change and new ideas. (91) Knowledge of these characteristics is important if health educators are to motivate changes in health behavior. Newman has conducted a study of ninth grade smokers' and nonsmokers' behavior and attitudes indicating that smoking may be a compensatory behavior for failure to achieve socially and academically. Thus, educators should attack failure (cause) more than smoking (effect). (119)

Closely tied to studies in individual differences are studies of specific behavioral patterns such as smoking and drinking and the relationships to personality and psychosocial factors. (104, 121, 130, 134, 147) These studies also seem to indicate that there are specific motivational factors that exert influence on particular patterns of behavior. Young reviewed studies related to behavioral variables, and effective techniques

in resolving health problems of communicable diseases, nutrition, dental care, family planning and smoking. This offers additional evidence that each type of behavior has its influential variables, and that communication techniques must be specific in terms of the forces operating. (152)

There are a number of studies of social-cultural factors that point up differences regarding what people know, believe, and do about practices that are helpful or injurious to their health. (77, 85, 96, 120, 125, 144, 150) Young summarized the concepts made in all these studies:

1. Cultural and socio-economic factors may be influential in the attainment of health knowledge and understandings.
2. Adult misconceptions may be sources of beliefs regarding health and health behavior.
3. Students achieve health knowledge but the application to change is poor. (151:34)

Summary

The dilemma in this problem of motivating health learning and behavior has no simple explanations or easy ways. Evidence points to a tremendous variety of individual differences in health attitudes and habits. Man's psychosocial environment is composed of a complex mixture of personality, society, and culture, with little room for reason. Behavior has become so ingrained and reinforced by habit and custom that change is highly resistant to factual evidence, but behavior science research does yield some guidelines that are useful to the health educator. (136:314)

It is encouraging to note that there is some knowledge and understanding of how to motivate changes in behavior, however, the optimal methods are still an open question.

CURRICULUM: THE FRAMEWORK FOR LEARNING

The school curriculum is considered today the framework for almost all learning and the behavior skills needed for living. In a primitive society the instruction of its youth was concerned with limited knowledge and a definite set of skills essential for life and for social intercourse within that particular culture. To each person were assigned certain fixed functions and roles. There was little difficulty in deciding what should be taught when time and resources were extremely limited. Today, however, what youth can and must learn, and the multiplicity of choices available in a highly technical society present a dilemma that is resulting in accelerated curricular changes. Philip Phenix expresses this so aptly:

Curriculum is a problem only in advanced, relatively free societies where considerable opportunities for schooling are available. It is a problem because a choice must be made among a great variety of different possibilities. In modern civilization the cultural inheritance is no longer a circumscribed standard, and a relatively stable body of content. It has become enormous in size and profoundly complex. It continually undergoes revision and receives accessions at an accelerating rate. It is not possible now, as it once was, for even an exceptionally able person to obtain a reasonable mastery of all the major fields of learning. For each individual a choice must be made from the virtually unlimited store of materials to be learned. Assuming that society is organized so that choice is possible, and assuming that schooling is provided, the problem of curriculum is to make the wisest decision about

which few things among the many valuable subjects should be studied. . . . Human intelligence is too rare and precious a thing to squander on a haphazard program of instruction. (48:9)

Historical Issues and Current Reforms

The meaning of curriculum has a narrow to broad range, from specific subject matter courses to "all the experiences the learner has under the guidance of the school." (47:5) Prior to the nineteenth century, the assumption was that curriculum should be organized into specific knowledges and "dispensed" to youth under close supervision. There were a few who challenged these rigid concepts, saying that the nature of the child was of superior importance; however, it wasn't until the studies of child growth and development were well underway that outspoken advocates of the child-centered curriculum ran into serious conflict with advocates of the traditional grammar, literature, Latin, religion, and arithmetic. (20:7-8)

The past four decades have brought many interesting developments: teachers developed more effective teaching methods such as the project method, the unit method, and ability grouping; organizational systems such as core programs, ungraded school units, and team teaching were tried; work experiences correlated with vocational subjects for a minority of high school students came into existence; individualized instruction in reading and other subjects, and individualized help with psychological, speech, hearing and other problems became more available; programmed instruction and computer-assisted instruction came into limited use. (20:13)

The schools in the twentieth century have been looked to as the chief means of individual and social betterment, reflecting the philosophy of the American people, yet the sixties and seventies have brought an awakening, with growing friction between the "traditionalists" or "fundamentalists" and the "progressivists," and a demand that new models of education cope with the problems of racial unrest and alienation, rapid technical advances and a demand for specialists, and a tremendous knowledge explosion particularly in the natural and social sciences. A growing number feel that there is a need for education to be freed from traditional structures so that it might adapt to the changing environment and its masses of people. (27:203-213)

While the battle is being waged between those who hold to the curriculum of fixed separate subjects based on the knowledges and wisdom of the past, and those who would remake the curriculum, introducing new subjects and identifying the interrelatedness of many fields, the knowledge explosion has brought about reforms within many fields of study. There is more to be known than can be comprehended, more in print than can be read and much more which no one has time to put into writing. The increase, states Doll, is only part of the problem:

As knowledge increases, the time available to combine it into usable concepts decreases so that. . . quandary develops in the act of finding meaning in a world of too many facts and too many affairs. (20:99)

Furthermore, the problem of increased knowledge is not only an additive one, but also one of sorting and discarding of large blocks

and little pieces of obsolete facts. Doll recognizes the multiplicity of this problem:

1. Knowledge which was once a piece of a whole has now become a whole. . . .
2. Blocks of knowledge which have formerly been accepted are suddenly destroyed as entities. The unaffiliated pieces remain but they no longer form a context or design. . . .
3. The number of theories and hypotheses about phenomena is increasing. Though many of them remain untested, those which are being tested suggest new combinations of the items of knowledge. Examples may be found especially in newer fields like psychology, which abounds in theories and hypotheses about individuals, groups, learning, and other concerns.
4. Specialization has become a phenomenon of modern life. . . . A case in point is the field of biology in which specialization has grown strikingly. (20:99-100)

There have been additional forces exerting pressure for change in curriculum. The roots are basically psychological, stemming from research in the disciplines of psychology, educational psychology, anthropology and sociology. As has been previously shown in the discussion on motivation, studies of the learner (individual differences, achievements, fear, perception, memory, needs, and others) have enlightened curriculum planners as to the pace and way children learn. Research into the theories and processes of learning and the role of repetition, transfer, and conceptualization is moving educators away from the rote memorization and rigid lecture methods. Many factors have caused educators to increasingly accept new patterns and designs for curriculum: the knowledge and understanding of

social and cultural factors with the interplay and conflict of traditional and "new morality" values; mass media; the social control of the individual by government, business and labor; the increased significance and uniqueness of inner city pressures in terms of these children's self-image, perceived reality, ability to communicate and physical and emotional poverty. (20:27-94)

The impetus of the present reform goes back to World War II when recruitment revealed inadequacies in understanding in science and mathematics. With the launching of the Russian satellite in 1957, reforms were spurred by the need to keep abreast with other world powers in scientific technology. Curriculum reform was a political process as well as an ideological process in determining ends and means of education. Supported by appropriation of federal funds and foundations such as the National Science Foundation, these curriculum projects have been conceived by scholars in colleges and universities who were joined by teachers from elementary and secondary schools. (33:9-12)

The explosion of knowledge has been, however, the primary force in causing scholars to think directly about subject matter content that is truly basic to additional content and to learning in depth. The resulting projects are subject-oriented and break with an emphasis on accumulating scientific knowledge. Instead, they emphasize processes through which new facts, concepts, principles, and elements of lasting value are identified and pulled into a meaningful whole. Doll made some general

comments concerning these projects: they have taken into account new understandings about the learner and the learning process; more of them have occurred in the secondary schools than in the elementary schools; too often the persons who have planned them have given little consideration to the processes by which teachers are influenced to apply new programs; some of the projects while dealing originally with one level now have become kindergarten-through-twelfth grade projects. (20:111) Frost added some additional comments on these programs: a high degree of structure of some implies rigidity; the materials do not always allow for individual differences; the new materials have not been thoroughly evaluated. He stated, however, that "the strengths of the program currently outweigh the criticism that has been heard."

(27:308-309) Most of the projects are in the science and mathematics areas. Foreign languages rank second, with a growing number of projects in social studies, and the English language arts. (20:111-114, 27:370-371) None of the subject fields are exempt from growth and change, although in some it has been occurring rapidly, in others, slowly. The fine arts, industrial arts, music, physical education, health education, home economics and business education also are changing focus and structure. (20:122-123)

A Conceptual Curriculum

The studies of individual differences in growth and development and of the learners and learning process have opened the doors to a greater understanding of the role which concepts play in

learning and the place they have in a discipline structure. The work of Piaget stands out in shedding light on the developmental stages of concept learning. Frost speaks of Piaget's research as showing that the intellectual growth of children proceeds sequentially and invariantly with specific and successive stages of understanding and conceptualization of the physical and social world. (27:36) Educational studies in concept learning have been reported since 1904, and while there has been a growing realization that concepts have a place in the thinking process, only recently has there been a clear picture of the nature of a concept and its relationship to behavior. (146:81) Concepts were invented by man to explain his world by a grouping of objects, events, processes and regions of similar characteristics. They range from ideas of simple things to high level abstractions. Concepts serve communication, are vital to reasoning and the discovery of new relationships. "Thinking, progress, and development in all fields of human endeavor rest on the accuracy of our concepts." (13:153) The process of conceptual learning is characterized by Darrow as cyclical:

. . . observation, examination, reflection and back again, with abstraction gradually setting in to influence new observations in an ever-spiraling pattern of growth towards understanding, never fully to be achieved but always to be sought after. (84:287)

Burton defines a concept as a defined idea, an amount of meaning a person gives to any thing, person, process; a logical construct, a word or symbol which stands for a number of objects or situations. (13:154) Woodruff gives a definition of concept in terms of curriculum planning:

A concept may be defined as some amount of meaning more or less organized in an individual's mind as a result of sensory perception of external objects or events and the cognitive interpretation of the perceived data. (146:84)

Drawing upon the work in conceptual and cognitive development, educators have seen conceptual systems as extremely useful and increasingly essential in education to provide a framework for learning. In speaking of the advantages of a science conceptual design for kindergarten through the twelfth grade, Hoffmaster stated that this curriculum was concerned with scope and sequence, had basic organizing substantive and behavioral elements. He felt that such an approach gave direction, showed relationships and processes, with interdependencies and varying levels of complexities. (101) Burton noted the following values of conceptual systems: they give a relatively stable, permanent system of knowledge, allowing knowledge to be sorted out and grouped, thus knowledge can be recalled and used because it is systematized: they are subject to change as new facts are discovered; they enable us to generalize, to carry understandings from one thing to another, to provide guideposts and framework for thinking; they use the instruments that enable us to adapt behavior to situations; they are necessary to understanding the social, economic and political life in today's world. (13:154) In summary, a conceptual system can be identified as having categories that can be easily discussed and manipulated with clearly identifiable, consistent levels of generality, and which can be developed from different perspectives. (32:141-142)

Goodlad defines such a system as one having a carefully engineered framework designed to identify and clarify relationships among related, complex and interacting phenomena; ". . . in effect, to reveal the whole where wholeness might not otherwise be thought to exist." (32:141)

A Health Education Curriculum

Curriculum development in health education has long been hampered with persistent obstacles and difficulties. The lack of scientific knowledge concerning disease prevention and care, poor community health, and the traditional emphasis on the classics as means to an effective life have been major hindrances. With the advancement of medical knowledge and skill and the development of public health concepts came the realization that certain health habits concerning cleanliness, nutrition, and disease prevention should be taught to school children for improved individual and community health. In the late 1800's problems with narcotics and alcohol influenced legislative action, putting such instruction into school curriculums. (112:1)

While the traditional idea of curriculum to the layman has been centered for the most part in a devotion to specific content, Cushman feels that in practice this is not so. He stated that curriculum and course construction is concerned with four basic factors: ". . . the organized body of subject matter, the nature of the learner, the nature of the learning process and the nature of society." (82:14) This, Cushman feels, has always

been true. The only change has been one of emphasis in these basic factors, stimulated to a great extent by educational research and discoveries in the sciences and medicine.

In the 1920's emphasis was on subject matter and the anatomical and physiological approaches were used; in the late 1920's the emphasis was on the child and the interest approach to the health curriculum emerged; in the late forties and early 1950's social needs received more attention; and at present, emphasis is on health as a discipline and the concept approach is current. (82:14-15)

It is interesting to note how research related to the learner, individual differences, and interests as factors in motivation and learning influenced emphasis in health education curriculums, as well as in other disciplines.

However enlightened we have become in eradicating diseases, improving living conditions, increasing life expectancy, and improving the vitality of many people through educational and technical advances, there is still much ignorance, much waste of human potential and so few who are living to their capacity. We still have too high accident rates, unsafe water supplies, problems of alcoholism, drug abuse, illegitimacy, venereal disease, and filth and crowding that produce epidemics, frustrations, unhappiness and disasters. (46:22) Health knowledge and information are available, even in an overwhelming abundance, but much of the understanding and application is still to be realized. This dilemma of so much knowledge, but with little evidence of meaningful and constructive living has motivated major changes in the thought and the process of health education. According to the

School Health Education Study, health as a comprehensive concept has come to mean:

. . . a quality of life involving dynamic interaction and interdependence among the individual's physical well-being, his mental and emotional reactions, and the social complex in which he exists. (52:10)

Health education seeks now to deal with the mechanisms of life and living, to affect the "ways of doing things, to improve life, . . . to show better ways of living, of building a heritage, of preventing sickness, or of preserving the home." (46:6) The School Health Education Study writers stated so aptly the current view of health education:

Health education is an applied field of learning that relies largely upon the knowledge of the physical, biological, and medical sciences and related fields for its subject matter and upon the application of behavioral science theory for its methodology. As such, it is a discipline in which the relevant knowledge and ideas from several fields are combined and synthesized. Because the concept of unity is ever its focus, health education strives toward the application of knowledge in achieving the integrated self. (52:11-12)

Drawing thus from many disciplines and being an applied science, the latest framework for a health education curriculum is the concept approach. Two guides are particularly significant: Health Concepts: Guides for Health Instruction, a publication of the Health Education Division of the American Association for Health, Physical Education and Recreation, and Health Education: A Conceptual Approach to Curriculum Design, a publication of the School Health Education Study. The former was initiated in 1962 as a plan of action to identify crucial health problems of the sixties and seventies, and to determine the basic health concepts

in relation to problem or instructional areas. Concepts relate to such problem areas as family health, nutrition, alcohol, and disaster preparedness. (4) Although the American Association for Health, Physical Education and Recreation's conceptual guide is a positive step forward, the School Health Education Study publication, with concepts related to a broad, positive view of health and selected content critical to safe and healthful living, is a far more comprehensive and long term effort. This project involved the work of professional writers in the fields of health education and education in consultation with prominent public health and medical authorities in the United States Public Health Service, the American Medical Association, the New York State Department of Health, Columbia University School of Public Health, and also those in curriculum development and school administration. (52:119) It is worthy of the statement that "this project undoubtedly will long be remembered as a model pattern in curriculum development." (112:10)

The national School Health Education Study was begun in 1961 under a grant from the Samuel Bronfman Foundation for an examination of the status of health instruction practices in the nation's schools. The findings revealed omission or neglect of certain areas, unnecessary repetition in other areas, lack of sequence in learning experiences at various grades and a need to plan a curriculum that would be meaningful and challenging. (52:xii) With the need and direction pointed out from the investigation, the committee turned to the development of experimental

curriculum materials. Writers, consultants, teachers and supervisors, and school tryout centers in Washington, New York, California and Illinois were selected. This phase was concerned with the organization and development of health education content and materials within a conceptual framework of thinking. Two of the eventual ten major concepts were tested and evaluated with the data being used to aid in the revision of the final materials. From this involved endeavor came the publication in 1967, Health Education: A Conceptual Approach to Curriculum Design, which presented a framework for health education from kindergarten through the twelfth grade and the teaching-learning materials for the first two concepts. (132:12) These and the materials for the other eight concepts are being published by 3M Company. Included are teacher guides with resources, transparency packets, and, ultimately, a student textbook series.

As Means has noted in the development of the basic operating philosophy for this new health education curriculum, the writing team analyzed numerous materials related to education, health education, curriculum development, the learning process, the individual, health, changes in society, and the democratic process. They concluded:

. . . that a 'conceptual approach' offered the most realistic and promising pattern. . . for health education.

It was felt that such an approach would improve the efficiency of both teaching and learning by providing: (1) a greater depth and breadth of understanding of factors affecting health, (2) accelerated learning through the establishment of a logical structure to

which new health facts and ideas might be related, (3) increased student interest in the study of health education by virtue of greater understanding, and (4) a greater transfer of learning in application to life situations. (112:4-5)

Nolte further described the characteristics of this conceptual plan as "adaptability, flexibility, relative permanence, progression, sequence, continuity, interrelatedness of elements." (166)

Objectives for the selection of curriculum materials were developed to encourage greater understanding, reveal greater interrelationships of health, increase student interest, enable teachers to improve their effectiveness, and produce greater teacher interest in health education. (112:5) The criteria for the selection of content were those "most important concepts in the field that should be understood by the well-informed citizen." (112:6) The framework deemed essential for a basic understanding was a unified concept of health:

. . . a quality of life involving dynamic interaction and interdependence among the individual's physical well-being, his mental and emotional reactions, and the social complex in which he exists. (52:10)

Three key concepts were identified as unifying threads characterizing the processes underlying health in the life cycle of every individual:

1. Growing and Developing: A dynamic life process by which the individual is in some ways like all other individuals, in some ways like some other individuals, and in some ways like no other individual.
2. Interacting: An ongoing process in which the individual is affected by and in turn affects certain biological, social, psychological, economic, cultural and physical forces in the environment.

3. **Decision-Making:** A process unique to man of consciously deciding to take or not to take an action, or of choosing one alternative rather than another. (52:16)

Under these key concepts, ten major concepts were developed as the major organizing elements or indicators for the direction of the learning experience and to show the scope of health education. The concepts are as follows:

1. Growth and development influences and is influenced by the structure and functioning of the individual.
2. Growing and development follows a predictable sequence, yet is unique for each individual.
3. Protection and promotion of health is an individual, community and international responsibility.
4. The potential for hazards and accidents exists, whatever the environment.
5. There are reciprocal relationships involving man, disease and environment.
6. The family serves to perpetuate man and to fulfill certain health needs.
7. Personal health practices are affected by a complexity of forces, often conflicting.
8. Utilization of health information, products, and services is guided by values and perceptions.
9. Use of substances that modify mood and behavior arises from a variety of motivations.
10. Food selection and eating patterns are determined by physical, social, mental, economic, and cultural factors. (52:20)

Four of the concepts have been used by the writer for this project. (1, 6, 9, 10) Each major concept has two to four sub-concepts, each of these having physical, mental, and social dimensions with content, or subject matter, emerging into

teaching-learning units. Long range goals or general outcomes in the cognitive, affective and action domains were identified to indicate what a learner should finally know, feel, and do. To give sequence and horizontal organization, behavioral objectives were developed at four levels, with each level of experience building on the prior ones. This encourages continuity and progress towards conceptualization. (52:15-28)

Throughout the entire process of this curriculum development, evaluative comments and data were sought. The general reaction of teachers and writers was highly favorable. (133:149) A few of the impressions from classroom teachers were that the design gave direction and goals to students and teachers alike; pupils were highly motivated by the materials and approaches used; and its greatest value was the fact that students became more involved. (133:151-152) A teacher, who used these materials, reported that she found content appropriate to the capacities of the children, yet meaningful and exciting. It forced her to teach in a more imaginative and creative way. Most important, it provided problem-solving situations, encouraging critical thinking and opportunity for discovery. (129)

There is now a growing number of health education conceptual curriculums, some related to specific topical areas, others covering the broad concept of health. The American School Health Association has Growth Patterns and Sex Education, a kindergarten through twelfth grade program with concepts, attitudes, content, activities, questions and resources. (81) Bobbitt and Lawrence

have developed a conceptual curriculum for gifted pupils in five aspects of health: body structure, food and nutrition, balance and moderation, health problems in the community, and health and travel. (75) In 1965, the Los Angeles County Schools published a curriculum guide based on conceptual elements, including such areas as growth and development, consumer health, and environmental problems. (40) The California State Department of Education in 1970 produced a guide for health instruction with a framework of ten content areas, four to five major concepts for each content area, subconcepts on four grade levels, suggested behavioral objectives, and examples of content for each of these areas. (25) The public schools of Ellensburg, Washington, also have applied the conceptual approach to a health education curriculum. Their graded concepts are centered around such units as consumer health, drugs, dental health, family, and mental health with objectives in terms of the cognitive, affective, and action domains. Also included are learning activities, teaching aids, resources and activities for integration with other subjects. (18:159-165) A recently developed graded conceptual plan is one for the schools of New York. This state has prepared a course of study organized around broad areas or "strands," topics, major understandings and fundamental concepts with suggested teaching aids, learning activities, and supplementary information for teachers. (18:131-142)

Summary

The School Health Education Study is unique in health education curriculum development. It offers a structural framework

adaptable to any local school system. Replacing the rigid terms of knowledge and habits with more meaningful objectives in the cognitive, affective and action domains, it signifies the recognition of a number of processes: perception, concept formation, value sensing, motive formation, and decision-making.

To this point Woodruff speaks most explicitly:

A human being makes his decisions, and takes his actions on the basis of his concepts about his environment and the particular parts of it which make up a person's situation at any one time. If we wish to affect his behavior through his own knowledge, we must stop giving him the end products of another person's decisions and help him acquire the concepts with which he can make his own decisions. (145:198)

In a world of increasing complexity, the ability to evaluate, choose wisely and act becomes critical even to mere survival and certainly to a full, healthy life. No one will deny the need for a firm basis of knowledge; however, today health education's major concern must be to motivate towards positive attitudes and constructive health behaviors conducive to the highest quality of living in a free democratic society.

CHAPTER III

PROCEDURE

Introduction

With all the technical and scientific advancements of our society, it would seem that the task of motivating for learning and changed behavior should be far easier and more effective. This major thought led the writer into a three year study involving the development of one tape recording which served as a pilot tape, and four additional tape recordings which became the basis of this study in motivation and conceptual health learning for older youth. Each of the four tapes was made by an individual whose life, or a particular aspect of it, would illustrate a major concept and subconcepts in one of the following health areas: family living, nutrition and dieting, growth and development, and mood-modifying substances. These major concepts were selected from the School Health Education Study's Health Education: A Conceptual Approach to Curriculum Design (52), which provided a new framework for conceptual learning.

For teacher guidance, a variety of materials was prepared to accompany each tape. Background information regarding each individual's family, friends, and patterns of living was outlined. Teaching objectives in terms of knowledges, attitudes,

and behaviors were developed relating to the major concept and subconcepts along with appropriate discussion questions and answers. A student evaluation sheet for each tape and a common teacher evaluation sheet were devised to allow both objective and subjective data to be collected.

The tapes and accompanying materials were used by this writer and four faculty members in the School of Health, Physical Education and Recreation at the University of North Carolina at Greensboro in basic health education classes. Two of the tapes and materials were presented to high school students in family life education classes by a local home economics instructor.

Information from the utilization of the four tapes and supplementary materials provided the basis for study and insights into the degree of motivational effectiveness and conceptual health learning for each tape.

Development of Tapes and Teaching Materials

While there is a large variety of technical and educational devices that could be used as motivational tools for health learning, tape recordings were selected because they would allow the writer or other classroom teachers to conveniently and inexpensively bring the "live" experiences of an individual into the classroom. The length of the presentation, the suitability of the speaker to the students' needs, and the health concepts to be covered could be selected and controlled. Hopefully, the students might gain further understandings regarding health behavior and the

writer would find one technique that lightens the frustrating task of teaching for changed behavior.

A Sony TC-104 Tape Recorder had been given to the writer for personal pleasure several months prior to beginning the study, and this conveniently provided the equipment for the project. Sony magnetic tape, one mil polyester, 300 feet, to be played at 3-3/4 inches per second was purchased for the project. This allowed the speaker a fifteen minute recording which was felt to be a sufficient length to present the experiences related to the concept and subconcepts and yet allow time within a fifty minute class period for discussion prior to and following the playing of the tape. Information in the use of audio equipment and its application to educational purposes was studied before beginning the actual taping. The recordings were made in privacy by this writer in her home, or in one case, in the summer home of a friend.

The selection of subjects for interviewing and recording was made over a three year period beginning in the summer of 1968. The choice of an individual to illustrate a major concept from among the ten offered by the School Health Education Study depended only upon knowing a willing person whose case history could reveal pertinent and interesting aspects that would be stimulating and appropriate to high school and freshmen college youth.

In the midsummer of 1968, a thirty-six year old married friend, Patsy, consented to prepare a tape illustrating the major concept, "The family serves to perpetuate man and to fulfill

certain health needs." (52:66) A college graduate, Patsy had had emotional problems resulting from a physical handicap and conflicts with her husband.

The taping procedures developed with Patsy were modified and refined for the subsequent four subjects. During the first two hour session with Patsy, she related "her story," showing the events and particular factors that influenced the pattern of her married life. From this information were drawn the experiences and factors that needed to be told in the tape to illustrate the selected concepts. By the end of the second meeting, decisions had been made on the material for a fifteen minute tape. Prior to the third meeting, an outline of general and specific points was written out for Patsy to follow. It was felt that an outline using single words and short phrases to suggest the order and ideas would make for more spontaneity and naturalness in tone and manner of speaking.

A three hour uninterrupted period of time was agreed upon for the taping period. The subject was shown where to place the outline paper, and cautioned about rattling papers, moving unnecessarily or handling the microphone. The drop of a hand was agreed upon as the signal to start or stop taping and speaking. In order to find the best tone and volume setting, and to put the subject at ease before the microphone, several trial beginnings were made. Subjects were always shown that any section could be erased and repeated as desired. Since interruptions could be handled easily without marring the quality of the production, the subject could proceed at his or her own pace.

Although Patsy produced an interesting twenty minute tape, it lacked in conciseness and desirable length, and was not used as part of this study; however, it proved to be a valuable experience in developing taping techniques and organizing material around concepts.

"Ross" and "John"

The first tape that was actually used in the study was prepared in the late summer of 1968 with a high school sophomore, Ross, who had experimented with marijuana for a period of about eight months. His story was used to illustrate the major concept, "Use of substances that modify mood and behavior arises from a variety of motivations." (52:84) With less experimentation necessary, the background material was obtained in one three-hour session. From this, incidents and social and emotional factors were identified that would illustrate two subconcepts. An outline of these points was prepared for Ross to use as a guide in making the tape. The actual taping was conducted in the second meeting with Ross following the same procedure as previously described with Patsy.

The teaching materials for "Ross" consisted of the background information regarding his personality, the familial and affiliative behaviors, and the important socio-economic values as they related to the concept and two subconcepts. Teaching objectives and long range goals appropriate to the concepts were identified in terms of knowledges, attitudes, and behaviors. Discussion questions that would point towards the objectives

were written out with answers in phrase form to permit convenient use by the teacher. These materials, along with a student evaluation sheet, were the basic ones developed; however, the final packet of teacher materials for "Ross" had, in addition, factual information on drug abuse and the instructor's evaluation sheet. (See Appendix A)

The student evaluation sheet was prepared to allow an objective response in terms of numerical values with additional space for clarifying subjective comments. Question 1 concerned the degree of realism in Ross' story. Wondering if Ross' solution to his problem might influence students' general acceptance of the tape and materials, Question 2 asked for their degree of acceptance of this solution. Question 3 was concerned with the value of the background material in facilitating an understanding of the various factors influencing Ross' behavior. The worth of the follow-up questions and discussion in aiding understanding was asked in Question 4. Students were requested in Question 5 to rate the tape and materials for its value and effectiveness as a teaching aid in the study of mood-modifying drugs, for junior high, senior high and freshman college students. There was one exception here in that the rating for the junior high level was not on the initial form but was added later when it was used with high school students. The last three questions asked the students for major ideas, guidelines for personal living and one personally significant idea.

During the summer of 1969, the second tape was made by a high school senior, John, who from the age of nine had coped with

the problem of diabetes in a most constructive manner. His tape was used to illustrate two subconcepts and the major concept, "Growth and development influences and is influenced by the structure and functioning of the individual." (52:36) The taping followed the previously described procedure with Ross, one session to collect the background information and the second to prepare the tape. The teaching materials for "John" were similar to "Ross," consisting of background material, concepts, and two subconcepts with related teaching objectives in terms of knowledges, attitudes and behaviors, long range goals, discussion questions and a student evaluation sheet. These materials were the basic ones developed; however, the final packet of teaching materials for "John" included a previously prepared paper on diabetes mellitus, a copy of the food exchange lists as factual information for the instructor and the instructor's evaluation sheet. (See Appendix B)

On the student evaluation sheet, a number of the questions were similar to "Ross'": the ones concerning the degree of realism, the value of the background materials, questions and discussion, the rating of the tape and materials as a teaching aid, and the request for major ideas. Three questions were unique to John's problem of diabetes: Question 2 concerning John's attitude towards his problem, Question 5 regarding acceptance of John as a personal friend, and Question 6, concerning the student's interest in knowing about John's problem as a close friend.

The instructor's evaluation sheet was kept the same for all the tapes and materials. It was developed just prior to the

use of the materials on Ross and John by a local high school teacher. There were two major parts, format and content, each with questions concerning the tape and the supplementary written materials. The instructor was asked to rate each aspect with a numerical value and to comment on each item. (See Appendix E)

In the use and evaluation of these first two tapes and related materials, "Ross" and "John" were first used by this writer with college students. In the fall of 1968, the concepts, background information, tape and questions about Ross were presented to a health education class of thirty college students, primarily freshman women, and then again in early 1969 to fifty-five students in two health education classes. All classes were at the University of North Carolina at Greensboro. Evaluation sheets were distributed at the end of the fifty-minute class periods and returned unsigned at the next class meeting. Similar materials on John were presented in a like manner by this writer and evaluated by fifty freshman college students in the fall of 1969 and spring of 1970 in basic health education classes at the University of North Carolina at Greensboro. The materials on John were also used and evaluated by a university faculty member with twenty college senior physical education majors in a health education methods course in the fall of 1970.

In the spring of 1970 the tapes and teaching materials on John and Ross were used on consecutive days and evaluated by a home economics teacher at Grimsley High School, Greensboro, North Carolina, in her family life education classes. The initial contact

was made directly to the instructor, a personal friend. She, in turn, secured the approval of her principal to use the materials in her classes. The two packets of materials were taken to the instructor one afternoon after school, explained and discussed, with the agreement that she would call this writer when they were completed. Both sets of materials were presented to the high school students during consecutive fifty-five minute class periods. The student evaluation sheets were distributed near the end of the period, completed and returned unsigned before leaving. The tapes and materials were presented to the same four classes, although 106 students responded for "Ross" and 118 students for "John."

On the evaluation sheets, these high school students were also asked to give their age, sex, class, major academic interest and an estimated family income level. While the data were originally tabulated according to sex, the other information was not utilized.

"Cindy" and "Susan"

In the summer of 1970, two more tapes were prepared. The third tape was made by Cindy, a college sophomore, who for over five years had followed extremely poor dieting patterns. The tape illustrated the major concept, "Food selection and eating patterns are determined by physical, social, mental, economic and cultural factors," and selected subconcepts. (52:90) Taping procedures were the same as for the earlier tapes, involving two sessions. It was interesting to note a wide variation in taping time by the subjects, dependent on their degree of assurance and

fluency of speaking. Cindy made her tape in less than an hour's time, while the others took two to three hours.

With the experience of the first two sets of materials, it was decided that a condensation of the supplementary materials would facilitate their presentation. They were similar in organization to the "Ross" and "John" packets except that the number of teaching objectives and discussion questions was reduced while the long range goals and factual information for the instructor were eliminated. Factual information was not provided since the university instructors were knowledgeable in the topical area. "Cindy's" materials did include her diet record for the week following the taping session to show her eating habits at that time. (See Appendix C)

The student evaluation sheet for "Cindy" was similar to the earlier ones, having a number of questions in common, that is, the ones on degree of realism, the value of the background information and discussion questions, and the effectiveness of the tapes and materials as a teaching aid. Only Question 2 was unique, asking the students for their degree of identification with Cindy and her weight problem. There were further modifications in the questions concerning ideas and guidelines. These were shortened, requesting two major ideas personally significant to the student. The last item in "Cindy's" packet was the instructor's evaluation sheet which was the same one that had been used before.

It was decided that the fourth tape should again illustrate the family concept, "The family serves to perpetuate man and to

fulfill certain health needs," since the first tape ("Patsy") was not usable. (52:66) Susan, a thirty-five year old married, working woman with one child, consented to prepare this tape. The materials accompanying this tape were much like "Cindy's" and consisted of the concept and two subconcepts, with related teaching objectives and discussion questions with answers. Background information was outlined covering parental patterns of living, earlier events in Susan's life and particular value decisions that govern their married life. As with "Cindy," general factual information on the topic was omitted. "Susan's" student evaluation sheet was also identical to Cindy's with the exception of Question 2 asking for the degree of acceptance of Susan's attitude towards her family, work and study. (See Appendix D) As with the previous packets, the instructor's evaluation was included.

These last two tapes and materials were used and evaluated in basic health education classes in the fall of 1970 by this writer and three faculty members of the School of Health, Physical Education and Recreation at the University of North Carolina at Greensboro. "Cindy" was presented to two health education classes, almost all freshman girls, by this writer and a faculty member during the study on nutrition. Unsigned evaluation sheets were returned by twenty-five students from each of these classes. A second faculty member was unable to use the material with the nutrition unit but did present the tape and materials out of context later in the health education class with thirty-four students.

"Susan" was used in the fall of 1970 by this writer in one health education class, with sixteen freshman college students returning the evaluation sheets. Another faculty member also used and evaluated this material with fifty-seven of her students in two basic health education classes at the University of North Carolina at Greensboro.

Summary

This study has involved the construction, use and evaluation of four fifteen minute tape recordings of life experiences with accompanying teaching materials. These have been presented to older youth in an attempt to motivate them towards concept learning in health education. From the creation of an idea through the intricate pattern of planning and implementing the ideas into action, the time and effort required may appear long and tedious, yet the process has been a creative and learning experience for the writer.

CHAPTER IV

EVALUATION

"Ross"

Ross was the subject of the first tape and materials to be completed, used, and evaluated by students. The presentation was made to eighty-five freshman college students, almost all girls, whose attitudes tend to be conservative and whose vocational interests lie for the most part in teaching. Thus, it might be expected that they would relate with Ross' middle class status. A year and a half later, it was used in coeducational high school classes totaling 106 students. This group was far more heterogeneous in composition although the school draws its students largely from suburban areas.

In evaluating "Ross," students were asked to indicate their degree of acceptance for each question on the evaluation sheet. This was done by using a five point rating scale ranging from "5" indicating "a very great deal," to "1" indicating "not at all." Additional space was provided after each question for students' explanations and comments. In the preliminary calculations of the data, the high school evaluation sheets were tabulated separately by sex, giving forty-one boys and sixty-five girls. All the ratings by the boys were slightly lower than the girls, but it was not thought to be enough to warrant separate

tables so that the final table shows a combined total. It can be seen in Table 1, page 80, as in all the tables, that students did not respond to all the questions, thus the varying totals.

Question 1: To what extent was Ross' story realistic to you? In what ways?

This question was exactly the same on all the evaluation sheets. It was hoped that it would reflect the degree to which the students could believe and feel the authenticity of the person speaking, and, thereby, be receptive to illustrated concepts and subconcepts. It was also felt that this receptiveness with the speaker might be a subjective variable in the positive motivational aspect of the learning situation.

Although the college students' ratings were slightly higher on this question, the general reaction can be seen more clearly by adding the ratings together. For the combined college and high school groups, 32.78 per cent rated Ross' story with "5" (a very great deal) in realism and 44.21 per cent rated it "4" (a great deal). Together, these ratings meant that slightly over 76 per cent could accept the reality of the speaker's story. Total responses for a "3" rating (somewhat) was 18.42 per cent. In keeping with the more positive feeling of the college students, only one gave a rating of "2" (very little) while eleven high school students felt this way.

Some of the written comments from college students reinforce this concept of identity with the speaker as part of the process of internalizing the message:

"Because it was about someone of my age group it seemed to have more of a message for me."

"He seemed quite honest and his talk was as though he were chatting with a friend."

Some high school students made positive statements, while others remarked unfavorably, possibly reflecting considerable familiarity with drugs:

"I know people who smoke and many of their lives are like Ross' and his friends. Ross' story portrayed a real life story and seemed very realistic."

"The language he used was good."

"It seems like it might even happen to me." (a boy)

"It seemed like his reasons for smoking marijuana were phony."

"It was not really interesting compared to other talks on drugs I've heard."

"He never said anything that would make me believe he smoked."

Question 2: To what extent was Ross' solution as one possible solution acceptable to you? Why?

This question was asked in order to determine if the acceptance or nonacceptance of Ross' solution to his marijuana need might be a factor in the general receptiveness to the material. Slightly over 65 per cent of the total group expressed their high approval of Ross' solution by faith with the "5" or "4" rating, while 25 per cent said it was only "somewhat acceptable." Contrasting the two groups, the high school students were less favorable in their response with only about 50 per cent giving "5" or "4" ratings, while about 70 per cent of the college students gave the same ratings. This seems to show again the

more traditional, conservative nature of the college girls. The responses indicate generally that the solution was certainly not a strong detrimental factor with these particular groups of students. There were, of course, some (seventeen) among high school and college students who were unfavorable to religious values, as an often typical response among youth today.

There was considerable unanimity in the comments from the college and high school students:

"It seems overly 'idealistic', rather unreal considering people of Ross' generation today."

"Because I have accepted Christ, I know the ways in which he can help if you are wanting to be helped."

". . . good solution, but not likely to happen to many people."

"If I had the problem he had, I probably would have chosen the same solution."

"I don't have that much faith in 'faith'."

"I have heard of others who came back with a belief in Christ."

Question 3: Did the background material contribute to your understanding of the behavior of Ross and his friends? How or in what ways?

The background material dealt with Ross, his family and friends, and their values in regard to education, recreational activities, money, community affairs, church and life goals. It is somewhat detailed but this was felt necessary in order to clarify for the teacher's benefit the influential factors operative in Ross' behavior.

The college students' responses were quite favorable with slightly over 85 per cent rating it "5" or "4" and only 14.12 per cent rating it "3." The high school students' responses were much less positive with only about 39 per cent rating "5" or "4," 42.86 per cent and 12.38 per cent rating "3" and "2" respectively. In the presentation of the background information to the students, the writer selected and condensed appropriate portions while the high school instructor read the material verbatim to her classes. Her procedure obviously colored their responses and made for boredom and confusion as evidenced from some of the comments of the high school students listed below:

"Yes, it was easier to understand the situation."

"I found it hard to keep all the people separated."

". . . home life of boys especially added to my understanding of their behavior."

". . . too long and drawn out."

". . . good description of character."

"It showed how he became involved with marijuana."

In contrast, the college students' comments reflect their understanding and perhaps their unfamiliarity with drug abuse:

"The material made it quite clear what caused Ross to turn to drugs."

"The use of drugs depends more on one's values and standards of living learned from parents and friends."

"Without it I would not have understood his motivation for taking the drug."

Question 4: To what extent did the follow-up questions and discussion aid in your understanding of the use of mood-modifying drugs? In what ways?

The purpose of the discussion questions was to facilitate the task of the teacher in clarifying to the students the multiple factors that influenced Ross and his friends in the use of marijuana, and the possible results in health, social and academic problems. There were nine questions with a somewhat long list of possible answers.

Of the high school students, the highest percentage of students, 19.05 per cent, 37.14 per cent and 21.90 per cent rated this aspect with a "3," "2," and "1" respectively, while the highest percentages of college students, 22.89 per cent, 33.73 per cent and 33.73 per cent rated this with "5," "4," and "3." This meant that about 90 per cent of the high school students saw little value in the discussion while about 78 per cent of the college students reacted favorably.

The comments from the college students also shed some light regarding their degree of interest:

"The discussion helped me to understand more the frequency of drug use."

"I had a good idea of harmful drugs before the discussion but it did help somewhat."

"The questions made me start thinking about how normal kids are led to experiment with drugs."

While most did not comment, high school students reported a few positive remarks like those above, but gave more that were unfavorable:

"Questions didn't provide new information."

"I've heard so much already."

"So much is going around about drugs in the movies, television, magazines."

"It would have been better if it had not gone into such detail."

"I understood before because I'm informed anyway."

In the discussion period with the college students, the writer selected certain questions that were thought appropriate for the group while the high school teacher read and asked all the questions exactly as written. It seems apparent that the method of presentation definitely affected student judgment of their value. Here again the format and language were meant primarily for the instructor with the thought that adaptation and selection would be necessary to meet the particular levels of comprehension and need. It was thus seen that the concept of appropriate utilization cannot be assumed, but should be written out in the instructions.

Two other factors may have influenced the difference in response between the college students and the high school students. One was the greater familiarity with and increased information about drugs by the high school students at the time of presentation in the spring of 1970, a year and a half after the initial use of "Ross." The second factor was the boredom and disinterest that may result from a long and poorly structured discussion period. Questions and discussion are the traditional tools of the teachers, but they are frequently overworked and inadequately presented.

Question 5: Would this audio tape and background material be valuable and effective as a teaching aid? Comment further.

Each group was asked to rate the suitability and value of Ross' story and background materials for particular grade levels: junior high, senior high, and freshman college students. (There was one exception in that college students did not mark a rating for the junior high level, for this idea did not occur until the use of the evaluation sheet later by the high school students.) It can also be noted in Table 1, page 80, that a number of students failed to give ratings on this question. Most of these placed only a check signifying their acceptance. This is also true to a lesser extent on the subsequent evaluation sheets.

By adding the two highest ratings, it can be seen that slightly over 81 per cent of the college students indicated their high value of "Ross" as an effective teaching aid for senior high school students, but only about 69 per cent felt the same way in its use for their own age group. In contrast about 50 per cent of the high school students rated "Ross" with "5" or "4" and about 42 per cent gave similar approval for the junior high age. High school students were even less enthusiastic in its use for college students as about 43 per cent rated the material "2" or "1."

It should be remembered that there was an interval of a year and a half between the college and high school presentations. During this interval, the local and national drug picture changed rapidly. The incidence of drug abuse increased tremendously as did publicity by word and mass media. Thus, the greater acceptance

by the college students reflects not only their conservative nature and inexperience but also the drug situation at the time of presentation of "Ross" to them. A few of their comments reveal their thoughts:

"It made the whole idea of drug taking more realistic."

"I found the tape really valuable and it cleared up many questions in my mind about the use of drugs."

"At sixteen a person has not really reached the questioning period--the experience of a college student and his solution would be more meaningful."

By the time "Ross" was presented to high school students, his experimentation seemed mild and not a new or unique story. From their comments it was evident that a few may have used drugs:

"I'll do it (use marijuana) whenever I'm in the mood."

". . . glad he tried it."

"I have personally thought of smoking because all teenagers, not just me, get confused and disturbed with the situations today." (a boy)

"I have a pretty good idea that I know more about it than anyone in the class."

The last part of the evaluation sheet consisted of three questions asking for major ideas and guidelines for personal living. (See Appendix A) These would hopefully indicate students' understanding and appreciation of the subconcepts covering influential factors and resultant problems and the desired knowledges and attitudes. Some of their statements are as follows:

"Don't look to drugs to find your identity."

"Marijuana is often first used out of curiosity."

"Parents who don't care aid the drug problem."

"When I hear stories like this, I feel much more sure that I would never try any drugs."

"Drugs don't make your life any better--it hurts you more than helps you."

"Become involved in many areas rather than limit yourself."

"Choose your friends carefully because they have great influence."

Over 90 per cent of the students wrote some comments regarding their major ideas, and while they varied considerably in phrasing and thought, a great number of them were similar to those above. By reviewing the outline of concepts and teaching objectives in Appendix A and comparing these with the students' ideas, there is strong indication that they had an understanding of the concepts regarding influential factors in drug use.

In the instructor's evaluation sheet, a rating scale ranging from "5" indicating "excellent," to "0" indicating "absent" was provided with additional space for comments on each item. The tape and supplementary materials were each evaluated in terms of format and content. The high school instructor who used "Ross" felt that the physical qualities of the tape, its length and audio qualities were "very good." She rated the supplementary materials "very good" to "excellent," with the exception of the discussion questions which were "good;" however, she commented that they needed to be clearer and simpler because of student difficulty

in comprehension. She also questioned the amount of background information. The writer feels that both of these problems stem mainly from her presentation procedure of reading verbatim. The high school instructor, although finding that "Ross" stimulated interest and was pertinent to their needs, suggested it as only "fair" for high school age, more suitable for junior high age. With this thought the writer agrees.

In conclusion, "Ross" was a partially successful first attempt in producing a motivational device for teaching health concepts. Certainly as a technique that takes into the classroom the voice of one who has experienced particular situations, it can stimulate attention and interest, factors important to learning. The variation in response between the college and high school students on background information and discussion questions can be attributed to a great extent to the presentation procedure.

With the experience of preparing additional tapes and materials, it is apparent that "Ross" could be improved by having him describe some of his closest friends and their activities on the tape, rather than leaving so much of this pertinent information as background information. There also could be further improvement by concentrating on fewer concepts, eliminating the fourth and sixth knowledge objectives and their corresponding questions, numbers four, five, eight and nine. In terms of essential materials and convenient length, the long range goals now appear unnecessary.

In general, "Ross'" partial success as a motivational device was due primarily to two factors: the inexperience of the writer in coordinating health concepts, background information and the taped story, and the multiplicity of factors and the changing status of the drug scene in recent years, even in the span of a year and a half. This latter factor makes it difficult to select a person with whom all students can identify, particularly when there is extensive use of marijuana. There is also the problem that while a former drug user can deter some, for others it may stimulate their curiosity to experiment.

In terms of being meaningful and appropriate to high school students, "Ross" is no longer suitable. Perhaps it may now be appropriate for upper elementary middle class children. Certainly, discretion in the selection and use of materials concerning drug experimentation and abuse is most important in relation to the physical, emotional, and social level of the students in a particular school or community, for the illustration must provide meaningful points for self-identity.

TABLE 1

Students' Evaluation of "Ross"

Questions	Group Response ^a	5 ^b		4		3		2		1		No Response		
		N	%	N	%	N	%	N	%	N	%	N	%	
1. Story realistic to you?	HS	105	32	30.48	45	42.86	17	16.19	11	10.48	-	-	1	.94
	C	85	27	36.00	39	45.88	18	21.18	1	1.33	-	-	-	-
	T	190	59	32.78	84	44.21	35	18.42	12	6.67	-	-	1	.52
2. Ross' solution acceptable?	HS	103	35	33.98	27	26.21	32	31.07	5	4.85	4	3.88	3	2.83
	C	85	41	48.24	21	24.71	15	17.65	6	7.06	2	2.35	-	-
	T	188	76	40.43	48	25.53	47	25.00	11	5.85	6	3.19	3	1.57
3. Background contributed to understanding?	HS	105	13	12.38	28	26.67	45	42.86	13	12.38	6	5.71	1	.94
	C	85	35	41.18	38	44.71	12	14.12	-	-	-	-	-	-
	T	190	48	25.26	66	34.74	57	30.00	13	6.84	6	3.16	1	.52
4. Questions and discussion aided understanding?	HS	105	13	12.38	10	9.52	20	19.05	39	37.14	23	21.90	1	.94
	C	83	19	22.89	28	33.73	28	33.73	8	9.64	-	-	2	2.35
	T	188	32	17.02	38	20.21	48	25.53	47	25.00	23	12.23	3	1.57
5. Tape and material valuable and effective as a teaching aid?	(For SH	91	22	24.18	17	18.68	35	38.46	10	10.99	7	7.69	15	14.15
	JH level)													
	SH	93	21	22.58	26	27.96	24	25.81	11	11.83	11	11.83	13	12.26
	(For C	79	41	51.90	23	29.11	13	16.46	2	2.53	-	-	6	7.06
	SH T	172	62	36.05	49	28.49	37	21.51	13	7.56	11	6.40	19	9.95
	level)													
(For SH	90	19	21.11	9	10.00	23	25.56	18	20.00	21	23.33	16	15.09	
college C	78	30	38.46	24	30.77	14	17.95	7	8.97	3	3.85	7	8.24	
level) T	168	49	29.17	33	19.64	37	22.02	25	14.88	24	14.29	23	12.04	

a - High School N = 106
 College N = 85
 Total N = 191

b - Rating Scale

5 - A very great deal 3 - Somewhat 1 - Not at all
 4 - A great deal 2 - Very little

"John"

The subject for the second tape and supplementary materials was John, a youth with diabetes. The first presentation was made by the writer to fifty college students, mostly freshman girls, with conservative backgrounds and major interests in teaching. These characteristics were typical of almost all the different college classes to which "John," "Ross" and the subsequent packets were presented. Later in the spring of 1970, "John" was used in coeducational high school family life education classes totaling 116 students. These were the same classes to which "Ross" was presented as previously discussed. A third group, twenty senior major students in physical education heard "John" in their health education methods class.

In evaluating "John," students used the same rating system as described earlier, a scale ranging from a high of "5" to a low of "1," with additional space after each question for students' comments. In the preliminary calculations of the data on "John," the high school evaluation sheets were again tabulated by sex, giving forty-seven boys and seventy-one girls. The differences in ratings were even less than with "Ross," so that the final Table 2, page 92, shows a combined group. Table 2 also shows a number of students who failed to respond to questions with a specific rating, although they usually placed a check to show approval.

Question 1: To what extent was John's story realistic to you? In what ways?

This question was the same one asked about Ross and the subsequent subjects. It can be noted that there was not a great deal of difference among the combined highest ratings of "5" and "4" by the three groups, ranging from an 80 per cent for the college freshmen to a 90 per cent with the college seniors. Only two students rated John with "2" or "very little" in realism, while 14.89 per cent felt the story was "somewhat" realistic. The college seniors were quite high with 55 per cent giving a rating of "5." This may be due in part to the fact that they are prospective teachers, soon perhaps to launch into the challenges of teaching health, thus the greater appeal of a technique to facilitate the task.

John's story is not a controversial topic nor one with which many people are familiar, therefore, he may be quite acceptable and stimulate more interest. The comments by the college and high school students reflect this acceptability and their identity with John:

"He just told about everything as it really is."

"This type of illness could happen to anyone at any time."

"He sounded like an average boy accepting his problem realistically. He didn't sound put-on or affected."

"He spoke with honesty as to his feelings and thoughts. It was possible to identify with him."

"He spoke simply and made you feel like he was right there talking to you face to face."

Question 2: How acceptable to you was John's attitude towards his problem, his way of looking at people and his world? Explain how you feel.

John's attitude towards his problem was most positive as was his view of other people and the world in which he lived. Handicapped individuals do not always have this outlook, and normal persons may even believe that such attitudes are too unrealistic and not too probable. It was interesting to note that slightly over 96 per cent rated John's attitude with "5" or "4," signifying their approval. Only 3.19 per cent said his attitude towards his problem was "somewhat acceptable" and none gave lower ratings. The comments from the three groups were similar and support the high ratings:

"John was not buried in self-pity. I admire his attitude."

"His acceptance of himself brought acceptance from others."

". . . makes me wish myself (sic) and others could accept our small problems half as well as John lives with his handicap."

"John has a real good outlook on life."

Question 3: This question was the same as was asked on "Ross," the previously discussed material. These rating totals on "John" and "Ross" were fairly similar. For "John," slightly over 55 per cent of the three student groups marked "5" or "4," and 35.91 per cent marked "3," signifying the background contributed "somewhat." The background information on John concerned his family, his early health problems and diagnosis of his diabetes and the details of much that he tells in the tape. The spread in the ratings may be due to several factors, one being the fact that a number of the students may have felt themselves knowledgeable about diabetes. Another factor could be the rather boring

presentation technique of the high school instructor of reading the detailed information verbatim instead of selecting portions. It can be seen that the college seniors seem to acknowledge to the same extent as the two other groups, the importance of the background material, 55 per cent rating it "5" or "4." Assuming their greater maturity and knowledge after a basic health education course, one would think that they would feel less need for this information; however, being prospective teachers with a desire to know more may have stimulated their response to this question.

Even though their ratings varied to some degree, the comments of the three groups were almost all favorable and typical of the ones below:

"Background rounded out his personality for us."

"His family played an important part of his being able to accept his illness. If the background about his childhood had not been given, his story would have been hard to believe."

"It helped me to understand his feelings and his acceptance of his condition."

"He said almost the same thing as the background material."
(high school student)

Question 4: Did the follow-up questions and discussion aid in your understanding? In what ways?

In contrast to their previous high rating of this tape, the response to the questions and discussion was not high with either the high school students or college freshmen. Of these two groups, 51.25 per cent said it contributed "somewhat,"

marking "3" rating, although nearly 26 per cent indicated that discussion helped tremendously, marking "5" or "4." The high school group had the larger number, about 27 per cent, who felt that the questions and discussion helped "very little" or "not at all." The college seniors did not have time for discussion after the playing of the tape. Perhaps the careful presentation of the background information and the playing of the tape are in themselves fairly adequate in producing an understanding, for this group was most enthusiastic about "John" as a teaching aid. This could also be a factor in the freshman group as suggested by the comment below. College freshmen expressed generally more favorable comments in spite of their low ratings:

"We discussed the pros and cons of John's condition, whereas he only told the story from his viewpoint."

"I feel the tape itself did an excellent job of helping the student understand the disease and its influence on John's life."

"It brought out different points from classmates for further thought."

With the high school students, the technique of reading all the questions by the instructor could have influenced the low student opinions. Some of the comments from the high school students reflect their thoughts:

"We just expounded on what was already said."

"I could understand from just hearing him talk about it."

"They helped some but I'd rather just discuss what he had to say."

"It gave me a better understanding of his condition."

These comments clearly show that the task of structuring a discussion period is not an easy one, its success depending to a great extent on the sensitivity of the teacher to the mood and needs of the students at that particular time.

Question 5: To what extent would you accept John as a close personal friend? Describe your reaction as a fellow student.

Since social discrimination against handicapped people is often a problem, this question was asked. Combining the rating of "5" and "4," about 91 per cent of the college freshmen showed the greatest acceptance of John as a personal friend; the college seniors placed second with about 89 per cent, and only about 61 per cent of the high school students were this accepting of John. Perhaps the college students are somewhat more mature in their judgments, and since they are interested in teaching, they tend to have a greater degree of concern for the individual. The comments from the college students seem to reinforce these ideas:

"I would treat him as any other student, make him feel 'in'. I would let him know that he could rely on me."

"John seems to be the type of person that is most valuable as a friend. He sounds understanding, warm and intelligent."

"I would be anxious to know his problem and would strive to encourage him."

The high school students appear to be more cautious, possibly reflecting their own reticency, insecurity, and lack of knowledge about this disease:

"I can't really say without meeting him."

"I doubt that we share the same interests, but I'd readily accept him as a normal person."

"I respect him for his courage. He sounds like a very interesting and friendly guy."

"I would probably feel sorry for him."

"I would treat him as anyone else if he had a good personality."

Question 6: If you were John's close friend, how much would you want to know about his problem? Comment further.

It was thought that this question might reveal further insights into how people feel about personal relationships with a handicapped person. It was interesting to note that the combined "5" and "4" ratings of the three student groups for this question and the preceding one on John as a close friend were very much the same, about 73 per cent and 72 per cent respectively. It seems that the large majority could freely accept John as a friend and also wanted to know much about his problem so that they could lend assistance if needed. This relationship is apparent with even a cursory check of the evaluation sheets. In contrast, it should be noted that 24.73 per cent on Question 5 and 21.35 per cent of the total group on Question 6 marked a "3" rating, or that they had reservations about accepting John as a friend and knowing a great deal about his problem. Four of the high school students were hesitant about giving friendship and seven wanted only "very little" information about his disease. For various reasons handicaps seem to create a problem in social acceptance.

In the comments of the three groups, there are two general feelings, one of wanting to know in order to assist and understand, and the other, a fear of prying into personal problems:

"I would want to understand but not pry.

". . . if he wanted to discuss it and tell me about it."

"I would not like to probe into his business. It's his life and maybe talking about it makes him more self-conscious."

"I would want to know as much as possible in case something happened, then I could help."

"You need to know all about him to understand him."

"I would want to understand every phase of his problem so that we could become close friends without letting his problem become a barrier."

Question 7: Would this audio tape and background material be valuable and effective as a teaching aid. Comment further.

This question was the same as was asked about "Ross" and the subsequent tapes and materials. The general ratings on "John" were consistently about ten points higher than with "Ross." About 53 per cent of the total group gave a "5" or "4" as suitable for the junior high level, slightly over 73 per cent of the three groups indicated its value for the senior high level and about 67 per cent rated its high effectiveness for the college level. In their lower rating for the junior high level, 37.13 per cent of all the students rated it with a "3." Some college freshman and high school students indicated their feelings that this age was "not mature enough," or "interested in things of this sort." Interestingly, about 82 per cent, or fourteen college seniors

who expect to teach health education, felt that the tape and materials were of great value for the junior high age. There were only a few comments from the high school students and these seem to repeat what the college students offered:

"I think all classes could benefit because we really don't get firsthand accounts of things such as this, especially diabetes."

"Just being aware of the problems of a diabetic is good in itself. Hearing the person talk about the problem himself is still more enlightening."

"It is a good reminder that there are others less fortunate than ourselves who still manage to enjoy life to its fullest extent and don't let their handicaps interfere."

The last part of the evaluation sheet consisted of three questions asking for major ideas and guidelines for personal living. These should hopefully indicate students' understanding and appreciation of the subconcepts covering the physical, social, and emotional factors influencing John's growth and development. It was also hoped that they might appreciate John's attitudes and behavior as an example for their own lives. The comments from the three groups of students seem to indicate these understandings:

"Accept yourself for what you are and make the most of it."

". . . how friendship can relieve the embarrassment of handicaps."

"I learned what a vital part parents can play in a child's development."

"Keep yourself in the best possible physical and mental condition."

"A diabetic can live a fairly normal life."

Over 95 per cent of the students wrote some comments regarding their ideas which were similar to those above. By comparing the outline of concepts and teaching objectives in Appendix B with the students' ideas, it can be seen that many had an understanding of concepts regarding growth and development.

Two instructors' evaluations were made, one from the university teacher of the college senior health education methods class, and the other from the high school teacher of the family life education classes. The university instructor rated all physical and content qualities on the tape and supplementary materials either "excellent" or "very good." One exception was the voice quality of John which she said was only "good." Some of this problem was corrected later by a direct method of tape copying. This lower rating might also be due in part to John's high pitched voice, lacking in deep resonance due to his slow growth pattern. The high school instructor felt the same about the voice quality. She was generally not as favorable in her ratings, giving a "good" or "fair" rating on the supplementary materials, their organization and convenience in use, sentence structure, and style. This reaction was attributed mainly to her presentation procedure. Both instructors rated "John" "very good" or "excellent" in terms of stimulating interest and being meaningful, realistic and appropriate to high school and college students.

In conclusion, the general overall response of both students and instructors to "John" was quite favorable, showing

considerable success as a motivational device for teaching health concepts. The number of objectives and corresponding discussion questions are fewer than in "Ross," thus the handling and teaching of the concepts perhaps are easier. Here, as in the first packet, the long range goals now seem an unnecessary part of the materials. While factual information about diabetes mellitus was provided, it was not needed or used in either case. It was discovered that the high school instructor's husband has diabetes, so she is quite familiar with the problem. If such information was needed or used, it would have to be updated in light of new understandings and knowledge.

In terms of being meaningful and pertinent to youth, even junior high level, "John" is a valuable tool in helping young people who are eager to find the keys to the various dimensions of growth and development. Their search for self-identity and self-worth is particularly important to them at this age. They frequently dwell on their "handicaps," so that John's example of a productive and worthwhile life can offer them hope along with constructive ideas and guidelines.

TABLE 2

Students' Evaluation of "John"

Questions	Group Response ^a	5 ^b		4		3		2		1		No response		
		N	%	N	%	N	%	N	%	N	%	N	%	
1. Story realistic to you?	HS	118	42	35.59	58	49.15	17	14.41	1	.85	-	-	-	-
	CF	50	21	42.00	19	38.00	9	18.00	1	2.00	-	-	-	-
	CS	20	11	55.00	7	35.00	2	10.00	-	-	-	-	-	-
	T	188	74	39.36	84	44.68	28	14.89	2	1.06	-	-	-	-
2. Acceptability of John's attitude toward problem?	HS	118	71	60.17	43	36.44	4	3.39	-	-	-	-	-	-
	CF	50	33	66.00	15	30.00	2	4.00	-	-	-	-	-	-
	CS	20	12	60.00	8	40.00	-	-	-	-	-	-	-	-
	T	188	116	61.70	66	35.11	6	3.19	-	-	-	-	-	-
3. Background contributed to understanding?	HS	112	23	20.54	37	33.04	39	34.82	11	9.82	2	1.79	6	5.08
	CF	49	8	16.33	22	44.99	17	34.69	2	4.08	-	-	1	2.00
	CS	20	2	10.00	9	45.00	9	45.00	-	-	-	-	-	-
	T	181	33	18.23	68	37.57	65	35.91	13	7.18	2	1.10	7	3.72
4. Questions and discussion aided understanding?	HS	112	10	8.93	19	16.96	52	46.43	22	19.64	9	8.04	6	5.08
	CF	48	3	6.25	10	20.83	30	62.50	5	10.42	-	-	2	4.00
	CS	-	-	-	-	-	-	-	-	-	-	-	20	100.00
	T	160	13	8.13	29	18.13	82	51.25	27	16.88	9	5.63	28	14.89
5. Accept John as personal friend?	HS	114	26	22.81	44	38.60	39	34.21	4	3.51	1	.88	4	3.39
	CF	49	24	48.98	21	42.86	4	8.16	-	-	-	-	1	2.00
	CS	19	6	31.58	11	57.89	2	10.53	-	-	-	-	1	5.00
	T	182	56	30.77	76	41.76	45	24.73	4	2.20	1	.55	6	3.19

a-High School N = 118
 College freshmen N = 50
 College seniors N = 20

Total N = 188

b-Rating Scale

5-A very great deal
 4-A great deal

3-Somewhat
 2-Very little

1-Not at all

TABLE 2 (continued)

Questions	Group Response ^a	5 ^b		4		3		2		1		No response		
		N	%	N	%	N	%	N	%	N	%	N	%	
6. If friend, knowledge of problem	HS	113	43	38.05	36	31.86	26	23.01	7	6.19	1	.88	5	4.24
	CF	47	28	59.57	11	23.40	8	17.02	-	-	-	-	3	6.00
	CS	18	10	55.56	3	16.67	4	22.22	1	5.56	-	-	2	10.00
	T	178	81	45.51	50	28.09	38	21.35	8	4.49	1	.56	10	5.32
7. Tape (For JH and materials level)	HS	105	26	24.76	24	22.86	41	39.05	11	10.48	3	2.86	13	11.02
	CF	45	13	28.89	12	26.67	18	40.00	2	4.44	-	-	5	10.00
	CS	17	8	47.06	6	35.29	3	17.65	-	-	-	-	3	15.00
	T	167	47	28.14	42	25.15	62	37.13	13	7.78	3	1.80	21	11.17
Valuable and effective level)	HS	111	22	19.82	46	41.44	37	33.33	4	3.60	2	1.80	7	5.93
	SH	46	12	26.09	31	67.39	3	6.52	-	-	-	-	4	8.00
	CS	18	6	33.33	12	66.67	-	-	-	-	-	-	2	10.00
	T	175	40	22.86	89	50.86	40	22.86	4	2.29	2	1.14	13	6.91
As a teaching aid? (For college level)	HS	102	31	30.39	26	25.49	18	17.65	19	18.63	8	7.84	16	13.56
	CF	45	21	46.67	18	40.00	6	13.33	-	-	-	-	5	10.00
	CS	18	6	33.33	9	50.00	3	16.67	-	-	-	-	2	10.00
	T	165	58	35.15	53	32.12	27	16.36	19	11.52	8	4.85	23	12.23

a-High School N = 118
 College freshmen N = 50
 College seniors N = 20
 Total N = 188

b-Rating Scale

5-A very great deal
 4-A great deal

3-Somewhat
 2-Very little

1-Not at all

"Cindy"

The subject for the third tape and supplementary materials was Cindy, a girl overly concerned with dieting and a slim figure. Presentations of "Cindy" were made during the unit on nutrition to two health education classes of twenty-five students, almost all freshman girls, by this writer and a second university instructor. It was used a third time by another instructor, out of context, near the end of the health education course. Thirty-four students were in this latter group.

The data from the three groups were tabulated separately, showing the first two college groups quite similar in response, the third one noticeably different. Table 3, page 105, shows the data for the first two groups combined as a single group, identified as Group A, that is, the ones who studied "Cindy" during the unit on nutrition. The third group is identified in the table as Group B, those who studied the tape and the materials some weeks after the completion of the nutrition unit.

Question 1: To what extent was Cindy's story realistic to you? In what ways?

In Group A, 64 per cent were most favorably impressed with the realism of Cindy's story, rating it with a "5" or "4." In contrast only about 29 per cent of Group B gave a similar rating and 55.88 per cent rated it "3," or "somewhat" acceptable. About one-third of Group B wrote comments, some of which reveal why they voted as they did:

". . . did not sound like someone telling a story."

"I do not understand why a 105 pound girl would do such a thing to her body, but I guess some girls are that way."

". . . too strict, never known anyone with that much will power."

"Being a high school student, she should have had some basis in health education."

From Group A the following thoughts are given:

"I have gone on crash diets before and have experienced physical problems. I'm also concerned about physical appearance very much."

"It sounded a lot like me sometimes, just not eating anything and feeling that I have to keep my weight down for looks and to get into my clothes."

"I have many friends who have tried this type of diet."

The contrast in high and low ratings between these two groups could possibly be attributed to two factors unique with Group B. "Cindy" was presented to them not only out of context, but several weeks after they had completed the study on nutrition and nutrition problems such as dieting. These girls, now familiar and perhaps feeling quite knowledgeable about the subject, may have been somewhat bored with the repetition of the material. For Group A, "Cindy" was a planned part of the initial study on nutrition.

Question 2: To what extent could you identify with Cindy and her efforts to control her weight and the resulting problems? In what ways?

This question was unique to the tape on Cindy. It was an attempt to discover how many of the students had had similar

diETING problems. There was also the thought that if they had, they might then see the folly of their ways and be motivated to change their behavior. In Group A, 6.12 per cent, 24.49 per cent and 48.98 per cent rated identity with Cindy "5," "4," and "3" respectively, while 5.88 per cent, 14.71 per cent and 52.94 per cent of Group B gave the same respective ratings. This meant that slightly over 79 per cent of Group A and about 73 per cent of Group B could identify with Cindy's dieting difficulties. Although these totals are quite close, it can be seen in the "5" and "4" totals that Group A is about 10 per cent higher in its rating than Group B, possibly indicating greater identity.

The thoughts expressed by most of the students were similar:

"I could identify in some ways, but not to Cindy's extent."

"I have had problems with weight control even more serious than Cindy's. My high school years were filled with dieting also."

"At one time she said she didn't eat all day and then ate a great deal of snack food at night. I find myself doing that quite often."

"I have experienced fatigue, depression, headaches and general slowness from stupid diets."

The degree of identity with Cindy is no doubt related to a great extent to the student's personal experience or experience with close friends. Cindy's behavior is an extreme example, yet the fact that only five students out of eighty-four could not relate to Cindy's experiences at all shows quite clearly that unbalanced and ridiculous dieting is a big problem for teenage girls.

Question 3: To what extent did the background material and menu sheet contribute to your understanding? In what ways?

This question was the same one that was asked on "Ross" and "John" except for the reference to the menu sheet. The menu sheet listed Cindy's diet for six days with evaluations in terms of total daily calories and number of servings in the four basic food groups. It is interesting to see in this question that the total rating percentages on "Cindy" follow closely the ones on "John's" background. On "Cindy," however, 66 per cent of Group A rated this aspect with a "5" or "4" indicating its value, while about 32 per cent of Group B gave similar ratings. Nearly half, 47.06 per cent, of Group B felt that the background helped "somewhat" showing their recognition of this necessary part. Background information is essential; however, the response of the students will depend upon their prior knowledge and experience and the skill of the instructor in giving pertinent facts to meet his students' needs.

The comments fail to throw light on the reasons for the range of ratings, but they do reveal how the material, particularly the menu sheet, aided understanding of Cindy's actual eating behavior in contrast to her comments on the tape:

"I could see Cindy's spasmodic eating habits and was amazed at her unbalanced amounts of food."

"It showed me just how much I really was lacking in the necessary nutrients."

"It gave me a clearer picture of what kind of person Cindy was and why she wanted to diet."

". . . helped to show the fallacies of improper diet."

"The menu sheet showed why she was having physical problems."

Question 4: Did the follow-up questions and discussion aid in your understanding? In what ways?

There was a considerable difference between the responses of the two groups. About 51 per cent of Group A gave a rating of "5" or "4," while just slightly over 23 per cent of Group B marked these same ratings. In the "3" rating, 44.68 per cent of Group A felt the questions aided understanding "somewhat" and 55.88 per cent of Group B felt the same way. It seems clear, again here, as with the presentation of the background material, that there are many influential variables that would make the student's response quite individualistic, such as general knowledge, perception, personal receptiveness with subject and interest in topic, instructor's procedure and interest, and wording of the questions. These factors are only a few, but they are quite difficult to control, and, therefore, hard to evaluate in any situation. Some of the students' written thoughts reveal their varied ideas:

"I saw in her poor diet my own and could understand my failings, shortcomings, and stupidity through her practices."

"No one said anything I couldn't have gathered for myself."

"The questions helped me to realize that Cindy was like most people, intelligent in all areas except in nutrition."

"It helped to know the wrong she was doing to herself."

"Many ideas I had not thought about were pointed out."

Question 5: Would this audio tape and background material be valuable and effective as a teaching aid? Comment further.

When the "5" and "4" ratings are combined, "Cindy" was judged by Group A to be most useful at the senior high and college levels, slightly over 91 per cent and 86 per cent respectively, while it was judged by 72 per cent to be very useful for the junior high level. Group B's ratings were not only lower, but almost in reverse order, as the combined "5" and "4" ratings showed nearly 61 per cent, 56 per cent and 33 per cent believing it to be very useful for the junior high, senior high, and college levels, respectively. They obviously felt "Cindy" best for the junior high students.

It is strange to see that Group B's rating on identity with Cindy in Question 2 and its rating on the value and usefulness of the tape and materials for college level follows almost the same pattern, a few rating "5," the majority "4" and "3." Even though Group A's identity rating was nearly the same on Question 2, they were most impressed with "Cindy" as a teaching aid. Some of the influential factors may lie in class procedures, attitudes, and interest.

There were very few written comments to this question. Some from both groups show the variety of thoughts:

"By the time we reach senior high, all we've had is teaching. This audio tape and background is effective and a switch."

"People already know this but pay little attention."

". . . relevant to all, especially girls, boys not so much."

"Even in junior high, students worry about weight problems."

Question 6: Give two major ideas that are personally significant to you as a result of this study.

In an attempt to simplify and consolidate the students' understanding of concepts, this question on "Cindy's" evaluation sheet and the final one on "Susan" were changed. Students were asked to give only two personally significant ideas. Almost all the students responded to this request. While their remarks vary, they generally seem to show considerable understanding of the nutritional factors and problems expressed in the subconcepts and teaching objectives, and a need to evaluate honestly their personal diet patterns. Three areas in particular appear frequently among their thoughts: the danger and problems of a poor diet, the importance of exercise to improve body lines and the value of a balanced diet. In comparing the remarks they wrote with the objectives, there are strong indications that the girls understood the concepts quite clearly and some were willing to take action.

The comments from both groups reflect these understandings and appreciations:

"Everyone needs a balanced diet to be alert mentally, physically, and socially."

". . . made me realize that there is a vast difference between fat and undertoned muscles."

"I realize that these crazy diets may cause physical and emotional problems if extended over a period of time."

"I found that it is more important to cut down on what you eat than to cut out completely."

"It takes both exercise and a proper diet to lose weight and to maintain a steady weight."

"It has motivated me to try to establish a more balanced diet."

The two instructor's evaluations (other than this writer) seem to follow generally the same responses as their group; Group A's instructor being far more favorable than Group B's instructor. Both instructors used the same evaluation sheet that had been used previously.

In the evaluation of format, Group A's instructor rated all items except family background "excellent" or "very good." This included the physical qualities of the tape, its voice quality, loudness, length, and the organization, style, conciseness and convenience in use of the supplementary materials. The family background was rated "good" with the suggestion that there was more than was necessary.

Group B's instructor gave a lower rating to a number of items. The voice quality was rated "good," the inflection not being appropriate at times. Its ability to keep students' attention and interest was rated only "fair" with the remark that there was an overlap especially in physical problems. The organization of the supplementary materials were for the most part "very good," but this was a lower rating than was given by the instructor of Group A. Family background and the discussion questions received a "good" by this instructor with the suggestion that the questions might be more openended.

In the content section of the evaluation occurred the greatest differences between the two instructor's ratings. Group A's instructor felt the tape "excellent" or "very good" in being appropriate to grade level, stimulating interest, being meaningful, realistic and pertinent to students' needs and problems. The rating by Group B's instructor was considerably lower in all items in this area, particularly in being appropriate to grade level and realistic, which received a "fair." Inasmuch as the students of Group B rated this packet as "somewhat" useful for college level, and the instructor's response on these items was also low, one wonders whether the instructor or the students were responsible for initiating the tepid response or whether either had an influence on the other. The instructor made the comment after the question on realism that the emphasis on physical problems was not normal for this age group. Perhaps this quality of realism depends far more on the individual's close-at-hand experience with dieting problems.

The ratings on the content of supplementary materials also showed considerable differences between the two instructors. The instructor of Group A rated concepts and objectives "excellent." With "Cindy" the number of these objectives was considerably fewer than the first two sets of materials. The instructor of Group B rated this item lower, but still "very good." Long range goals were not written for "Cindy" nor do they seem necessary.

Although Group A's instructor used only a small portion of the background information, rating student response "good,"

there was the comment that the quantity of it might be overwhelming to the teacher. The instructor of Group B, in contrast, rated the background material only "fair," writing that it was "not too meaningful" and that student response was "absent." The instructor may have been confused here in the word usage, family background meaning to him only Cindy's parents instead of the entire amount of background information. This writer feels that the details of Cindy's story are needed for the instructor to clarify the events during Cindy's five years of dieting, but that only a small portion need be presented to the students: Cindy's intellectual ability, her family's economic and educational background, her early childhood pattern of activity and her height.

The discussion questions were given a "very good" rating by the instructor of Group A, with student response "good." With fewer objectives these, too, were fewer than in earlier packets. In contrast, Group B's instructor rated this aspect "good," with student response "poor." The student evaluations on this aspect seem to support the instructor's evaluations. What the influential factors are cannot be discerned.

In conclusion, "Cindy" appears quite successful as a motivational teaching device for two groups and their instructors, with only fair response from a third. Certainly for greatest effectiveness, the material should be integrated into the study on nutrition and dieting. The use of it out of context may explain much of the lower evaluations by Group B and the instructor;

however, Group B and the instructor may also be some who are not particularly interested in the problem of dieting. This writer feels that "Cindy" is most suitable for all three levels, the junior high students usually being most receptive to experiences of older girls, and the older girls more willing to respond to one their own age.

As a teaching packet, "Cindy" is an improvement over the first two packets, the objectives and questions being fewer, thus easier to present. Student response was greater also, particularly with Group A. In terms of being meaningful, Cindy is an extreme case of poor dieting practices in spite of being an academically talented girl. Frequently, teenage girls believe ignorance and low intelligence to be the major influential factors. Cindy showed that even when these factors are not present, there are forces that motivate people to practice extremely poor dieting patterns with resultant emotional, mental, and physical harm. The knowledge and the desire to follow a balanced diet is most important to the health and well-being of everyone.

TABLE 3

Students' Evaluation of "Cindy"

Questions	Group Response ^a	5 ^b		4		3		2		1		No response	
		N	%	N	%	N	%	N	%	N	%	N	%
1. Story realistic to you?	A 50	7	14.00	25	50.00	16	32.00	2	4.00	-	-	-	-
	B 34	1	2.94	9	26.47	19	55.88	4	11.76	1	2.94	-	-
	T 84	8	9.52	34	40.48	35	41.67	6	7.14	1	1.19	-	-
2. Identity with Cindy and her problem?	A 49	3	6.12	12	24.49	24	48.98	7	14.29	3	6.12	1	2.00
	B 34	2	5.88	5	14.71	18	52.94	7	20.59	2	5.88	-	-
	T 83	5	6.02	17	20.48	42	50.60	14	16.87	5	6.02	1	1.19
3. Background contributed to understanding?	A 50	13	26.00	20	40.00	15	30.00	2	4.00	-	-	-	-
	B 34	2	5.88	9	26.47	16	47.06	6	17.65	1	2.94	-	-
	T 84	15	17.86	29	34.52	31	36.90	8	9.88	1	1.23	-	-
4. Questions and discussion aided understanding?	A 47	6	12.77	18	38.30	21	44.68	2	4.26	-	-	3	6.00
	B 34	1	2.94	7	20.59	19	55.88	6	17.65	1	2.94	-	-
	T 81	7	8.64	25	30.86	40	49.38	8	9.88	1	1.23	3	3.57
5. Tape and materials valuable and effective as a teaching aid? (For college level)	(For A 47	17	36.17	17	36.17	10	21.28	3	6.38	-	-	3	6.00
	college level) B 31	6	19.35	13	41.94	7	22.58	5	16.13	1	3.23	3	8.82
	level) T 78	23	29.49	30	38.46	17	21.79	8	10.26	1	1.28	6	7.14
	and effective (SHA 47	25	53.19	18	38.30	4	8.51	-	-	-	-	3	6.00
	ing aid? level) B 30	3	10.00	14	46.67	11	36.67	2	6.67	-	-	4	11.76
	T 77	28	36.36	32	41.56	15	19.48	2	2.60	-	-	7	8.33
	(For college level) A 47	29	61.70	12	25.53	6	12.77	-	-	-	-	3	6.00
level) B 30	2	6.67	8	26.67	13	43.33	5	16.67	2	6.67	4	11.76	
T 77	31	40.26	20	25.97	19	24.68	5	6.49	2	2.60	7	8.33	

a-Group A = 50 college freshmen; materials presented in nutrition unit.

Group B = 34 college freshmen; materials presented out of context.

Total N = 84

b-Rating Scale - 5=A very great deal, 4=A great deal, 3=Somewhat, 2 = Very little, 1 = Not at all

"Susan"

Susan was the subject for the fourth and last tape and supplementary materials. A young married working woman with one child, she shared the values and unique characteristics of her marriage. "Susan" was presented first by this writer to freshman college students in a basic health education class, with sixteen students returning the evaluation sheet. A university faculty member also presented the packet to her two health education classes of fifty-seven students. All of these classes were predominately girls. Although the tabulation of the data was separate by class, the differences were negligible, so that Table 4, page 113, shows a combined group of seventy-three college students.

Question 1: To what extent was Susan's story realistic to you? In what ways?

The rating on realism of Susan's story is the highest of all the tapes, 47.95 per cent and 45.21 per cent given to "5" and "4" respectively, or slightly over 93 per cent saying that they could feel the authenticity of the woman speaking and perhaps were receptive to her message. Only four girls rated this aspect with a "3." The students' comments reveal further this receptiveness:

"I recognized many things that were similar in my family--role distinction and male domination."

". . . just like a family that I know."

"It's a common story for a wife to put her husband through school, then to accept a minor role as her husband assumes his role as provider. It's also

common to have the problem of a mother with a small working."

"She told her story step-by-step as if she enjoyed each part of it, accepting things and still being happily married."

Question 2: How acceptable to you was Susan's attitude towards her family and her work and study? Describe your ideas in this area.

This was unique to "Susan" and was asked in order to determine how students felt about the combined roles of work and family, and to see if this feeling might be a factor in their approval of this packet as a teaching aid. It is interesting to note that while the realism and receptiveness to Susan were very high, they could not accept her attitudes towards her family and work to the same extent, only about 69 per cent rating this aspect with a "5" or "4." Perhaps the wider range of feeling here reflects the various societal attitudes concerning the roles that a woman can or should assume towards her family and her work. The descriptions of their ideas are enlightening and illustrate the divergent opinions:

"It is my belief that a wife and mother should not let work and study interfere with the family unless her income is essential to the family economy."

"Susan seems quite patient and understanding and realizes the differences, attempting to either compromise or accept Jerry's opinions."

"Susan was too lenient and gave in to her husband's ideas much too often. Marriage is a compromise."

"I do think Susan should continue her studies because this seems to be the greatest thing she wants in life."

"She seems in some ways trying to escape her family life by being overactive."

Question 3: To what extent did the background material contribute to your understanding? In what ways?

This is again the same question that was asked previously, however, the response to the background material received the highest rating of all the packets, slightly over 86 per cent of the students marking a "5" or "4" rating. Obviously, the students felt that this information contributed much to their understanding for only nine students felt it helped only "somewhat." As with "Cindy," the instructions for "Susan" in the use of the supplementary materials were more explicit in advising selection to meet student needs, so that perhaps here this aspect was handled adequately and helped to create a more favorable response. The students' comments appear to affirm their ratings:

"It set the stage for the tape showing what Jerry and Susan and their parents were like."

"Background helped us to understand why they acted as they did."

"It gave me a little more insight as to the forces behind the individuals, namely their parents."

Question 4: Did the follow-up questions and discussion aid in your understanding? In what ways?

Feelings regarding the discussion period varied from 16.44 per cent rating this aspect "5," 36.99 per cent rating it "4," and 39.73 per cent giving it a "3" rating. A similar pattern occurred in the same question on Group A's rating on "Cindy." This may indicate that discussion is certainly needed but its value and meaningfulness will depend on a number of factors: the amount of time, the skill of the instructor, and the variables inherent in the students participating. Their comments show some areas that were clarified:

"It served to tie together many details."

". . . made me realize she was facing reality rather than being against her husband."

". . . pointed out things that I had not noticed before."

"It helped me to relate to Susan's story and compare her to myself and people I know."

". . . allows you to see others' viewpoints."

Question 5: Would this audio tape and background material be valuable and effective as a teaching aid? Comment further.

This question is, of course, the same on all evaluation sheets. It is interesting to note that 47.14 per cent of the college students felt that these materials were of "very little" value for the junior high level, but about 68 per cent rated them "5" or "4" for the senior high level, and were even more favorable, slightly over 87 per cent, for the college level. It seems that the college girls judge junior high age just too young as revealed by their comments: "aren't concerned," "too fidgety to sit still and listen," "too busy dating," and "would not understand." This writer wonders why the college students feel that the difference of one year between high school and college can make such a difference in maturity, but perhaps their identity with Jerry's and Susan's college background increased the appropriateness for them. As a fairly effective teaching aid, "Susan" is of value, particularly for the senior high and college levels. In contrast to previous evaluation sheets, the comments from the students were quite numerous on this question:

"A college student can relate to this tape because marriage is becoming more of a reality."

"It makes you think deeply about their problems and your views of them and the possibilities for change in their marriage."

". . . shows the give and take required in a marriage."

"For senior high it would be useful as many students are already planning marriage."

Question 6: Give two major ideas that are personally significant to you as a result of this study.

This request was the same as on "Cindy" and almost all students responded. Their thoughts and ideas varied considerably in phrasing, but most of them point very strongly towards an understanding of the values, attitudes, and needs of married life outlined in the teaching objectives and subconcept:

"For a successful marriage, each partner must sacrifice for the other."

"I see in my values, the values of my mother and father, and a third part of me (the values) that makes me unique."

". . . importance of common interests and acceptance of differences."

"Deep love must be present in order for two people to accept each other as individuals."

"Each partner should maintain a degree of independence while appreciating the qualities most admired in the mate."

"Parents who do work can spend sufficient time with their children and help them develop into healthy individuals. I never thought that this was possible."

The instructor (other than the writer) rated almost all items on the format and content with either "very good" or

"excellent." She felt that the physical qualities of the tape were "excellent," and "very good" in stimulating interest and attention. The concepts and objectives and family background were quite sufficient, well organized and easy to use. There were only five teaching objectives for "Susan." With five corresponding questions, these appear to be an adequate number. The instructor rated the discussion questions as "good," but noted that they had only ten minutes, insufficient time for discussion. She suggested that it would allow more time if sheets were returned at the next class. College level was the grade level recommended as being the most appropriate one.

The instructor rated "Susan" only "good" in being realistic. This is in contrast to the students, about 93 per cent of whom apparently were far more favorable on this aspect. Reflected here may be the differences in age, and the difficulty of the older generation judging what is realistic, meaningful, and of interest to youth. Also reflected may be a higher level of discrimination by the instructor.

In conclusion, this writer feels that "Susan" is a most successful attempt in producing a motivational tool for concept learning, particularly for conservative freshman college students in a basic health education course. This tape and materials should be evaluated by a coeducational high school group, although identity with Susan might not be as high with a more heterogeneous group. One comment by a college student suggested the need for a tape presenting the views of the husband and the son.

"Susan" was most effective in encouraging students to identify some of the forces that have already influenced them, and to choose the values that they feel important for their future married lives.

TABLE 3
Students' Evaluation of "Susan"

Questions	Group Responses	N	5 ^b	4	3	2	1	Mean	SD
1. Group realistic to you?	73	35	47.95	33	49.31	4	5.48	5	2.37
2. Attitude towards her family acceptable?	73	37	33.29	34	46.56	19	36.03	5	4.11
3. Background helpful to understanding?	73	24	59.73	34	46.58	9	17.33	4	1.37
4. Questions and discussion aided understanding?	73	11	16.46	27	36.59	29	39.73	4	5.48
5. Tape and materials valuable and effective as a teacher aid?	70	5	4.09	6	8.37	24	34.29	31	47.08
6. Tape and materials valuable and effective as a teacher aid?	70	10	14.29	30	54.29	18	37.14	5	4.29
7. Tape and materials valuable and effective as a teacher aid?	70	27	32.56	24	34.29	9	13.56	4	4.11

a - N = 73 college students

b - Rating Scale = 5 = a very great deal, 4 = a great deal, 3 = somewhat, 2 = a little, 1 = not at all

TABLE 4

Students' Evaluation of "Susan"

Questions	Group Response ^a	5 ^b		4		3		2		1		No response	
		N	%	N	%	N	%	N	%	N	%	N	%
1. Story realistic to you?	73	35	47.95	33	45.21	4	5.48	1	1.37	-	-	-	-
2. Attitude towards her family acceptable?	73	17	23.29	34	46.58	19	26.03	3	4.11	-	-	-	-
3. Background contributed to understanding?	73	29	39.73	34	46.58	9	12.33	1	1.37	-	-	-	-
4. Questions and discussion aided understanding?	73	12	16.44	27	36.99	29	39.73	4	5.48	1	1.37	-	-
5. Tape and materials valuable (For JH level)	70	3	4.29	6	8.57	24	34.29	33	47.14	4	5.71	3	4.11
and effective as a teaching aid? (For SH level)	70	10	14.29	38	54.29	19	27.14	3	4.29	-	-	3	4.11
(For college level)	70	37	52.86	24	34.29	9	12.86	-	-	-	-	3	4.11

a - N = 73 college students

b - Rating Scale - 5=A very great deal, 4=A great deal, 3=Somewhat, 2=Very little, 1=Not at all

CHAPTER V

SUMMARY AND RECOMMENDATIONS

Summary

This study has involved the development of four tape recordings with accompanying teaching materials and the evaluation of them as motivation for older youth towards concept learning in health education. The work has spanned a period of three years and has been a creative process of experimentation and study with resultant learnings and understandings by this writer.

In an overall view of the four packets, there appears to be an increasing receptiveness by the students and most of the instructors to each subsequent tape and accompanying materials. The writer feels that the first evaluation question, on realism, is most indicative of this quality, reflecting the degree to which a student or instructor can believe and feel the authenticity of the person speaking and thereby be receptive to illustrated concepts and subconcepts. It was also felt that this receptiveness to the speaker might be a subjective variable in positive motivation for learning. "Ross" received a highly favorable response on this quality from a majority of students, with the number increasing for "John" and being the highest on "Susan." The response to "Cindy" was lower, but approximately half could respond to the realism of Cindy's extreme dieting

behavior. In giving a very high approval of "Cindy" as a teaching aid on a later question, the students seem to be saying that nutrition and dieting are of tremendous concern and interest to them although they all have not experienced Cindy's difficulties. The instructors' responses to this quality of realism was quite favorable except for Group B's instructor. In this case, the causes may be attributed to a number of previously mentioned factors, possibly a major one being the instructor's feeling that the case was extreme and inappropriate.

The accompanying teaching materials show progressive improvement in their conciseness, organization, convenience and ease of use as indicated by the instructors' ratings and comments. While the background material may be excessive for the first three packets, it seems to be quite adequate for "Susan." Combining the two highest ratings, the students' reaction to the background information increased progressively for each packet to a very high majority on "Susan." The instructors' responses to the concepts and objectives were very good throughout, the fewer number in "Cindy" and "Susan" facilitating even more the task of teaching. The reactions of the instructors to the accompanying discussion questions were good, their organization being convenient to follow and use. While the number of questions was excessive in the first two packets, they were considerably fewer and seemed adequate in "Cindy" and "Susan." The total of the three highest ratings shows that the students indicated an

increasing value of the questions and discussion from a slight majority on "Ross" to almost all the students on "Susan." The degree of enthusiasm on this aspect and also the background information is attributed to a number of factors: students' interest and knowledge, the instructor's presentation skill, techniques and interest, time allotted and the interaction of these and other variables. Improved directions for use of the materials did correct some presentation problems, but to insure a better coverage, these could be even more detailed, at least in suggesting a minimum time for the introduction and follow-up questions and discussion.

Along with the evaluation on realism, the question concerning the value and effectiveness of the packets as teaching aids is most significant. In general, as in the other aspects, there was an increase in the value noted by the students from a low on "Ross" to a high on "Susan," with each packet being best for a specific grade level. Due to the changed drug scene over a year and a half, the reaction of the high school students and their instructor should be considered. About two-thirds failed to respond to "Ross" favorably so that "Ross" may be suitable now only for an upper elementary level. A majority of all students and their instructors rated "John" as useful for all levels, but nearly three-fourths of the students felt it best for the senior high level. John was a high school student, so it seems his greatest appeal is to that age, perhaps because the problems of self-worth and self-identity are of great need at

this age. The reaction to "Cindy" was more favorable than to "John," particularly by Group A. It was seen best for the senior high level, but also very useful for college level. With the exception of Group B's instructor, the instructors confirmed this opinion. Although the judgment on "Susan" was limited to college students, this packet was viewed by them and their instructors to be most appropriate for their age. It was not thought suitable for junior high students due to their immaturity.

In viewing the overall responses of the instructors and students, the writer feels that each of these life experiences was increasingly more effective in stimulating interest, and being meaningful and pertinent to students' needs and problems. From the students' comments on their understandings and appreciations, it appears that many do have the knowledges and attitudes related to the health concepts concerning mood-modifiers, growth and development, nutrition and dieting, and family living.

There have been certain limitations to this study, some of which are avoidable with careful planning and organization:

1. Each one of the subjects, and Ross particularly, failed to win a favorable response from some students due to their inability to identify with the experiences of the subjects. The subjects selected to illustrate the health concepts had many characteristics within their social and cultural background with which the majority of students could identify, but greater receptiveness occurred when these characteristics were more numerous.

It is doubtful that any of these packets would be suitable for disadvantaged youth as their social values and experiences are so very different.

2. The concepts and teaching objectives with corresponding questions were excessive in "Ross" and "John," but with "Cindy" and "Susan" these were sufficient to adequately fit within the time allotted.
3. To some extent, three packets fell short in meeting the needs, age, and problems of the youth involved, due to certain personal and social factors: the drug problem with high school students is now far more extensive than occasional experimentation; due to immaturity, the high school age has difficulty relating to handicapped individuals; girls have dieting problems, but not all are extreme.
4. Directions to instructors need to be more specific in order to insure consistency in presentation procedures and the approximate time allotted for each aspect. This was particularly apparent in "Ross" and "John," but also in "Cindy" and "Susan."
5. "Cindy" and "Susan" were evaluated by almost no young men. Their responses might differ considerably from those given by young women.
6. The group of instructors participating in this study consisted of five women and one man. A more unbiased evaluation could be achieved by having a more equal number of men and women.

In general, this study has certain strengths that may offer encouragement to others who struggle with the challenge of motivation and teaching:

1. Tape recordings, as an inexpensive technological device, can conveniently bring the "live" experiences of others into the classroom, providing a controlled, structured situation that can readily be used to teach concepts.
2. The personal touch of an individual telling his or her story stimulates interest and curiosity, and encourages attention and identity with the speaker, all important variables to utilize in motivation for learning.
3. With a carefully structured unit of tape and teaching materials, attitudes, beliefs, values and behaviors can be examined and communicated. These are factors operative in motivation and are determinants in the decision-making processes.
4. Specific examples of difficulties and successes in living can provide exciting illustrations of health concepts and healthful living. This reality is stimulating, a break from the typical reading and writing work. It utilizes effective principles in motivation.
5. With careful selection of subjects, particular needs and problems of students can be met with constructive avenues of action offered and encouraged.

Recommendations

Study and research in this vast area of motivation and concept learning, with the integration of technical media into the curriculum, is a challenge and of tremendous need. As a result of this problem, the writer would like to make the following suggestions for those who might be tempted to develop similar teaching units:

1. Identify the particular needs, interests and problems of the majority of your students in order to select the most appropriate individuals to illustrate the health concepts.
2. Be most selective in the subconcepts and teaching objectives, so that they can be adequately illustrated and covered in the time allotted.
3. Carefully write out specific directions for the instructors in the use of the background information and questions for discussion so that they will meet the comprehension level and needs of the students involved.
4. Integrate a small study unit into a larger topical or conceptual area of study for its most effective use.
5. Have students and instructors use and evaluate one lesson unit with tape and accompanying materials to determine its strengths and weaknesses before proceeding with additional ones.

6. Take into consideration the often rapidly changing attitudes, values and experiences of your particular group of students in developing materials for them. Sensitivity to these forces can make the difference between a most effective lesson or a most inappropriate one.

The task of changing attitudes and behavior in students so as to permit high efficiency and healthful living is a problem for which we have only a few answers. This writer would recommend action in the following directions:

1. Develop taped "live" recordings drawing from common experiences of a specific group to illustrate and encourage concept learning in health.
2. Follow-up these teaching experiences with opportunities to exercise and act upon the knowledges and understandings gained.
3. Use social peer groups to help identify, plan and implement action programs towards resolution of health problems and needs.
4. Search for and identify the strongest motivational factors for particular types of health behavior among specific socio-economic school groups.
5. Devise techniques and procedures that will consider and work with the needs of self-worth and achievement as a key for personal fulfillment.

6. Integrate various media techniques into units or parts of units with systems analysis techniques applied.

In conclusion, this study demonstrates that the particular skills needed to produce and utilize audio media in teaching health concepts can be developed by the classroom teacher. This approach, if structured with careful organization and consideration of the students, can facilitate the teaching-learning situation and provide motivation impetus and possibly some changed behavior.

Health education involves the critical issues of living, of making wise health decisions that will release human potential. The materials in this study have dealt with a few issues and problems of living, and hopefully they have opened the door slightly to increased personal effectiveness. The phenomenon of learning for changed behavior is still not fully understood, but there is a growing number of clues available. With effort, the application of known principles and the utilization of modern technology, the potential within our youth can be revealed for personal satisfaction and well-being and the improvement of society.

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APPENDIXES

APPENDIXES

Ross is a case study showing the socio-economic family and personality factors that may influence an individual to use drugs. Although Ross is a high school youth, these same factors can be just as influential in a college or out of school situation. The solution that Ross finds to his problem is just one possible solution. That Ross found his solution is interesting. How he found this solution is still another story - you may find further insight into Ross' solution and other people who use drugs in David Wilkerson's books, The Cross and the Switchblade and Twelve Angels from Hell.

APPENDIX A

"Ross"

To the Instructor

This packet consists of six parts: the concepts, objectives and long range goals, background information, discussion questions, factual information on hallucinogens, student evaluation sheets and instructor's evaluation. You will want to read through these materials to obtain an overall picture.

In the evaluation sheets to be filled out by the students, be sure that they mark a rating in the third block at the bottom of the page, "freshmen college students." Encourage them to add their comments under each question particularly under five. Make sure they understand that there are additional questions on the back of the sheet. At the bottom of the right-hand side on the back of the sheet have each student give age, sex, class, major area of academic interest and family income in this order.

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MAJOR CONCEPT

Use of substances that modify mood and behavior arises from a variety of motivations.¹

Subconcepts²

1. Many factors and forces influence the use of substances that modify mood and behavior.
2. Use of substances that modify mood and behavior may result in health, social and academic problems.

Objectives for the Students

Knowledges

1. Knows the physical attributes that may influence a person to use marijuana or mood-modifying drugs.
2. Realizes how the factors of perception, identity and self worth may encourage the use of mood-modifying substances.
3. Comprehends the interaction of social customs, family attitudes, peer influence in the use of mood and behavior modifying substances.
4. Understands the psychological and physical effects marijuana may have on the individual.
5. Understands the social, academic and health problems that may result from mood-modifying substances and that the degree of dependency is greater for certain individuals in certain circumstances.
6. Knows positive measures that help prevent experimentation with drugs.

Attitudes

1. Is impressed with the potential risks and dangers of health, social and academic problems that the use of marijuana offers.

¹School Health Education Study, Health Education: A Conceptual Approach to Curriculum Design. St. Paul, Minn.: Minnesota Mining and Manufacturing Co., 1967, p. 84.

Behaviors

1. Works through school publications, class discussions, and/or projects to influence students against experimentation with drugs.
2. Engages in socially accepted and constructive activities.

Long Range Goals

Knowledges

1. Knows that mood-modifying drugs differ in strength, range of effects and resultant varieties of behavior.
2. Analyzes the physical and emotional needs and social forces that encourage or prevent the use of mood-modifying substances.
3. Understands the varying risks of physical and psychological dependence of mood-modifying substances.

Attitudes

1. Is impressed with the unpredictability of emotions and behavior when mood-modifying substances are taken into the system.
2. Respects the varying dependency potential of mood-modifying substances.

Behavior

1. Avoids the use of substances that may lead to dependency and disability.
2. Refuses to experiment or use without a physician's directions drugs that will modify mood and behavior.

BACKGROUND INFORMATION - ROSS

Ross is a 16 year old boy, the oldest of three children, with a sister 14 and a brother 11. Friends would describe Ross as easy going, good-natured, likeable, having a sense of humor, easy to talk with, yet somewhat retiring and passive. In school he is an average student, at times below average, particularly in language and communication skills. With the exception of skiing and sailing, which he can't pursue readily in his present location, he has no keen interest in any hobby, school activity or other sport. College plans and major work are undecided and vague except that he knows his parents expect him to attend college. Until the age of 15, he lived in a suburban village outside a large northern industrial city where the children traveled by bus to a central junior high school of 1300 students. Neighbors were not nearby, but were within five minutes walking distance. It was a problem for boys to gather together. Ross and six or seven close friends did bicycle occasionally to a corner store about a mile from Ross' home. Camping, skiing, tinkering with radio-electronic devices interested them. With the help of high school profile tests, Ross describes himself as being "not pushy", likes to be with one or two people at a time, works better independently, is good in abstract reasoning, math, has a mechanical aptitude, and so concludes that he should take business administration in college!

Father is a college graduate in civil engineering. Before their move East, his work demanded a long day in the city but he was usually home by 6:30. For years he spent much of his extra time building their home in the country, with little time to do things with Ross. He expects a great deal of Ross in obedience and academic performance and shows exasperation and impatience in Ross' low achievement and lack of direction.

Mother is also a college graduate in preschool education. She is easy going and somewhat permissive with her children but warm and understanding. She is inclined to let Ross set his own pace in all school and social activities, but has tried to encourage any special interest Ross expressed. Both parents are active in community activities, the local Presbyterian church and enjoy social gatherings and parties.

At the beginning of his sophomore year, Ross' family moved to a large eastern city where they purchased a home in the upper middle class suburban area. Ross has friends and neighbors close by now and attends a large city high school of 2000 students. He found his first friends in a small Presbyterian church near his home. These first friends he considers his best friends now. Most of them come from families in affluent circumstances; many fathers are professional men while the mothers are busy in social and community activities. Membership in the local social and recreational clubs is felt desirable. Ross says adults and young people seem more

interested in having a good time, going out every night possible, looking for excitement. Success among Ross' friends is an attractive home, fun, recreation and the money to buy these comforts.

The Millers are the advisors for Ross' church fellowship group. They are a well-educated couple with teen-age children, Bruce and Carol. As seen through the eyes of Ross and his mother, the Millers are undemonstrative to adults and perhaps even to their own children, but the youth consider them friendly, expressing interest in them and never critical. They encourage the fellowship's interest and conversation in the areas of poverty and Negro problems, but offer little in constructive methods of action. They let their own children express themselves verbally and in behavior as they wish, feeling that they'll return "to the fold" in time. Few, if any, restrictions are set in order to avoid family tensions and frictions.

Ross' Friends as Described by Ross

Bruce is the Miller's not too ambitious boy of 16. He left school during the second semester of his junior year because his marks were poor and he wanted to make money. Even though his parents demanded little of him, he had run away from home several times. He smoked marijuana several times a week, feeling a need to find himself and be accepted by the "in crowd". He says that one day he'll return to school.

Jay was the wild 17 year old youth who lived with the Millers for six months. The Millers thought they could help reform this youth who had run away from various homes and broken out of reformatory once, but eventually, because of his undesirable influence in their home, they asked him to leave. He was the big source of "pot" - giving, selling and smoking it readily. Jay eventually got into more trouble and is now in prison.

Carol Miller is 15. She became infatuated with Jay during his stay in her home. Later she wanted to leave home and live with him, but the Millers said "no", although they felt she was mature enough to take care of herself and could continue to date Jay.

Taylor is Ross' friend in algebra class who introduced Ross to marijuana. His parents are well-to-do and can provide him with all the material needs and advantages, but Taylor doesn't seem to care about anything except gambling and marijuana, which he uses every day.

Craig was one of the regular smokers with Ross that spring. A wild, mixed-up fellow, he had failed a grade, had been suspended a couple of times from school and finally quit school at the end of his sophomore year to join the Army. His family was outwardly

very religious and had adopted Craig as a baby. He stopped smoking marijuana after the spring venture because his girl friend didn't like it and it gave him a headache.

Dan comes from well-to-do, highly educated parents. His father is the head of the early childhood education department at the local state college. Easy going, likeable, an average student, Dan ran away from home before school was out in May to join a girl friend in California where he felt he could be free of parental restrictions, could dress and look as he pleased, and find excitement.

Steve J. is Ross' close, affluent neighbor. Loud, nervy in front of people, he feels it's important to travel with the right crowd, wear the right clothes, have money to buy things and go places. Although friendly, Steve J. doesn't have many friends, for others and Ross tire easily of his loud, superficial attitudes. The important things in life, he feels, are money, affluence and prestige which will answer all one's problems. His parents idolize an older son and feel that Steve never does anything right. Ross sees Steve's personality as a result of his parents lack of pride and confidence in him.

Tom graduated from high school that eventful spring. Not interested in college, he took a surveying job but believes he will eventually go to college since he thinks it is the key to social and financial success. He tried marijuana once but didn't seem interested in smoking again.

Steve and Dave are brothers. Ross likes to hunt, fish and camp with them. Members of the fellowship group, they worked with retarded children during the summer. They had no interest in trying marijuana, didn't like anything about it, and were afraid of the legal dangers.

DISCUSSION QUESTIONS - ROSS

1. What role does a person's physical attributes play in the use of marijuana and other mood-modifying substances?

- individual not fitting into society's image of male or female.
- lack of physical skills, hobbies, special interests.
- few or no opportunities for after school activities.
- being physically unattractive.

2. How does a person's view of himself, his search for identity influence his need or lack of need for drugs?

- immature personality - low self-esteem, self-worth, insecure, low levels of frustration, anger; drugs offering escape from inadequacy, problems; building ego, creating pleasant world while under its influence.
- lack of self-identity in school achievement, social situations, community activities.
- lack of recognition, love, security from parents.
- unable to establish reasonable, constructive short or long range goals.
- search for self, identity, greater self-understanding; believes experiences will increase insights into self, meaning of life, and world.
- offer of excitement, adventure, fun; "new" kind of experiences via drugs.
- lack of strong conscience or religious faith reducing conflict or eliminates feeling of wrong.
- need for personal recognition, adult status, with frustration in achieving this-results in "forbidden kicks," rebellion.

3. How does the interaction of social customs and group thinking, family living patterns and attitudes, the desire for group acceptance and approval affect the use of mood and behavior modifying drugs?

- adults emphasizing values of affluence, social status, comfortable living, much fun, excitement, adventure as the criteria of success and goal of life; leads youth to stress same values; drugs offering fun, excitement, adventure.
- society's emphasis on hedonism; anticipation of drug experience as being pleasureable.
- affluence, excitement, pleasure values accentuated by communication media - television, movies, magazines.
- social pressures, rapid pace of life in urban areas.
- crowded, demoralizing, poverty of slums.

- mobility of families every few years breaking stabilizing neighborhood controls; impersonality of apartment, urban living.
- rapid transportation, convenience of car offering privacy, independence, mobility.
- overstrict or overpermissive parents, lack of family love and acceptance pushing youth into stronger identity with peer group, to be in "in crowd" and do as they do.
- use of drugs generally beginning in social group with non-user being taught how to smoke, what effects to expect and how to recognize them; after learning techniques, user possibly smoking in private depending upon his motivations.
- lack of constructive free time skills and interests with little or no direction from parents; drugs become "something to do".
- failure of parents to establish real communication with youth, too busy with work and/or community affairs.
- drugs voicing protest against middle class society, its morality, its affluence, its "self-righteousness" of its "best" members; protest against authority, its controls, laws, its inconsistency.

4. What varying effects does marijuana have on the nervous and circulatory system?

- dilation of pupils, red eyes, decreased appetite, rapid heart beat, dulls nervous system, poor muscular coordination, unsteadiness, drowsiness, unusual sleeping habits, faulty perception.

5. What is the range of mood and behavior possible with the use of marijuana?

- term "unpredictable" most characteristic.
- confusion, hallucinations, giggling spells, euphoria, agitation, despair, panic.
- transient psychosis 4-6 hours.
- impaired memory, exaggerated notions of thinking, creativity, impaired judgment.
- heightened suggestibility, distortion of time and space, overoptimism.

6. What health and social problems may result from the use of marijuana?

- malnutrition, poor resistance to disease, due to decreased appetite; irregular sleeping habits.
- car accidents due to poor muscular coordination, altered perception, distortion of time.

- preoccupation with fantasy world pulls user from real world and active, constructive involvement; denotes psychological dependence difficult to control and treat.
- loss of human resources much needed to help solve the multiple problems of society.
- restricted social contact usually only with users and nonproductive individuals.
- heightened suggestibility, reduced judgment leading possibly to anti-social, immoral behavior, sex offenses, illegitimacy.
- chronic user becoming financial and social burden on family and society.
- may influence negatively the weak, emotionally unstable, less intelligent individual to begin use and become even more handicapped.

7. What academic problems may result from use of marijuana?

- distorted and exaggerated view of capabilities, thinking, creativity.
- interferes with thinking process, weakens concentration, memory, subtly retards speech - all a handicap to intellectual development.
- preoccupation with drug takes time and energy away from developing mental skills and knowledges.
- loss of time, academic credit and progress.
- arrest, police record may handicap business, educational opportunities.
- loss of intellectual potential much needed in a highly complex, technical world.

8. In what situation might psychological dependence occur?

- important factor in use, abuse, or non-use being individual's personality and his present and persistent needs; closely related, social consequences, conformity and individuality are not clearly separate entities; the final, critical factor, the individual perception of himself in relationship to groups - affecting them and being affected by them - a perception that is always changing because both the individual and groups change.
- those more prone to dependence being weak, unmotivated, lacking in self-identity, inadequate in social, academic fields, lack of love, security, direction in the home; reality unpleasant or unable to cope with reality; no visual solution to problems; drugs easy road and only time person feels good.
- an individual's action in relation to drugs depending on his knowledge of the drug, its effects; his own evaluation of use, his personal experience with it, the judgment and practices of his peer groups.

9. What positive measures will help prevent experimentation with drugs?

- seek to know self - physically, mentally, socially - seek to develop these areas in constructive, positive ways.
- find, develop and use particular talents, abilities and interests.
- learn to face and cope with problems at school, home and community.
- become involved in extra-curricular activities, service clubs, sports.
- deepen your religious faith.
- cultivate friends who have a constructive, optimistic outlook, who are ambitious and energetic about tackling life's problems.
- know effects, dangers, problems of drugs.
- know social situations that encourage drug use and the choices to be made.
- develop a constructive philosophy of life; set realistic short and long range goals.

10. To what extent do you agree with the following statement?

11. To what extent do you agree with the following statement?

12. To what extent do you agree with the following statement?

13. To what extent do you agree with the following statement?

14. To what extent do you agree with the following statement?

15. To what extent do you agree with the following statement?

STUDENT EVALUATION - ROSS

Directions: Mark in the square for each question your degree of acceptance.

- 5 - a very great deal
- 4 - a great deal
- 3 - somewhat
- 2 - very little
- 1 - not at all

In the space below each question add further explanations and comments.

1. To what extent was Ross's story realistic to you?
In what ways?

2. To what extent was Ross's solution, as one possible
solution, acceptable to you?
Why?

3. Did the background material contribute to your
understanding of the behavior of Ross and his
friends?
How or in what ways?

4. To what extent did the follow-up questions and
discussion aid in your understanding of the use
of mood-modifying drugs?
In what ways?

5. Would this audio-tape and background material be valuable and effective as a teaching aid? .. for junior high

Comment further.

for senior high

freshman college students

6. Give three major ideas that you gained from this study.

1.

2.

3.

7. What guidelines for personal living did you learn from this case study?

1.

2.

8. Give one thought or idea that was personally significant to you.

FACTUAL INFORMATION - HALLUCINOGENS¹

Bases for appeal of drugs:

1. Desire for adventure, to satisfy curiosity, to try new things and have new experiences may attract some.
2. Social forces vary with different individuals; some are leaders, some are followers.
3. Drugs voice protest against middle class society, its morality, its affluence, and the "self-righteousness" of its "best members;" it can be a protest against authority, its controls, laws, its inconsistency; illegality of drugs adds to attractiveness.
4. Hedonistic attraction, anticipation of experience as being pleasurable may appeal to users.
5. The search for self-identity, greater self-understanding; a belief that experiences will increase insights in self and world intrigues a number.

Dangers involved are variable with user's personality and past experiences:

1. The term "unpredictable" is most characteristic of the effect on individual.
2. Users believe drugs will expand consciousness or awareness - experiences can range from beautiful, exotic, pleasant to painful, sordid, ugly, terrifying, with result of severe anxiety, panic or actual psychosis, all requiring psychiatric care for recovery; two qualities of experience may proceed simultaneously; under LSD suicide may occasionally be a danger.
3. Research with these drugs is not extensive; there is some indication of long-term, permanent damaging effects from their use.
4. Marijuana use generally begins in social group with non-user being taught how to smoke, what effects to expect and how to recognize them; after learning techniques, user might smoke in private depending on his motivations; penalties for use and possession are often heavy, but it is readily available and use is increasing in all levels of society; it may or may not be a stepping stone to use of stronger drug, critical factors being social situation, a source, personality of user.

¹School Health Education Study. Teaching-Learning Guide for Level 4 Concept: Use of Substances That Modify Mood and Behavior Arises from a Variety of Motivations. (St. Paul: 3M Company Education Press, 1968), pp. 38-46, 58-62.

5. Desire to repeatedly escape into world of psychedelic experience again and again at the expense of all other activities and relationships denotes a psychological dependence which is difficult to control and treat.
6. Illegality of drugs leads to risks of arrest, embarrassment, and police record which may handicap advancement in business, educational opportunities.

Situations that may lead to use of stronger drugs:

1. Individual inadvertently becomes addicted through the medical use of drugs.
2. Choices usually must be made in a social situation when user is already under influence of a drug that reduces capacity to reason and predict consequences, thus it is reasonable to avoid such situations as a preventive.
3. Individual should consider why another person may be urging drug use, often it may be a matter of financial gain and emotional need for others to join "club".

"The use, nonuse, or abuse of mood and behavior modifiers results from some dynamic of personal needs, social consequences, and the individual's perception about effects."²

1. Some argue that all nonmedical use and abuse is wrong; in a society dominated by industry, technology, modern medicine, and rapid social change it is more than difficult to get agreement on what is right.
2. The individual learns by emulating others, by trial and error; some form of control results when an individual or society or both determine that a substance is being misused; changes in practice by society are rarely instantaneous or exactly appropriate or consistent - but changes do occur if judgment is that danger overrides the value of general use.
3. An individual's action in relation to drugs depends on his knowledge of the drug, its effects, his own evaluation of use, his personal experience with it, and the judgment and practices of peer group.
4. Society judges also the reconciliation of personal rights and dangers to self and others.
5. Important factor in use, abuse, or nonuse is individual's personality and his present and persistent needs; closely related social consequences--conformity and individuality are not clearly separate entities; the final, critical factor is how the individual perceives himself in relationship to groups--affecting them and being affected by them--a perception that is always changing because both the individual and groups change.

²Ibid., p. 58.

6. To decide between use and nonuse - know self--physically, mentally, socially, as a total person; have knowledge about drugs and their effects; know social situations and their options.

Additional Resources
(included in this packet)

Giordano, Henry L. The Dangers of Marijuana....Facts You Should Know. Washington, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1968.

U. S. Department of Health, Education and Welfare. Students and Drug Abuse. Washington, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1969.

XIV

John is a case study of a teen-age boy illustrating how the pattern, rate and quality of growth and development can be influenced positively or negatively by heredity, the physical and social environment, and personal health knowledge, attitudes and practices.

To the Instructor

This packet consists of six parts: the concepts, objectives and long range goals, background information, discussion questions, factual information on diabetes and food exchanges, student evaluation sheets and instructor's evaluation. You will want to read through these materials to obtain an overall picture.

APPENDIX B

In the evaluation sheets to be filled out by the students, be sure that they mark a category in the third block at the bottom of the page, "Freshman college students." Encourage them to add their comments under each question, particularly number five. Make sure they understand that there are additional questions on the back of the sheet. At the bottom of the right-hand side on the back of the sheet have each student give age, sex, class, major area of academic interest and family income.

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MAJOR CONCEPT

Growth and development influences and is influenced by the Structure and functioning of the individual.¹

Subconcepts²

1. Heredity prescribes the potential for growth and development.
2. Growth and development may be promoted or hindered by body functions, environmental conditions, and the use of certain substances.

Objectives for the Students

Knowledges

1. Describes the part heredity plays in a diabetic's physical makeup.
2. Understands the interaction of particular body systems; respiration, digestion, resistance to disease, environmental conditions that influence allergies, and drugs used for treatment upon a diabetic's physical growth and health.
3. Knows the problems of daily living that a diabetic faces.
4. Understands the effects that the physical handicap of diabetes has upon mental, physical, emotional, and social development.

Attitudes

1. Appreciates the critical role parents play in nurturing a handicapped child towards maturity.
2. Appreciates the positive attitudes and behavior that a handicapped youth must have to face life with optimism and function effectively.
3. Appreciates that handicapped people particularly need social acceptance and friends.

¹School Health Education Study, Health Education: A Conceptual Approach to Curriculum Design. St. Paul, Minn.: 3M Company Education Press, 1967, p. 36.

²Ibid.

4. Realizes that each individual has unique liabilities that must be accepted, and capabilities that should be developed.

Behaviors

1. Accepts and gives friendship to physically handicapped individuals.

Long Range Goals

Knowledges

1. Understands that an individual's potential for physical, mental and social growth and development is established by his unique inherited makeup.
2. Knows how differences in physical makeup, growth and development can affect feelings, social relationships and mental ability.
3. Understands that the health decisions and behavior which affect growth result from knowledges, attitudes, values and the way the individual functions as a total person.

Attitudes

1. Is aware that while heredity sets certain limits, beliefs, choices and the physical and social environment greatly affect the progress and level obtained in growth and development.
2. Appreciates the value of positive personal health habits and favorable environmental conditions to promote optimal growth.
3. Appreciates the interaction of emotions and attitudes among the individual, his family and others in influencing the level of development.
4. Realizes that growth can be both quantitative and qualitative with physical, mental, and social dimensions.

Behavior

1. Accepts one's limitations, attempts to improve physical, mental, and social self.
2. Accepts and values the uniqueness of other individuals.

BACKGROUND INFORMATION - JOHN

John is a seventeen year old boy from an upper middle class family. At birth he weighed 5 pounds 3 ounces and had no fingernails or eyebrows, even though his mother carried him nine and a half months. RH negative blood produced the problem of jauntice but a blood transfusion was not given until twenty-four hours after birth. His nervous system was immature with a pyloric spasm with projectile vomiting. Sedatives were tried but surgery was finally necessary at seven months of age. John was prone to many attacks of croup at an early age which finally developed into asthma when he was five, with many allergies to molds, fungus, foods. Under treatment of a physician, allergy shots were begun. All food except soybean flour was eliminated with one new food added each week to determine the degree of adverse effect. In spite of drugs, John had severe asthmatic attacks which required hospitalization and the injection of adrenalin directly into the heart muscle to combat shock; however, he showed an allergy to adrenalin so treatment was switched to cortisone. Many attacks in the summers when he was between the ages of five and eight required cortisone drugs and he was hospitalized twice.

When John was eight and a half, symptoms of weight loss and low energy prompted his physician to give the sugar tolerance test which indicated diabetes with about 25 per cent functioning cells. As a result of testing and questioning the family, no hereditary defect could be found so that the cause was attributed to the damaging effect of cortisone over an extended period of time. John was put on a restricted diet of vegetables, low calorie fruit, lean meats, low bread exchange, but from the time of diagnosis in the spring to the first part of July, he lost 20 pounds, so insulin was begun, two shots daily. From the very beginning, after the instructions from his physician, John, almost nine years old, gave himself his own insulin shots and made his urine test every other day.

John's and his family's initial reaction to his problem was one of severe distress. Many tears were shed that first night. At this point, John's physical and emotional status was poor. He had lost considerable weight, tired easily, was nervous and jittery. His parents and teachers rallied to his support. The principal was most helpful and sympathetic, making a special effort to learn about the condition in detail and instructing her teachers in symptoms, precautionary measures and treatment so that by August as John began to gain weight and feel stronger, he was more fully able to accept his handicap. Each morning immediately after rising, he takes his insulin shot with someone watching as a safety precaution. The needle is kept in alcohol beside his bed with the insulin syringe and cotton. John learned soon after starting his insulin shots that his friends liked to collect his empty bottles. They admired his

ability to give himself shots so this distinction facilitated John's acceptance of his problem and an openness about it to his friends. When he was ten, as a special privilege and responsibility, he was given an allowance of \$2.50 per week from which he was to buy his insulin. It became a challenge to find special sales in order that he might keep the extra money. He discovered that old hypodermic needles are excellent thumb tacks for the large cork bulletin board in his bedroom!

Both parents from the very beginning have been open and frank about John's condition. Although his father has had some tendency to shelter John, often cautioning him not to over do and looking for candy and food substitutes, still they have taught him to accept his problem fully, to participate in school activities, to develop special interests in electronics, chemistry, scouting, and band. Since fourth grade, John has played in the band, has become proficient enough to qualify for the special band trips to Nassau and Jamaica. He worked in scouting to achieve the highest rank of Eagle Scout. During his fourteenth summer, he took a month long western trip to the National Scout Camp in Philmont, New Mexico, and climbed and hiked the mountain terrain in that area. With a special interest in motors and bikes, he obtained a responsible job with a motor and bike shop where he works after school and from 8:00 to 6:00 daily during the summer.

John has been fortunate for with the discovery of his diabetes, his allergy problem has gradually decreased, presenting only a problem of stuffy sinuses during the pollen season. He has had no infections, few colds, has missed only three days of school in eleven years. Semi-yearly physicals show a slow normal growth pattern with a weight gain of two to four pounds yearly. He is 5 feet 4 inches, weighing 110 pounds at the time of this tape. His vision is good, with no eye blood vessel damage thus far. He eats three balanced meals a day with a large snack about ten at night, estimating his calorie needs (about 2240 calories) and exercise expenditure. Insect bites do take considerable time to be absorbed and heal, always leaving dark scars, typical of the diabetic. Due to an early childhood of asthmatic attacks, his chest has a barreled appearance, being somewhat overdeveloped to compensate for some loss of function. As he approaches maturity, John needs less daily insulin. He uses the mildest slow action type, Lente V-40, 10 units in the morning, 15 units at night. His physician feels that at full maturity, John may be able to use an oral drug, Orinase.

John's Philosophy

"Everyone has some handicap - some wear glasses, some people have a weight problem - I have diabetes, have to give myself insulin shots, watch my food intake. Most of the time it's little bother, perhaps a little more so at scout camp, on trips where it takes some planning. Lots of people have heard about diabetes and understand

the problem a little. Some fellows wonder how I can give myself shots and will stay around out of curiosity to watch while others can't stand the sight of a syringe and needle. A diabetic has to be more health conscious, watching his balance of rest, exercise, food and insulin. He must be careful about infections and skin problems for they can become serious quickly and take longer to respond to treatment." (John has a mild problem with acne around his nose and once developed a boil.) John accepts his handicap, copes with it, says that he does not worry about his condition or his ability to keep it under control.

Two accomplishments particularly please John: his work and the rank of Eagle Scout. His job at the bicycle shop started out as a part time and temporary job but became full time during the summer of his junior year, which he says is due to learning the additional repair skills needed without being directed to do so. Since working full time, John's parents have required him to buy his own clothes. John says he likes this because he can cater to his own tastes. He notes, too, that he is more careful of his clothes now.

MEAL PLANNING WITH EXCHANGE LISTS FOR THE DIABETIC *
(Adapted from Meal Planning with Exchange Lists, The American Dietetic Association,
620 N. Michigan Ave., Chicago 11, Ill.)

Foods That Need Not Be Measured

(Insignificant carbohydrate or calories)

Coffee
Tea
Clear broth
Bouillon (fat free)
Lemon
Gelatin (unsweetened)
Rennet tablets
Cranberries (unsweetened)
Mustard (dry)
Pickles (unsweetened)
Saccharin and other noncaloric sweeteners
Pepper and other spices
Vinegar
Seasonings

To season your food, you may use chopped parsley, mint, garlic, onion, celery salt, nutmeg, mustard, cinnamon, pepper and other spices, lemon, saccharin and Sucaryl and vinegar. All of these may be used freely.

List 1. Milk Exchanges

One exchange of milk contains 8 Gm. of protein, 10 Gm. of fat, 12 Gm. of carbohydrate and 170 calories.

This list shows the different types of milk to use for one exchange:

TYPE OF MILK	AMOUNT TO USE
Whole milk (plain or homogenized)	1 c.
*Skim milk	1 c.
Evaporated milk	½ c.
Powdered whole milk	¼ c.
*Powdered skim milk (nonfat dried milk)	¼ c.
Buttermilk (made from whole milk)	1 c.
*Buttermilk (made from skim milk)	1 c.

You can use one type of milk instead of another. For example, you may use ½ cup of evaporated milk in place of 1 cup of whole milk.

* Skim milk and buttermilk have the same food values as whole milk, except that they contain less fat. Add 2 fat exchanges to your meal when you use 1 cup of skim milk or buttermilk made from skim milk.

List 2. Vegetable Exchanges: Group A

Group A contains little protein, carbohydrate or calories. You may use as much as 1 cup at a time without counting it.

Greens (Continued)	
Asparagus	Kale
*Broccoli	Mustard
Brussels sprouts	Spinach
Cabbage	Turnip greens
Cauliflower	Lettuce
Celery	Mushrooms
*Chicory	Okra
Cucumbers	*Pepper
*Escarole	Radishes
Eggplant	Sauerkraut
*Greens	String beans, young
Beet greens	Summer squash
Chard	*Tomatoes
Collard	*Watercress
Dandelion	

* These vegetables contain a lot of vitamin A.

List 2. Vegetable Exchanges: Group B

Each exchange contains 2 Gm. of protein, 7 Gm. of carbohydrate and 35 calories.

½ cup of vegetable equals 1 exchange:

Beets	Pumpkin
*Carrots	Rutabagas
Onions	*Squash, winter
Peas, green	Turnip

* These vegetables contain a lot of vitamin A.

List 3. Fruit Exchanges

One exchange of fruit contains 10 Gm. of carbohydrate and 40 calories.

This list shows the different amounts of fruits to use for one fruit exchange:

	AMOUNT TO USE
Apple (2" diam.)	1 small
Applesauce	½ c.
Apricots, fresh	2 medium
Apricots, dried	4 halves
Banana	½ small
Blackberries	1 c.
Raspberries	1 c.
*Strawberries	1 c.
Blueberries	¾ c.
*Cantaloupe (6" diam.)	¼
Cherries	10 large
Dates	2
Figs, fresh	2 large
Figs, dried	1 small

*Lenna Cooper, E. Barber, H. Mitchell, H. Rynbergen, J. Greene, *Nutrition in Health and Disease*, 14th ed. (Philadelphia: J. B. Lippencott, Co., 1963), pp. 270-271.

	AMOUNT To USE
List 3 (Continued)	
*Grapefruit	1/2 small
*Grapefruit juice	1/2 c.
Grapes	12
Grape juice	1/4 c.
Honeydew melon	1/8 medium
Mango	1/2 small
*Orange	1 small
*Orange juice	1/2 c.
Papaya	1/3 medium
Peach	1 medium
Pear	1 small
Pineapple	1/2 c.
Pineapple juice	1/3 c.
Plums	2 medium
Prunes, dried	2 medium
Raisins	2 tbsp.
*Tangerine	1 large
Watermelon	1 c.

* These fruits are rich sources of vitamin C. Try to use one of them each day.

List 4. Bread Exchanges

One exchange contains 2 Gm. of protein, 15 Gm. of carbohydrate and 70 calories.

This list shows the different amounts of foods to use for one bread exchange:

	AMOUNT To USE
Bread	1 slice
Biscuit, roll (2" diam.)	1
Muffin (2" diam.)	1
Cornbread (1 1/2" cube)	1
Cereals, cooked	1/2 c.
Dry, flake and puff types	3/4 c.
Rice, grits, cooked	1/2 c.
Spaghetti, noodles, cooked	1/2 c.
Macaroni, etc., cooked	1/2 c.
Crackers, graham (2 1/2" sq.)	2
Oyster (1/2 c.)	20
Saltines (2" sq.)	5
Soda (2 1/2" sq.)	3
Round, thin (1 1/2")	6
Flour	2 1/2 tbsp.
Vegetables	
Beans and peas, dried, cooked	1/2 c.
(Lima, navy, split pea, cowpeas, etc.)	
Baked beans, no pork	1/4 c.
Corn	1/3 c.
Popcorn	1 c.
Parsnips	3/5 c.
Potatoes, white	1 small
Potatoes, white, mashed	1/2 c.

	AMOUNT To USE
List 4 (Continued)	
Potatoes, sweet, or yams	1/4 c.
Sponge cake, plain (1 1/2" cube)	1
Ice cream (omit 2 fat exchanges)	1/2 c.

Use these foods carefully because they have a lot of sugar.

List 5. Meat Exchanges

One meat exchange contains 7 Gm. of protein, 5 Gm. of fat and 75 calories.

This list shows the different amounts of foods to use for one meat exchange:

	AMOUNT To USE
Meat and poultry (medium fat)	1 oz.
beef, lamb, pork, liver, chicken, etc.	
Cold cuts (4 1/2" x 1/8")	1 slice
salami, minced ham, bologna, liver-wurst, luncheon loaf	
Frankfurter (8-9 per lb.)	1
Egg	1
Fish: haddock, etc.	1 oz.
Salmon, tuna, crab, lobster	1/4 c.
Shrimp, clams, oysters, etc.	5 small
Sardines	3 medium
Cheese: Cheddar type	1 oz.
Cottage	1/4 c.
*Peanut butter	2 tbsp.

* Limit peanut butter to 1 exchange a day unless the carbohydrate in it is allowed for you in your meal plan.

List 6. Fat Exchanges

One fat exchange contains 5 Gm. of fat and 45 calories.

This list shows the different foods to use for one fat exchange:

	AMOUNT To USE
Butter or margarine	1 tsp.
Bacon, crisp	1 slice
Cream, light	2 tbsp.
Cream, heavy	1 tbsp.
Cream cheese	1 tbsp.
Avocado (4" diam.)	1/8
French dressing	1 tbsp.
Mayonnaise	1 tsp.
Oil or cooking fat	1 tsp.
Nuts	6 small
Olives	5 small

DISCUSSION QUESTIONS - JOHN

1. What unique physical characteristics and abilities could John have inherited?

- allergies, small stature, agility

Mental abilities?

- above average intelligence
- persistence, ambition
- electrical and mechanical aptitude
- musical talent

2. How have John's inherited physical characteristics, certain environmental conditions and the use of drugs influenced his physical growth and development?

- allergies led to asthma, drugs, diabetes
- slow growth, short stature, high voice, barrel chest, initiated arterial changes

3. To what extent have his physical characteristics and limitations affected his:

Emotional development?

- kept positive outlook in spite of limitations
- accepts handicap, sees some advantages to small stature

Mental development?

- expected to achieve, is not excused from school work
- encouragement in special interests in electronics by parents; much mental stimulation via books and family discussions
- encouraged to finish in scout program and to achieve Eagle award

Social development?

- lack of recognition in sports due to small stature, risk of injury, limited energy level
- encouraged in scouting program which can help a boy achieve independence, learn how to get along with others
- fear that people wouldn't understand diabetic problem never allowed to develop
- treated as much like a normal child as possible, with discipline of outside work, managing own money, buying clothes, insulin

4. How does John's insulin deficiency influence the function of other parts of his body?
 - slow weight gain
 - susceptible to infection
 - limited energy which is most dependent upon regular quantities of food and insulin

5. Explain the interrelatedness of John's mental, physical, and social activity that is unique to a diabetic.
 - limited energy and reserve; mental energy responds sharply to physical energy
 - can't take liberty of irregular schedule, must have three balanced meals, sufficient rest, careful habits of cleanliness
 - diabetic often fearful that others won't accept his unique routine of food, insulin, exercise, rest

6. What precautions should he take?
 - someone to watch procedure of insulin shot in case there is a sudden reaction; offers a check that diabetic took insulin which he can never miss
 - must balance insulin with amount of exercise and rest
 - must observe rigid rules of foot and hand care due to low resistance to infection and circulatory changes that occur first in extremities
 - a daily balance of food, insulin, exercise and rest being critical for the diabetic to slow the development of atherosclerosis

7. To what extent is John's independence and freedom dependent upon the particular responsibilities that he is willing to accept?
 - the more willing John is to remember and follow his daily routine, the freer he is to work, travel, be on his own away from home and close supervision

8. Describe John's attitudes and behavior that indicate his social effectiveness, his view of himself in relation to his world and the place he has in it.
 - traveling to New Mexico with a group of scouts, hiking, carrying his pack like everyone else
 - completing the numerous physical and mental skills required for Eagle in scouting
 - not expecting special favors, dispensations because of his handicap
 - finding an outside job, becoming proficient and progressing beyond the required level of skill

- accepting his size and seeing his small stature as an asset in his work
- planning and looking ahead to a profession, feeling he has a special contribution to make to society

9. How have his parents contributed to the image John has of himself?

- encouraged him to accept responsibility of his physical care, his insulin, his shots
- encouraged him to be financially independent through his work
- helped him to realize that he can function effectively by himself
- encouraged the development of special talents in music, electronics, science which in turn have increased his self-esteem

In his relations with others?

- have not overprotected him
- encouraged his participation in scouts, band, scout camp, work at the bike shop, travel with young people, which have facilitated social growth

STUDENT EVALUATION - JOHN

Directions: Mark in the square for each question your degree of acceptance.

- 5 - a very great deal
- 4 - a great deal
- 3 - somewhat
- 2 - very little
- 1 - not at all

In the space below each question add further explanations and comments.

1. To what extent was John's story realistic to you?
In what ways?

2. How acceptable to you was John's attitude towards his problem, his way of looking at people and his world?
Explain how you feel.

3. To what extent did the background material contribute to your understanding?
In what ways?

4. Did the follow-up questions and discussion aid in your understanding?
In what ways?

9. What guidelines for personal living did you learn from this case study?
 - 1.
 - 2.

10. Give one thought or idea that was personally significant to you.

CINDY

Cindy is a case study of a sophomore college girl who has been diagnosed with a learning disability. This packet contains her background information, objectives, and a record of her progress. The packet also contains a copy of the student's work on the assignment and a copy of the instructor's evaluation.

To the Instructor

This packet contains all the material you will need to teach Cindy. It includes objectives, background information, a record, discussion questions, student evaluation sheets, and instructor's evaluation sheet. You will need to have a copy of the student's work on the assignment and a copy of the instructor's evaluation sheet.

The objectives for the students are identified in terms of knowledge, attitudes and skills that they may achieve or towards which progress may be made.

APPENDIX C

"Cindy"

The background information and objectives are included in this packet to aid the teacher and students in understanding and application of the concepts. It is a detailed account of Cindy's story on tape with additional information on her family and the events since the production of the tape. Select and present to the students only those portions needed to clarify the concepts, objectives, and tape. The discussion questions are also for clarification. Your choice can be made to meet class needs.

The record sheets are for student use in order that they may see the actual misconceptions that Cindy has between what she believes she does and her actual behavior. The record was requested immediately after she finished the tape with only an explanation that it might be interesting to see how many misconceptions she contained daily. The tabulation of the number of misconceptions and corrections was done by this writer.

There are evaluation sheets to be filled out by each student upon completion of the discussion. These along with the completed instructor's evaluation and the student's background information should be returned to this writer.

CINDY

Cindy is a case study of a sophomore college girl who has been concerned with dieting for weight control for over five years, with resulting physical and emotional problems.

To the Instructor

This packet consists of six parts: the concepts and objectives, background information, diet record, discussion questions, student evaluation sheets, and instructor's evaluation. You will want to read through these materials to obtain an overall picture.

The objectives for the students are identified in terms of knowledges, attitudes and behaviors that they may achieve or towards which progress may be made.

The background material is to aid the teacher and students in an understanding and appreciation of the concepts. It is a detailed account of Cindy's story on tape with additional information on her family and the events since the production of the tape. Select and present to the students only those portions needed to clarify the concepts, objectives, and tape. The discussion questions are also for clarification. Here choices can be made to meet class needs.

The diet record sheets are for student use in order that they may see the mental misconceptions that Cindy has between what she believes she does and her actual behavior. The record was requested immediately after she finished the tape with only an explanation that it might be interesting to see how many calories she consumed daily. The tabulation of the number of servings and calories was done by this writer.

There are evaluation sheets to be filled out by each student upon completion of the discussion. These along with the completed instructor's evaluation and the other materials should be returned to this writer.

MAJOR CONCEPT

Food selection and eating patterns are determined by social, mental, economic and cultural factors.¹

Subconcepts²

1. A balanced diet affects well being and the desire for well being affects food choices.
2. Food selection and eating patterns serve social and psychological purposes as well as fulfilling physiological needs.

Objectives for the Students

Knowledges

1. Analyzes diet patterns in terms of daily food groups and calorie content.
2. Identifies the factors influencing personal food choices: emotions, personal likes and dislikes, energy expenditures, family and peer eating patterns, food fallacies.
3. Explains the digestive and weight problems that can result in faulty dieting and inactivity.

Attitudes

1. Appreciates the need for personal effort and discipline to change faulty eating habits and exercise patterns for control of weight and improvement of body lines.

Behaviors

1. Accepts responsibility for improving food selections to meet balanced daily requirements.

¹School Health Education Study, Health Education: A Conceptual Approach to Curriculum Design. St. Paul: 3M Company Education Press, 1967, p. 90.

²Ibid.

BACKGROUND INFORMATION - CINDY

Cindy is a nineteen year old college sophomore from a middle class family. She is 5 feet 2½ inches tall, weighing about 105 pounds, an attractive, friendly extrovert, intelligent, possessing ambition and leadership qualities. Her mother is a college graduate, petite, attractive, who has worked part-time outside the home in recent years, but has efficiently met her family's emotional, physical and nutritional needs. Her father has a professional degree, is involved in business and community activities. He still gives his children his time and thought, communicating fairly effectively with Cindy and her two younger brothers.

Ninth Grade

Although active in the Girl Scout program throughout her school years, Cindy was never too interested or skilled in physical activities or sports. In the summer prior to ninth grade, her mother, since she was working mornings, gave Cindy the responsibility of preparing breakfast and lunch for her brothers when they returned from swimming practice. Frequently, eating two breakfasts, she gained 15 pounds that summer. New skirts purchased earlier in the summer didn't fit by school time, so Cindy started on her concept of a "crash diet": one-half a banana for breakfast and lunch, for dinner - three small bites each of meat and a vegetable plus two to five slices of bread and two glasses of tea. She had read in a newspaper about a girl losing considerable weight from being locked up on just bread and water, and this influenced her selection of two to five slices of bread. Cindy and her friends frequently discussed the problem of being "too fat" so group desire and pressure to remain slim was strong. Lunches prepared by her mother were often given away. While her parents knew she ate little breakfast, they were unconcerned, thinking that her lunches were adequate. Her weight dropped fifteen pounds in two months - to 95 pounds. As she weighed herself daily, morning and night, and noted any increase, she would then become fearful of "getting fat," and would cut back any slight increase in food quantity. Walking to and from classes was her only exercise except for physical education classes three times weekly at which she exerted little effort.

Tenth Grade

At the beginning of the summer, she began again to gain a few pounds. It was then that she decided that lunches must be eliminated completely. It wasn't until her freshman year in college that she realized that this weight gain and growth in waist and bust size was due to normal maturation. Breakfast was skipped or sometimes was a hard boiled egg. Supper consisted of three spoonful each of one vegetable and a meat, one to three slices of bread and a glass of tea or lemonade. In two weeks she lost 10 pounds.

If her parents weren't around, she would eliminate supper also. She would then, however, get hungry and eat sweets, cake, pie, jelly on crackers, sometimes as much as one-half a pie. This would be her only food for the day in place of supper. With practically no activity, she finally did decide that her previous "limited supper" was a more effective way to keep her weight down to 95 pounds. The imbalance of nutrients, liquids and irregularity of eating, however, began at this time to result in physical discomfort, stomach cramps, excessive gas and severe constipation.

At the beginning of the school year Cindy's diet consisted of no breakfast or lunch. The hard boiled egg her mother gave her would be stuffed down the drain. She ate only supper: a small serving of meat and one vegetable with a small amount of dessert sometimes. Her physical discomfort continued and increased to the point that her mother finally took her to their physician. They were suspicious of an ulcer, but tests showed only an inflamed, nervous stomach. The doctor recommended more milk and water to relieve the constipation and a bland diet. She could take eight to ten Milk of Magnesia tablets for several days to relieve the immediate problem of constipation. Cindy was so obsessed with weight control through her limited intake of food that she accepted only her doctor's request to eliminate spices and fried foods. She did try to drink more water but added many crackers for between meal snacks, sometimes half a box at one time, which only added to her constipation difficulty. To her parents' discussions and pleas for more intelligent eating she turned a deaf ear.

In May of her sophomore year, her doctor placed her on estrogen pills for treatment of menstrual irregularities. The hormone did bring about a weight gain plus a stimulation of her appetite. She began eating more between meals - crackers, marshmallows, carbonated drinks, oatmeal cookies. These added little more than calories to her still unbalanced diet. A breakfast of one egg was started again and, since constipation was still a problem, she tried to drink more water.

Eleventh Grade

During the summer prior to her junior year, Cindy decided to add meat, cheese and ice cream to her between meal snacks and to stop the extra pie and cake because her weight was now 108 pounds. There was little progress towards a balanced diet that year. She was much involved in both academic and extra-curricular activities, giving little thought to food and sufficient rest unless she was ill. In December she caught the flu which developed into a painful sinus infection that hung on until May. At times she would go three and four days without food, taking only water or tea with little weight loss. She felt one meal - supper - was sufficient with between meal snacks of cheese, meat, ice cream and cookies.

Long evening study hours only added to her problem of tension and fatigue. Trying to stay awake in class became a concern and one of her teachers called Cindy's mother about this.

Twelfth Grade

During her senior year, the diet pattern continued, but breakfast more often consisted of scrambled eggs and a slice of bacon because she said it made her feel more energetic. Her diet was still deficient in fruits, vegetables and milk, although these were served and eaten by the rest of the family. She had the Hong Kong flu that year. Her school work was most important to her, keeping her up into the early hours of the morning at which times she would snack to relieve her fatigue. Cindy graduated fifty-second in a class of 625, qualifying for the honor roll all her years in high school.

College

As Cindy prepared to enter college, her parents realized that this would be the critical experience in independence. It would determine whether she was sufficiently perceptive to balance her food selection, rest, work load and recreation to ensure good health. Knowing that she knew "the rules" yet wasn't always motivated to put these rules into practice, they informed her that a college education was so expensive that she could not afford poor decisions in the areas of food, rest, and exercise. To give her added incentive they told her that if she became ill for a period of several weeks, her work would suffer and she must then return home and find work as best she could in the business world.

Cindy discovered college food to be far different from home cooking. It was more spicy and fattening with a repeated pattern of weekly selections of the same meats, salads and desserts. Meat that was lean and suited her palate was served only twice a week. To Cindy the food was too greasy and spicy, thus psychologically and physically she felt she could eat only some vegetables and meats, salads, cottage cheese and cheese for lunches and suppers. She ate scrambled eggs for breakfast four to five times weekly. Missing her mother's refrigerator, she started buying apples, raisins and cheese for between meal snacks. She noted college girls of her same weight and height had more attractive figures and firm, pleasing lines, due to exercising both in and out of class. Looking at her own flabby muscles, she decided she had confused flabbiness with fat and that exercise did improve body lines and firmness. Exercising in a course, Foundations for Physical Activities, and in the dormitory at night became a part of her schedule. Her weight in September, 112 pounds, dropped to 98 pounds at mid-semester. During the second semester a limited diet of vegetables, meats, cheese and fruits became too monotonous so she began to add some rolls, cake and pie for variety. Her weight rose to about

105 pounds and remained there for the remainder of the school year.

Cindy feels she has learned several important points concerning dieting and how it affects well being. She knows that an imbalance of food, erratic eating, tension and misconceptions of dieting can upset the balance of your system, affecting your mental alertness and emotional control and lead to problems of cramps, gas, constipation, irritability and illness. She sees the values of exercise and jogging to give more pleasing body contours and allow greater calorie consumption, but she lacks the motivation to consistently discipline herself. She believes she has a fairly well balanced diet with sufficient food from all groups except milk, which she dislikes.

Cindy still has room for much improvement in her diet and exercise patterns. She knows the four food groups but her concept of a balanced diet is three servings of meat, two of breads, two of vegetables, one of fruit and two to three servings of milk and eggs. (Note that Cindy uses the terms "Proteins" and "carbohydrates," nutrients, rather than food groups.) Her five-day summer diet record, requested without any explanation of the proper balance, shows deficiencies in all groups. She says that instruction from her parents and school has made her aware of the need for these food groups but that the large quantity always pictured seemed so excessive that she knew she must cut down considerably. She dislikes squash, turnip greens, spinach, black-eyed peas, limas and potatoes, but she still feels she eats sufficient quantities of vegetables and fruit. In September prior to her sophomore year at college, her constipation again became so severe from lack of roughage, water, and food that she went two weeks without a movement. Enemas and laxatives were ineffective. Her cramps and discomfort increased until her physician recommended a complete set of gastro-intestinal X-rays. These showed no obstruction. Her mother reports that she continues to weigh herself daily, a slight loss or gain affecting her mood for the day. Thus, Cindy's obsession with dieting and her desire for a slim figure continue to block intelligent action in spite of knowledge of how to correct her deficiencies.

CINDY'S DIET

	MONDAY	CAL.	TUESDAY	CAL.	WEDNESDAY	CAL.	THURSDAY	CAL.	FRIDAY	CAL.	SATURDAY	CAL.
Breakfast	black coffee 1/2 c. raisins	230	coffee 1/4 c. raisins fresh peach	115 35	coffee Diet Pepsi		coffee peach	35	coffee 8 saltines 2 sl. Am. cheese	144 140	coffee	
Lunch	1/2 c. ice cream maraschino cherries 5 pecans lemonade	100 80 150 110	hamburger patty 1 sl. cheese 1 sl. bread 2 T. catsup	245 70 65 40	10 saltines 1/4 c. cott. cheese Diet Pepsi	180 60			Coke	95	8 saltines cott. cheese Coke	144 60 95
Dinner	1/2 c. asparagus 1 chicken in oleo lemonade	18 155 50 110	7 crackers 1 chicken in oleo lemonade	126 155 50 110	hamburger patty 1 sl. cheese 1 bun 2 T. catsup tea	245 70 160 40	1 salisbury steak 1/4 c. limas tea	220 75	1 chicken, sm. 1/2 c. peas 1 roll 1 t. oleo tea	75 84 160 50	1 sl. beef 1/4 c. corn apple pie tea	125 42 345
Snacks	chicken, sm.	75	1/2 c. ice cream	100	1/2 Coke	48	apple pie	345	chicken, med.	100		
Tot. Cal.		1078		1211		803		675		848		811

SERVINGS RECOMMENDED: Cindy's Daily Servings

Meat (2)	3	3	①	①	2	①
Milk & Cheese (4)	①	②	②	①	①	①
Bread (4)	①	②	②	①	②	②
Veg. & Fruit (4)	③	②	①	③	①	②
Sweets	2	1	1	1	1	1

○ = deficient

Extremely low in veg. & fruits
Low in milk, breads, meat

Poor breakfast, inadequate lunch
Unbalanced amount of food

DISCUSSION QUESTIONS - CINDY

1. What are the motivational factors that started Cindy on her dieting?
 - inability to wear new skirts that she bought with her own money
 - fear of obesity, desire for slim figure
 - strong peer pressures for slim figures as most desirable
 - suggestion from newspaper article that diet of bread and water produced considerable weight loss
2. What were the resulting problems of severe dieting?
 - strong hunger contractions from no food leading her to overeat in sweets, cake, pie, jelly and crackers in the evening
 - imbalance of nutrients and liquids resulting in stomach cramps, excessive gas and severe constipation
 - continued improper dieting resulting in a digestive system sensitive to spices and fried foods
 - during period of excessive dieting becoming depressed, tense, irritable and fatigued with great difficulty in staying awake in school
 - low resistance to infection, lingering sinus infection and flu
3. What role did her parents and physician play?
 - parents' ideas and effort to persuade Cindy to improve her food selections and eat three meals a day ignored completely
 - her physician's suggestions followed in part but failed to motivate much change; his failure in Cindy's mind to provide the answers she sought: pills to control constipation and a detailed diet pattern
4. How did Cindy's dieting pattern change from high school to college?
 - missing the convenience of her mother's refrigerator and cooking, refusing to accept much of the meat and casserole dishes, thus was forced to add more salads, some vegetables, cottage cheese and cheese to her meals; second semester, some rolls, cake and pie were added
 - buying apples, raisins, cheese for between meal snacks

5. What misconceptions did she have concerning the value of exercise in relation to muscle tonus? How did these concepts change?
- confusing flabbiness from lack of exercise with excess fat and weight
 - during her high school years failure to see any value in regular exercise
 - exposure to college girls of her own weight and height, but with more pleasing firm body lines from exercise, showing Cindy her faulty reasoning
 - a class in Foundations for Physical Activities plus exercise in her dorm at night becoming part of her daily schedule
 - finding that exercise helps to reduce and stabilize weight along with improving appearance
6. What are the inconsistencies between her mental concepts of her diet and exercise patterns and her actual behavior?
- believing that her diet is now fairly "well balanced," perhaps low in milk; a "balanced diet" to her, consisting of three servings of meat, two of breads, two of vegetables, one of fruit, two of milk and eggs; her behavior on her week's menu doesn't show even this.
 - feeling that fifteen minutes of daily exercise (sit ups, jumping jacks, twists and leg exercises) is enough; sprints of running with long walks being desirable; she does this one or two times a week around a small pond in her backyard; at school she is exercising three to five times weekly; lack of participation in any sports at any time.
7. What improvements in her diet and exercise pattern does she still need to make?
- a daily diet balanced in terms of three meals, having at least the minimum daily number of servings, certainly more fruit, vegetables, milk and water.
 - vigorous daily exercises with alternates of vigorous sports that she can participate in with pleasure and a fair degree of skill.
8. What changes in values should she make?
- application of scientific approach to dieting and exercise as the way of weight control and improving appearance rather than her irrational and invalid methods
 - concern for physical and nutritional health now as insurance for her future well being and her family's

STUDENT EVALUATION - CINDY

Directions: Mark in the square for each question your degree of acceptance.

- 5 - a very great deal
- 4 - a great deal
- 3 - somewhat
- 2 - very little
- 1 - not at all

In the space below each question add further explanations and comments.

1. To what extent was Cindy's story realistic to you?
In what ways?

2. To what extent could you identify with Cindy and her efforts to control her weight and the resulting problems?
In what ways?

3. To what extent did the background material and menu sheet contribute to your understanding?
In what ways?

4. Did the follow-up questions and discussion aid in your understanding?
In what ways?

5. Would this audio-tape and background material be
valuable and effective as a teaching aid? for
junior high

for
senior high

freshman college
students

6. Give two major ideas that are personally significant to you
as a result of this study. (Write on back side if needed)

1.

2.

SUSAN

Susan is a case study of a young married woman's unique approach to family life in fulfilling her psychological, mental, and physical needs.

To the Instructor

This packet consists of five parts: the concepts and objectives, background information, discussion questions, student evaluation sheets and instructor's evaluation. You will want to read through these materials to obtain an overall picture.

The objectives for the students are identified in terms of knowledge, attitudes and behaviors that they may achieve, or towards which progress may be made.

APPENDIX D

"Susan"

The background material is intended to aid the teacher and students in an understanding and appreciation of the concepts. Select and present to the students only the portions needed to clarify the concepts, objectives and topic. The discussion questions are also for clarification. Here choices can be made to meet class needs.

There are evaluation sheets to be filled out by each student upon completion of the discussion. These along with the completed instructor's evaluation and the other materials should be returned to this writer.

SUSAN

Susan is a case study of a young married woman's unique approach to family life in fulfilling her psychological, mental, and physical needs.

To the Instructor

This packet consists of five parts: the concepts and objectives, background information, discussion questions, student evaluation sheets and instructor's evaluation. You will want to read through these materials to obtain an overall picture.

The objectives for the students are identified in terms of knowledges, attitudes and behaviors that they may achieve, or towards which progress may be made.

The background material is to aid the teacher and students in an understanding and appreciation of the concepts. Select and present to the students only those portions needed to clarify the concepts, objectives and tape. The discussion questions are also for clarification. Here choices can be made to meet class needs.

There are evaluation sheets to be filled out by each student upon completion of the discussion. These along with the completed instructor's evaluation and the other materials should be returned to this writer.

MAJOR CONCEPT

The family serves to perpetuate man and to fulfill certain health needs.¹

Subconcepts²

1. Each family grows and develops in its own unique way.

Objectives for the Students

Knowledges

1. Identifies some of the social, economic, and cultural forces that influence a family's life.
2. Describes how the emotional and mental needs of each member can affect development of each individual and the family as a whole.
3. Understands the particular values, standards, and attitudes that make this family unique.

Attitudes

1. Appreciates the interaction, effort and love that is needed in a harmonious family life.

Behaviors

1. Begins to discern the particular skills, standards, and values that will be needed for a meaningful family life.

¹School Health Education Study, Health Education: A Conceptual Approach to Curriculum Design. St. Paul: 3M Company Education Press, 1967, p. 66.

²Ibid.

BACKGROUND INFORMATION - SUSAN

Susan, age thirty-one, is an attractive wife, mother of a nine year old son, Bill, and works as a physical therapist. She grew up in a large southern metropolitan city, attended a large high school with the money, time, and encouragement from her parents to participate in school, sports, community and church activities. Values of honesty, perseverance, thrift, work and recreation through sports were important in her family. At age thirteen, she started to work after school in a drug store. Her father was a general manager of a drug chain until heart trouble forced his retirement when Susan was twelve years of age. Although he never finished high school, he believed firmly in self-education, read widely and took adult education courses in economics and business. He encouraged Susan to improve herself mentally, was always available to discuss current topics and take her to civic and sport activities. He was a perfectionist by nature, undemonstrative in affection, concerned with financial security, and more of an introvert, yet he was vitally interested in Susan and her older sister.

Susan's mother is a fun-loving, exuberant extrovert who is always busy in community, social and church activities. She has a B.S. degree in physical education, worked full time prior to marriage, then part time in YWCA work when her girls were in college and her husband's health had deteriorated.

Jerry, age thirty-two, grew up in the same southern city and attended the same high school as Susan. His father is a skilled laborer, an upholsterer with a high school education. Of easy going nature, comfortable with his way of life, he still felt his two boys and girl needed a college education to live in their world. Both boys acquired football scholarships to the state university. The parents were able to give them only \$5.00 per week towards their college education, feeling that with summer work and college jobs, the boys should and must earn their own way. The parents borrowed money to meet the college expenses for their daughter.

Jerry's mother is a deeply devout woman, a high school graduate who has always worked as a department store clerk to help provide for her family. Thrift and work are the most important values to these parents. Jerry worked after school as a clerk in a drug store and during the summer for the recreation department.

Susan's interest in boys started in ninth grade with some dating at group parties. Being an enthusiastic, energetic participant, she soon had many requests from the boys for dates. During the summer prior to tenth grade, she dated twenty-seven different boys, among them, Jerry. By the beginning of the eleventh grade, Jerry and Susan were going steady, had discussed plans for marriage after Susan finished her first two years of college. In the spring

of Susan's college freshman year, she and Jerry "broke up," Susan dating different boys for four months, but then they decided their love was deep enough for marriage and they returned to each other. They were married when Susan finished her sophomore year. She continued her studies during the summer, graduating in August of her third year with a B.S. degree in physical therapy. That November their son, William Dean, was born. Jerry graduated with a degree in business in June of that same year and immediately enrolled in graduate school. While astute poker playing in his fraternity had provided him with dues and spending money in his undergraduate years, Jerry turned now to clerking in a drug store, working sixteen hours per week the first year to help support his family. He was elected editor of the business review his last year in graduate school, which gave him \$1,000.00 added income to pay the nursery to keep their baby and help meet family expenses. Susan began full time work immediately after graduation, worked up to the day of her baby's birth and returned four weeks after his birth. She continued to work full time for seven years, then part-time these last three years as Jerry's salary began to meet more of their financial needs. Susan's salary in the early years of their marriage took care of their food, rent, and Jerry's tuition for graduate school.

Their baby, Bill, learned quickly to adjust to new situations. Until he was seven months old, a Negro maid kept him at home, but at seven months he was placed in a small private home nursery, and was in different ones up until age three. After he started school, he would stay with a neighbor until 5:30, when his mother returned home from work. Susan says Bill accepts the fact that his mother works and can't be around to take him to many after-school activities. During the summer he is busy at day camp and a YMCA camp.

Susan's description of her own personality: Susan considers herself an extrovert who thoroughly enjoys people of all kinds. She wants to understand their differences in attitudes and behavior and finds this search an exciting challenge. She sees herself as open, out-spoken, honest towards others without harsh judgment. Rarely depressed, she feels the need to be involved in the adventure of living, of reaching out to understand and help people.

Susan's description of Jerry's personality: Jerry is more of an introvert in comparison to Susan, is inclined to be more conservative and reserved. He feels you should work out your own problems as far as possible. Not aggressive in speaking or reaching out to people, he prefers a few deep friendships. Susan admires his personal integrity and honesty, his deep love for Susan and Bill. He feels somewhat pessimistic about people and the world, that so many fail in living fully. Independence, self-sufficiency and achievement are important values to Jerry.

Values and Behavior

1. Economic security, business goals: Susan sees Jerry as the main provider and is pleased with his professional responsibility and recognition. Having to work in his youth for spending money and his college education, Jerry believes financial success is a most important goal in his life. This will provide the means for a comfortable home, opportunity for recreation, travel and education for his son. Susan contributed a major portion of this early in their marriage, but now her income is no longer important to their security.

2. Decision-making: Although decisions are discussed thoroughly, Jerry takes the initiative and major responsibility for the management of their finances, particularly in the area of big expenditures such as cars and their home. The purchase of food, clothing, small furnishings is Susan's responsibility.

3. Household tasks: The management and care of the home is entirely Susan's responsibility. Although Jerry acts as repairman in their home and likes to make things, the only household task he accepts is the yard. He refuses to do dishes, cleaning, washing, food preparation, or baby care; he will eat out rather than prepare a meal himself.

4. Child rearing: Jerry feels that with the population problem and the high cost of living that one child is enough, while Susan would like another child. He is a perfectionist himself, a strict disciplinarian, but tempers this with love and warmth toward his son. He expects Bill to respect authority and property. Bill responds towards his father with affection and discussion concerning his sports and school activities. Jerry believes Bill could be skilled in any area, mental or physical, if only he will apply and discipline himself. Bill's physical care during his baby and early years was entirely up to Susan. Now that Bill enjoys sports and can participate, Jerry has assumed a greater role as father. Susan attempts to moderate to a degree her husband's pressure on Bill to achieve, for she feels that Bill may become frustrated if he fails to live up to too high standards. She is concerned that Bill grow mentally, socially and spiritually as well as physically.

5. Wife's work and career: Susan has felt the need to help people. She has enjoyed her work as a physical therapist, but with Bill older and in school, she views teaching as a way to broaden her outreach. Using her own money she has returned to graduate school, finding the challenge and mental stimulation exciting and rewarding. Jerry fails to understand this emotional and mental need, but tolerates her extra work as long as it doesn't interfere with her responsibility to Bill and himself

when they are home. He would prefer that she be content to continue her usual job, to be his companion in sports and watching movies and TV in the evenings. He views Susan's new work as trivial although Susan tries to help him understand her needs in this area. Susan doesn't comply with Jerry's demands completely. She attends class one night a week, plays bridge once a month with her girl friends, but otherwise tries to do things with Bill and Jerry.

6. Husband's career: Susan admires Jerry's professional skill and his perseverance in his work. She understands that with increased business responsibility, Jerry is under considerable pressure and tension and needs to relax when at home.

7. Community activities: Jerry is content to spend most of his free time from work with his family. He and Susan enjoy tennis together, attend church school as a family and are active in Cub Scout leadership with their son. Jerry coaches the elementary school football team on which his son plays.

DISCUSSION QUESTIONS - SUSAN

1. What values and attitudes of their parents appear to have influenced Jerry and Susan?
 - Susan's father: value of work, thrift, intellectual pursuits
 - Susan's mother: love of people, pleasure and skill in sports and social activities, work outside the home, spiritual values
 - Jerry's father: perseverance, work, thrift, need for college education
 - Jerry's mother: spiritual values, work, thrift

2. What particular values and needs do Susan and Jerry each have in the following areas: economic security and business goals, decision-making, household tasks, child-rearing, wife's work and career, husband's career, community activities? (see background material)

3. What factors have allowed their marriage to develop in spite of differences in needs and values?
 - their love and appreciation for each other and their son Bill
 - willingness to compromise, to accept their differences in spite of disagreement: Susan budgeting her time carefully to meet her family's needs but continuing her work and study although Jerry disapproves; Jerry's desire to be with his family at home and in activities together reinforcing his love and concern for them
 - both place their family's needs first although they recognize (Susan more, Jerry less) that each is unique and must use his own particular talents apart from the family
 - recognition of the value of communication and time together as a family

4. What modifications in attitudes and behavior would you like to see in Jerry and Susan?
 - Jerry's greater understanding and appreciation of Susan's desire and need to study for an advanced degree in teaching
 - Jerry's willingness to accept, when needed, a greater share of the household tasks.
 - Susan's satisfaction with her present work rather than pursuing further education

5. From this study what particular values and skills are most helpful in building a successful marriage?

- work skills that will provide adequate income, mental stimulation and personal satisfaction
- ability to communicate and work out differences
- skills in managing finances, household tasks
- love of children and a willingness to give them your time and attention
- value of self-worth, self-acceptance tempered with a love that gives of self and appreciates the talents and uniqueness of the other

In the space below each question and further explanation and comments:

1. To what extent will the study's findings be useful to you? In what way?

2. How acceptable do you find the study's findings to your family and to your work and study? Describe your views in this area.

3. To what extent did the findings influence your attitude towards marriage? In what way?

4. Did the following questions and answers help you in your understanding of marriage? In what way?

STUDENT EVALUATION - SUSAN

Directions: Mark in the square for each question your degree of acceptance.

- 5 - a very great deal
- 4 - a great deal
- 3 - somewhat
- 2 - very little
- 1 - not at all

In the space below each question add further explanations and comments.

1. To what extent was Susan's story realistic to you?
In what ways?

2. How acceptable to you was Susan's attitude towards her family and her work and study?
Describe your ideas in this area.

3. To what extent did the background material contribute to your understanding?
In what ways?

4. Did the follow-up questions and discussion aid in your understanding?
In what ways?

5. Would this audio-tape and background material be valuable and effective as a teaching aid? for
Comment further. junior high

for
senior high

freshman college
students

APPENDIX B

6. Give two major ideas that are personally significant to you as a result of this study. (Write on back side if needed.)

Participating Instructors

INSTRUCTOR'S EVALUATION

Please rate and comment on each item.

Rating Scale: Excellent - 5 Fair - 2
 Very good - 4 Poor - 1
 Good - 3 Absent - 0

FORMAT

A. Tapes - Physical Qualities

- ___ 1. Audio quality
- ___ a. Loudness sufficient for class to understand
- ___ b. Voice quality - distinct
- ___ 2. Length

APPENDIX E

Instructor's Evaluation

Participating Instructors

3. Supplementary Written Material

- ___ 1. Organization logical and meaningful
- ___ 2. Sufficiency of material - coverage
- ___ a. Concepts and objectives
- ___ b. Family background
- ___ c. Discussion questions
- ___ d. Factual information
- ___ 3. Organization, style of writing - clear, concise, easy to use
- ___ a. Concepts and objectives
- ___ b. Family background
- ___ c. Discussion questions
- ___ d. Factual information

INSTRUCTOR'S EVALUATION

Please rate and comment on each item.

Rating Scale:	Excellent - 5	Fair - 2
	Very good - 4	Poor - 1
	Good - 3	Absent - 0

FORMAT

A. Tape - Physical Qualities

___ 1. Audio quality

___ a. Loudness sufficient for class
to understand

___ b. Voice quality - distinct

___ 2. Length

___ a. Sufficient to present insights into
personal story

___ b. Kept students' attention and interest

B. Supplementary Written Material

___ 1. Organization logical and meaningful

___ 2. Sufficiency of material - coverage

___ a. Concepts and objectives

___ b. Family background

___ c. Discussion questions

___ d. Factual information

___ 3. Organization, style of writing - clear,
concise, easy to use

___ a. Concepts and objectives

___ b. Family background

___ c. Discussion questions

___ d. Factual information

CONTENT

A. Tape

- ___ 1. Appropriate to grade level
- ___ 2. Stimulated interest and identification with individual
- ___ 3. Meaningful, pertinent to students needs and problems
- ___ 4. Realistic

B. Supplementary Written Material - meaningful, pertinent to needs, problems

- ___ 1. Concepts and objectives
- ___ 2. Family Background
 - ___ a. Students' response
 - ___ b. Instructor's response
- ___ 3. Discussion questions
 - ___ a. Students' response
 - ___ b. Instructor's response
- ___ 4. Factual information

Additional comments and reactions to tape and material as a teaching aid.

PARTICIPATING INSTRUCTORS

The following instructors with their students participated in the testing and evaluation of the tape recordings and the supplementary materials:

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