

Utah State University

DigitalCommons@USU

---

All Graduate Theses and Dissertations

Graduate Studies

---

5-1970

## A Comparative Survey of Health Knowledge Between Sophomores at Utah State University and Sophomores at the University of Utah

Richard L. Maughan  
*Utah State University*

Follow this and additional works at: <https://digitalcommons.usu.edu/etd>



Part of the [Medicine and Health Sciences Commons](#)

---

### Recommended Citation

Maughan, Richard L., "A Comparative Survey of Health Knowledge Between Sophomores at Utah State University and Sophomores at the University of Utah" (1970). *All Graduate Theses and Dissertations*. 2934.

<https://digitalcommons.usu.edu/etd/2934>

This Thesis is brought to you for free and open access by the Graduate Studies at DigitalCommons@USU. It has been accepted for inclusion in All Graduate Theses and Dissertations by an authorized administrator of DigitalCommons@USU. For more information, please contact [digitalcommons@usu.edu](mailto:digitalcommons@usu.edu).



A COMPARATIVE SURVEY OF HEALTH KNOWLEDGE  
BETWEEN SOPHOMORES AT UTAH STATE UNIVERSITY  
AND SOPHOMORES AT THE UNIVERSITY OF UTAH

by

Richard L. Maughan

A thesis submitted in partial fulfillment  
of the requirements for the degree

of

MASTER OF SCIENCE

in

Health Education

UTAH STATE UNIVERSITY  
Logan, Utah

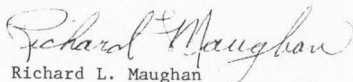
1970

#### ACKNOWLEDGMENTS

At this time the author would like to express his appreciation to those individuals who have made this study possible. This study was performed under the able direction of Dr. Lanny J. Nalder. I express my sincere appreciation to Dr. Nalder for his suggestions, encouragement and support.

I would like to thank Dr. C. O. Ness, Department Head of Health Education at the University of Utah, for his support in supplying me with the names of students having had Health Education I. These names were used to facilitate my random selection of students who received a questionnaire.

Special appreciation is expressed to my wife Ruth, for her assistance in the typing of this thesis, as well as her patience and support throughout this study.

  
Richard L. Maughan

## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION . . . . .	1
Statement of the problem . . . . .	4
Basic assumption . . . . .	4
Hypothesis . . . . .	5
Null hypothesis . . . . .	5
Justification of the problem . . . . .	5
Methodology . . . . .	6
Delimitations . . . . .	7
Definition of terms . . . . .	8
II. LITERATURE REVIEW . . . . .	9
III. ANALYSIS OF DATA . . . . .	15
Method or procedure for collection of data . . . . .	15
Alcohol and tobacco . . . . .	17
Community health and communicable disease . . . . .	18
Consumer health . . . . .	20
Drugs and narcotics . . . . .	22
Food fads and medical quackery . . . . .	23
Mental health . . . . .	25
Personal health . . . . .	27
Sex education . . . . .	29
Summary . . . . .	31
IV. CONCLUSIONS AND RECOMMENDATIONS . . . . .	34
Conclusions . . . . .	34
Recommendations . . . . .	34
BIBLIOGRAPHY . . . . .	36
APPENDIX . . . . .	37
VITA . . . . .	46

LIST OF TABLES

Table	Page
1. Mean correct responses of students on questions of alcohol and tobacco . . . . .	17
2. Mean score for two questions . . . . .	18
3. Mean correct responses of students on questions of community health and communicable diseases . . . . .	19
4. Mean scores correct for five questions . . . . .	20
5. Mean correct responses of students on questions of consumer health . . . . .	21
6. Consumer health mean correct score for five questions	21
7. Mean correct responses of students on questions on drugs and narcotics . . . . .	23
8. Drugs and narcotics mean correct scores for five questions . . . . .	23
9. Mean correct responses of students on questions of food fads and medical quackery . . . . .	24
10. Food fads and medical quackery mean correct scores for five questions . . . . .	25
11. Mean correct responses of students on questions of mental health . . . . .	26
12. Mental health mean correct scores for five questions	27
13. Mean correct responses of students on questions of personal health . . . . .	28
14. Personal health mean correct scores for six questions	29
15. Mean correct responses of students on questions of sex education . . . . .	30
16. Sex education mean correct scores for seven questions	31

ABSTRACT

A Comparative Survey of Health Knowledge  
Between Sophomores at Utah State University  
and Sophomores at the University of Utah

by

Richard L. Maughan, Master of Science

Utah State University, 1970

Major Professor: Dr. Lanny J. Nalder  
Department: Health, Physical Education and Recreation

A survey was performed to compare basic health education knowledge between sophomore students at Utah State University and sophomore students at the University of Utah. This was performed through the use of a questionnaire consisting of 40 questions covering the following eight areas of prominence in health education:

1. Alcohol and tobacco
2. Community health and communicable disease
3. Consumer health
4. Drugs and narcotics
5. Food fads and medical quackery
6. Mental health
7. Personal health
8. Sex education

This questionnaire was administered through the mail to 250 randomly selected students at the two universities.

When responses were received they were scored and keypunched on IBM-5080 cards. The cards were then processed through the IBM-350 Model 44 computer using Analysis of Variance and the Quest Program. Computation of student "T" scores verified that students at the University of Utah were superior in health knowledge at the .05 level of significance based on the one tailed test.

The University of Utah last year required a basic health education class of all freshmen. At Utah State University such a class is not required or even offered. The fact that University of Utah students were superior verified that positive learning of health education did increase through specific instruction.

CHAPTER I  
INTRODUCTION

Even though the life span of man is increasing, there seems to be an indication that the health of man is not held at a premium. To illustrate the above statement, consider some of the pertinent practices of mankind in today's society. The tobacco consumption of man has shown a decrease,<sup>1</sup> with science producing evidence that there exists a positive relationship between prolonged tobacco consumption and the occurrence of cancer and emphysema of the lung.<sup>2</sup> Even though a statement is placed on the side of the package warning that the use of this substance may be detrimental to one's health, this causative agent can still be purchased. A very interesting paradox is developed in that people seem to place emphasis upon certain facets of health and not upon others. Consider the recent release of information from the study of the effect of continued use of cyclamates. Evidence was produced to the effect that the introduction of cyclamates in rats did induce cancer.<sup>3</sup> Even though there was no sufficient

---

<sup>1</sup>"1969 Cigarettes and Society: A Growing Dilemma," Time, XCIII (April 25, 1969), 44-46.

<sup>2</sup>"Battle for Breath," Today's Health, XLIII (February, 1967), 42-43.

<sup>3</sup>"Is Your Food Safe? Dispute Over Testing," U. S. News and World Report, LXVII (December 15, 1967), 44-46.



evidence to show any effect in human beings, beverages and foods containing cyclamates were removed from the market immediately.

Alcohol consumption is another aspect of the violation of the law of health. One need only consider the extreme costs associated with alcohol in terms of death by accidents, injury and economic loss caused while under the influence of alcohol to realize the tremendous effect that the use of this substance has on our society. The fact that alcohol is a drug and can produce physical dependence gives further evidence that consumers of this beverage are not holding health at a premium.

Just at the time when young people should be developing proper attitudes, habits and practices concerning health, a new problem has been introduced into their lives. This is their contact with drugs and the results of their abuse. Proper education in this area becomes imperative as no geographical location or financial level seems exempt from this influence. These drugs seem to be finding their way into all areas where youth are available for contact. Proper education beforehand would be of a much greater value than an extensive rehabilitation program after the young person has become dependent to the use of drugs and ceased to act and contribute as a productive citizen. It must be kept in mind that not everyone in society looks at the young people of today as our future leaders and prospective creators of tomorrow. On the contrary, there are those who look upon them as a means of making a vast amount of money through the sale of drugs.

The area of consumer health serves as a prime example of health ignorance. The vast amount of money spent each year on the food fads and diet fads gives every indication of a serious need for proper education in the area of foods and nutrition.

At the present time there is a move to eliminate sex education from the curriculum in health education. The feeling seems to be that this subject should be taught in the home. One needs to ask the question, do the parents feel adequate in teaching this subject and at what age would be the best time for a lesson of this nature? Just how extensive is the education received in the home in these various areas and how well prepared are the parents who are trying to teach this material? If sex education is withdrawn from the curriculum, justification could then arise to withdraw other units of study, such as consumer health, contagious diseases, etc. The most vital question would be how much education would people be receiving in the area of health education?

It is a fact that the life expectancy of man is being extended and is now longer than at any previous time in modern civilization. It is also true that science has made great strides in the control of communicable disease, medical technology, medical care and the longevity of the geriatric patient. Education of the individual pertaining to the principles of health and knowledge of keeping the body at the epitome of fitness is equally important. Knowledge of these principles could avert premature aging or an individual whose life is maintained but, due to poor health, is not a productive citizen.

Regarding health education and the need to improve one's health knowledge, Dearborn performed a study of health knowledge in junior colleges of California. His test was administered to 5000 students in 34 junior colleges. The mean score was 46.6 and the range of the scores was 3-93.<sup>4</sup> With the mean being so low there is a real need for health education to be taught in the schools of California. Many of the problems that Dearborn observed in California have universal application and the need for health education becomes imperative.

#### Statement of the problem

The purpose of this study was to perform a comparative survey of health knowledge of college sophomores at the University of Utah where a basic health class was required of all freshmen, with the health knowledge of college sophomores at Utah State University where a basic health class is not required or even offered.

#### Basic assumption

Sophomore students at the University of Utah and sophomore students at Utah State University will be comparable in their background of education, with the exception being that the sophomore students at the University of Utah have completed a class in basic health education.

---

<sup>4</sup>Terry H. Dearborn, "Comparative Class Performances and Gains in Junior College Health Education," Research Quarterly, XXXIV (October, 1963), 299-304.

Hypothesis

Students having had a class in basic health education will have superior knowledge of the principles and aspects of maintaining proper health compared to students that have not had a basic health class.

Null hypothesis

Students having had a class in basic health education will not have superior functioning knowledge of the principles and aspects of maintaining proper health compared to students that have not had a basic health class.

Justification of the problem

There is a need for information concerning health knowledge. If people can only live as well as they know how to live then considerable emphasis needs to be placed upon health knowledge. It is basic to this study that people cannot live a health concept that to their knowledge does not exist. Therefore, how well we live is based upon how much we know.

Utah State University at the present time does not offer a basic health education class even on an elective basis. This study compared the health knowledge of sophomore students at USU with sophomore students at the University of Utah. The U of U students had taken a basic health class. On the basis of the findings of this study, recommendations will be made as to the implementation of required health education at USU or maintenance of the status quo.

### Methodology

Through the cooperation of the Department of Health, Physical Education and Recreation at the University of Utah and Utah State University, a questionnaire containing information pertaining to basic health education was administered to approximately 250 sophomore students from each university.

This questionnaire was administered by mail to randomly selected students at both universities. The names of the subjects were obtained through the student directories and recorded in order to obtain a valid selection of all freshmen students. Both school years (1968-1969 and 1969-1970) were used. Students not attending school when this questionnaire was mailed out had it mailed to their homes.

Random selection. Each student was assigned a number and the numbers were placed into a hopper. These numbers were drawn out and recorded with the number being returned to the hopper each time to guarantee an equal opportunity of being redrawn. For each questionnaire returned "address unknown" another name was selected and sent out so that 250 students received a questionnaire.

Subjects. The reason for using sophomore students was because all freshmen students at the University of Utah are required to take a class in basic health education. The students at Utah State University are not required to take such a class and a subject of this nature is not offered at this University.

Questionnaire. The evaluation tool was constructed of questions based on important areas in the field of health education. In determining the areas of importance, various tests prepared by authorities in the field of health education were reviewed. From these tests areas of prominence held in common by each authority were compiled into questionnaire form. The material selected consisted of 40 questions covering the following eight areas: (1) Alcohol and tobacco; (2) Community health and communicable disease; (3) Consumer health; (4) Drugs and narcotics; (5) Food fads and medical quackery; (6) Mental health; (7) Personal health and (8) Sex education.

This questionnaire compared students having just completed a class in basic health with students having had no such class, and did not test knowledge gained from progress through an undergraduate program.

#### Delimitations

Sophomore students from two universities were tested. Sophomores at the University of Utah have had a required class in health education. Sophomore students at Utah State University have not had a class in basic health education and served as a comparative group. Only sophomore students having had basic health were used and compared to students not having had basic health. Students above the level of sophomore were not evaluated, as this survey was to determine the knowledge gained in such a class and compare it to health knowledge of a group having had no such class in health education.

Definition of terms

Comparative survey. A survey to determine the extent of knowledge pertaining to health education on a comparative basis between the two universities of this study.

Health knowledge. Correct responses to questions on issues deemed important by various recognized authorities in health education.

Basic health education. A curriculum composed of prominent areas considered important by authorities of health education on a college level.

Areas of prominence. Subject areas in terms of health education which are held in common by various authorities.

Authorities in health education. Qualified instructors of health education who have compiled and evaluated in terms of reliability the tests that they have developed.

CHAPTER II  
LITERATURE REVIEW

A review of literature related to comparing basic health knowledge among colleges or universities indicated that little had been done regarding the comparing of basic health knowledge between the two sophomore classes.

Little has been found in the literature regarding the pros and cons of required health education. This review dealt with the needs of college students as determined by research performed by various authorities in the field of health education. Statements regarding the importance of health education, as stated by said authorities and others in responsible positions, were also considered. Fraleigh and Gustafson made the following statement concerning the position of responsible persons in education:

Accordingly then, requirements in education rely upon the intelligent, rational judgement of those who are placed in responsible positions.<sup>5</sup>

In determining the needs and interests of college students, Humphrey had students write down the problems which listed areas

---

<sup>5</sup>Warren P. Fraleigh and William F. Gustafson, "Can We Defend Required Programs," Journal of Health, Physical Education and Recreation, XXXV (February, 1964), 32.



that interested them most. From Humphrey's table the items most frequently listed and having the higher percentage were:

1. nutrition and foods by 63.3 percent
2. communicable disease by 38.3 percent
3. sex education by 35 percent
4. exercise, sleep and rest by 35 percent
5. narcotics and stimulants by 26.6 percent, and
6. mental hygiene by 18.3 percent.<sup>6</sup>

Hinrichs reported the results of a proficiency test in hygiene with entering students at the University of Illinois. Approximately 30 percent of 1,000 students tested were able to answer correctly 75 percent or more of the questions. The summary of some of the results and higher missed scores of 500 student's examinations covering 70 questions showed that in the areas of:

1. public and consumer health the average number of misses for each of the 20 questions was 114
2. general bodily hygiene the average number of misses for each of seven questions was 14.3
3. mental health the average number of misses for each of four questions was 150
4. reproduction, sex, and heridity the average number of misses for each of 12 questions was 183

---

<sup>6</sup>James H. Humphrey, "Health Problems of Interest to College Men," Research Quarterly, XXIII (May, 1952), 319-21.

5. nutrition and diet the average number of misses for each of eleven questions was 191, and
6. personal health problems the average number of misses for each of 16 questions was 201.<sup>7</sup>

The overall needs of college students in their education in the field of health can be shown by the results of Dearborn's study. With endorsement of professional and official agencies, a study committee conducted a voluntary project to determine the health knowledge achievement of students in the two-unit health course required for graduation in the public junior colleges of California. A standardized test was given to over 5000 students in 118 hygiene classes in 34 junior colleges at the beginning of the course. The results of the tests showed a mean score of only 46.6 and the range of the scores ran from 3-93.<sup>8</sup>

Institutions of higher education are recognizing the need of health education. Richard K. Means in his study reported:

The American College Health Association polled 157 institutions of higher education in 1953. It found that courses in health education were offered in 80 percent of the colleges with a student service.<sup>9</sup>

---

<sup>7</sup>Marie A. Hinrichs, "Some Notes on a College Proficiency Test in Hygiene," Research Quarterly, XXIV (March, 1953), 18-21.

<sup>8</sup>Terry H. Dearborn, "Comparative Class Performances and Gains in Junior College Health Education," Research Quarterly, XXXIV (October, 1963), 299-304.

<sup>9</sup>Richard K. Means, "Required College Health Education Past and Present," Journal of Health, Physical Education and Recreation, XXXV (September, 1964), 30-31.

For universities and colleges not offering a program in health education, Johnson had the following comment:

In a day when research has led to a widespread recognition of the necessity for increased physical activity in the lives of the American people it is ironic that health and physical education programs in colleges and universities are frequently viewed with indifference, skepticism or even hostility by students and administrators alike. The reasons for such attitudes vary with individual schools but most situations have one thing in common: the failure of the traditional type of program to effectively present the why of health and fitness or to put it another way the failure to facilitate the development of appropriate concepts of health and fitness.<sup>10</sup>

Dr. Bernice Moss offered a very apt reason for the failure of health education in some institutions:

Other fields of education recognizing various needs of the students have incorporated teaching of these problems with their course. The result has often been an unplanned dispersal of these aspects of health education throughout the curriculum with consequent duplication and conflicting points of view. Not all teachers are trained to teach competently in these areas. The organized course often is placed in the position of trying to pick up the pieces.<sup>11</sup>

---

<sup>10</sup>Perry B. Johnson, "An Academic Approach to College Health and Physical Education," Journal of Health, Physical Education and Recreation, XXXVII (March, 1966), 23-25.

<sup>11</sup>Bernice Moss, "Can Health Education Command Respect," Journal of Health, Physical Education and Recreation, XXVIII (May, 1957), 26-27.

National groups have concerned themselves with the importance of health education as well as authorities in the field of health. In 1960 the American Medical House of Delegates adopted the following resolution:

Resolved, that the American Medical Association reaffirms its longstanding and fundamental belief that health education should be an integral and basic part of school and college curriculum and that state and local medical societies be encouraged to work with the appropriate health and education officials and agencies in their communities to achieve this end.<sup>12</sup>

National and Federal groups concerned with education recognize the need for proper health and the value of knowledge for maintaining a proper balance of good health as necessary to the school curriculum and success of the entire education process. The Educational Policies Commission in their report of "The Central Purpose of Education," stated the following:

The school must be guided in pursuing its central purpose or any other purpose, by certain conditions which are known to be basic to significant mental development. The school has responsibility to establish and maintain these conditions.

One of them is physical health. The sick or poorly nourished pupil, the pupil suffering from poor hearing or vision is hampered in learning. An adequate physical basis for intellectual life must be assured.<sup>13</sup>

---

<sup>12</sup>American Medical Association House of Delegates Resolution, (Meeting held at Miami Beach, June, 1960).

<sup>13</sup>Educational Policies Commission. National Education Association, The Central Purpose of American Education (1961), 15.

The Commission on Philosophy for School Education feels that health should become an integral part of the curriculum. They had this to say regarding the place of health in education.

Health education is an integral part of the administrative context and curriculum at every level and is recognized as a part of the general education of all students. It is not peripheral to the central purpose of education. Through its organized approach to teaching and curriculum development, it presents to the student consecutive experiences in the knowledge and practice which not only is valuable in itself, but also aids the subject in the reception, assimilation, relating and use of other subject matter.<sup>14</sup>

The President's Commission on Higher Education summed up the opinion of these and other authorities when it made the following statement:

Our colleges and universities are doing far less than they might to dispel the ignorance that lies at the root of the ill health of many of our people. Almost all of our colleges, it is true, offer many courses that touch in some degree on the principles and practices of healthful living, but these courses are scattered through a number of departments and the information contained in them is never brought directly to bear on the practical problems of personal and community health.<sup>15</sup>

---

<sup>14</sup>Commission on Philosophy for School Education, "A Point of View for School Health Education," Journal of Health, Physical Education and Recreation, XXXIII (November, 1962), 47-48.

<sup>15</sup>President's Commission on Higher Education, Higher Education for American Democracy, Establishing the Goals (Washington, D.C.: December, 1947), 54.

CHAPTER III  
ANALYSIS OF DATA

The data presented in this chapter were obtained from the questionnaire that was administered to the sophomore students at Utah State University and the University of Utah. The hypothesis of the study was supported by the information contained in this chapter.

This chapter will be divided into the following areas:

1. Method and procedure for collection of data
2. Alcohol and tobacco
3. Community health and communicable disease
4. Consumer health
5. Drugs and narcotics
6. Food fads and medical quackery
7. Mental health
8. Personal health
9. Sex education
10. Summary

In discussion of the various questions the mean scores are based upon a possible score of 100 percent. The questionnaire in complete content is shown in the Appendix.

Method or procedure for collection of data

Five hundred questionnaires were mailed to 250 students from Utah State University and the University of Utah. Of the 500

mailed 218 were returned. One hundred and sixteen were returned from Utah State University and 102 from the University of Utah. Names were selected by random sampling from the sophomore students at Utah State University and from the University of Utah Department of Health Education class rolls. The questionnaires were mailed to each of the 500 respondents and when questionnaires were returned with "address unknown," another name was selected until 250 questionnaires were accepted through the mail. When responses were received they were scored and keypunched on IBM-5080 cards. The cards were then processed through the IBM-360 Model 44 computer system using Analysis of Variance and the "Quest" program. The results of this data was analyzed with "t" test scores for significance and the specific question results according to means are presented in detail under the various headings of this chapter.

The breakdown of percentage per question will be covered in this discussion as well as a mean percentage for each area. To aid in explanation throughout the rest of the chapter, Utah State University will be referred to as USU and the University of Utah will be referred to as U of U.

A review of various tests prepared by authorities in the field of health education produced eight areas of prominence used in the questionnaire (see Appendix A). This questionnaire was administered to junior and senior students at Utah State University

enrolled in a Method and Materials Class in the Department of Health, Physical Education and Recreation. The purpose of the "pilot study" was to determine the reliability of the questionnaire.

#### Alcohol and tobacco

In the area of health knowledge dealing with alcohol and tobacco there were two questions. University of Utah students were more capable in detecting the dangerous characteristics of tobacco than were USU students. Question No. 1 dealt with identification of various effects of nicotine in conjunction with smoking.

Question No. 2 was concerned with the discussion of what health scientists regard as the most serious health problem in the United States. Utah State University students were slightly more capable in the identification of alcoholism as the most serious health problem in this country. Table 1 presents the mean correct responses for students at both Universities concerning this area.

Table 1. Mean correct responses of students on questions of alcohol and tobacco

Question	1	2
Utah State University	31.80	57.86
University of Utah	43.14	56.86



The difference between knowledge concerning the effects of tobacco on individuals was greater than the knowledge differences on Question No. 2 concerning the national problems of alcoholism. Both groups seemed to recognize the seriousness of alcohol in health problems.

Table 2 presents the mean scores for both groups with regard to questions covered under this area.

Table 2. Mean score for two questions

Utah State University	percent correct	44.83
University of Utah	percent correct	50.00

#### Community health and communicable disease

In the area of health knowledge dealing with community health and communicable disease there were five questions. Utah State University students were superior on four of the five questions. They were slightly above U of U students in recognizing that the cause of muscular dystrophy is unknown, as was asked in Question No. 31. Question No. 33 dealt with the least effective means of avoiding influenza. University of Utah was slightly better in being able to detect that exercising two hours daily was the least effective means. Question No. 34 dealt with infectious hepatitis and where it was localized. Utah State University

students were slightly more able to recognize this as being in the area of the liver than was U of U. Question 36 had regards to the disease causing the greatest economic loss to society. Utah State University students were slightly more capable in the identification of the common cold as the disease causing this loss. The disease that remains the least controlled today was the basis for Question No. 37. Utah State University proved to be superior in detecting the answer to be tuberculosis over U of U. The percent right regarding this question was higher than in previous ones. Table 3 presents the mean correct response for students at both Universities pertaining to this area.

Table 3. Mean correct responses of students on questions of community health and communicable diseases

Question	31	33	34	36	37
Utah State University	84.48	5.17	75.86	83.62	65.52
University of Utah	83.33	7.84	64.71	81.37	59.80

Utah State University students were superior in this area as can be seen on Table 4 which displays the overall mean scores. Possibly the information on infectious hepatitis being a viral disease localizing in the liver was covered in a public health class which is offered at USU. The same could also be said regarding Question 37 pertaining to the least controlled disease in the United States.

Table 4. Mean scores correct for five questions

Utah State University	percent correct	62.92
University of Utah	percent correct	59.41

#### Consumer health

There were five questions concerning the area of consumer health. Question No. 22 concerned the food substance providing the most energy. University of Utah students were more able to recognize fats as the greatest source of energy from the foods listed. Both groups scored rather low on this question.

Question 23 was concerned with the results of a vitamin deficiency which will bring about an inflammation of the nerves (polyneuritis). The scores of both groups were extremely close, however, USU was slightly ahead with correct responses of thiamine.

Question 24 dealt with detecting the characteristics of the lack of ascorbic acid (Vitamin C). Utah State University students were superior in the answer to this question and indicated that all of the choices for selection were characteristics of this deficiency.

Question No. 25 was concerned with the essential four food groups and the choosing of the correct four groups listed. Utah State University students once again had a greater percent correct than did U of U students, as they responded with meat, vegetable-fruit, milk and bread-cereal.

Question 28 pertained to a condition causing reduced rate of metabolism, lowered vitality, mental sluggishness and increased body weight with enlargement of the thyroid gland being characteristics of what disease. Iodine, the correct score, was indicated by a slightly greater percent of USU students than by U of U students. The difference was insignificant. Table 5 presents the mean correct responses for students at both Universities concerning this area.

Table 5. Mean correct responses of students on questions of consumer health

Question	22	23	24	25	28
Utah State University	10.34	47.41	44.83	81.90	79.31
University of Utah	9.80	47.06	40.20	79.41	77.45

In the area of consumer health USU students had a better score by approximately two percent as can be seen in Table 6. All five of the questions were close with the difference of less than two percent. This difference was in Question No. 24 concerning the characteristics of lack of ascorbic acid.

Table 6. Consumer health mean correct score for five questions

Utah State University	percent correct	52.76
University of Utah	percent correct	50.79

Drugs and narcotics

In the area of drugs and narcotics there were five questions. University of Utah students were best able to recognize the description of morphine. Question No. 2 dealt with the characteristics of morphine.

Question 3 dealt with the description of the results of the abuse of barbiturates. University of Utah students were more able to recognize that death from an overdose of this drug may be caused by paralysis of the respiratory system.

Utah State University students displayed greater knowledge in Question No. 4 than did U of U students. This question concerned the effects of the hallucinogens and the results of the abuse of this drug. Utah State was superior in knowing that the effects of one dose usually lasts about eight hours and are best described as wild hallucinations.

Question No. 6 dealt with the term "speed kills" and what it was referring to. University of Utah students were much higher than USU in correct responses by knowing that it is the homicidal and self-destructive tendencies of someone coming down off of amphetamines.

Question 7 dealt with the use of marijuana in conjunction with crime which federal authorities feel to be an important factor in the occurrence of crime. University of Utah was again superior in correct responses to this question. Table 7 presents the mean correct response for students at both Universities concerning this area.

Table 7. Mean correct responses of students on questions on drugs and narcotics

Question	2	3	4	6	7
Utah State University	75.86	37.07	77.59	52.59	60.78
University of Utah	79.41	41.18	76.47	64.71	65.45

University of Utah students displayed superior knowledge in this area as can be seen in Table 8. The greatest difference can be found in Questions 2 and 6. Both groups showed fair knowledge in this area. However, there seems to be room for improvement for both.

Table 8. Drugs and narcotics mean correct scores for five questions

Utah State University	percent correct	60.78
University of Utah	percent correct	65.55

#### Food fads and medical quackery

There were five questions dealing with this area of food fads and medical quackery. University of Utah students were more knowledgeable in determining the fallacies concerning nutrition. Question No. 21 dealt with the identification of these false statements.

Question No. 32 revealed a very significant difference concerning the knowledge of chiropractic principle holding vertebral subluxation as the cause of arthritis, appendicitis and epilepsy. University of Utah students were superior in this question by almost double that of USU.

Questions 38 and 39 were both dealing with the result of the use of food fads and patent medicine. The fact that they both delay the receiving of proper diagnostics and the receiving of proper medical attention was recognized by both groups. Utah State University was better in Question 38 and U of U was higher on Question 39.

University of Utah students were better by 15 percent in labeling various quackery gadgets as nostrums, which was the basis for Question No. 40. Table 9 presents the mean correct responses for students at both Universities concerning this area.

Table 9. Mean correct responses of students on questions of food fads and medical quackery

Question	21	32	38	39	40
Utah State University	36.21	15.52	62.93	65.52	62.07
University of Utah	52.94	39.22	58.82	73.53	77.45

As can be seen in Table 10, U of U proved greater knowledge pertaining to this area by surpassing USU by a larger percent than in any previous area. Four of the five questions were

answered correctly by a greater percent of U of U with the exception being Question 38 in which USU students showed greater knowledge by only four percent. The question on chiropractic principle presented a great difference with U of U doubling the score of USU. In Question No. 40 U of U also displayed superior knowledge over USU by approximately 15 percent.

Table 10. Food fads and medical quackery mean correct scores for five questions

Utah State University	percent correct	48.54
University of Utah	percent correct	60.40

#### Mental health

In the area of mental health and associated problems there were five questions covering this material. Utah State University students were more able to detect that adequate food and rest were the first line of defense against mental illness. This was the information requested in Question No. 16 pertaining to the prevention of mental illness.

Question No. 17 was concerned with the various terminology for the classification of mental illness conditions. Both groups scored high on this question and U of U students were slightly more able to state that neurosis is a condition outside of the normal range of behavior but one that is not frankly disordered.



Question 18 asked, "Which of the following most frequently causes personality disintegration?" Both groups also scored very high on this question and USU students were slightly ahead in the correct answer of fatigue.

University of Utah students were superior in Question 19 with the greater percent knowing that popularity with the opposite sex was the least important factor of mental health.

Question No. 20 had reference to a psychosomatic condition. Utah State University students displayed superiority in this topic by having a higher percent of the correct description which was, a type of disorder that occurs when an inadequate release of emotional tension creates functional bodily disorders such as headaches and high blood pressure. Table 11 presents the mean correct responses for students at both universities concerning this area.

Table 11. Mean correct responses of students on questions of mental health

Question	16	17	18	19	20
Utah State University	70.69	92.24	83.62	27.59	75.86
University of Utah	56.86	92.16	82.35	32.35	71.57

The greatest difference was found in Questions 16 and 19 with USU showing definite superiority on the best defense against mental health and U of U students being able to detect the least important factor of mental health. Table 12 presents the mean scores for both groups with regard to questions covered under this area.

Table 12. Mental health mean correct scores for five questions

Utah State University	percent correct	53.10
University of Utah	percent correct	51.

### Personal health

There were six questions in this area of health knowledge.

In Question No. 15 concerning the longevity of the female being longer than the male, U of U was definitely greater in the correct response of eight years.

Question 26 was concerned with some of the characteristics of hypertension. Utah State University was more able to detect the false statement that the average age of onset was in the late fifties.

In detecting the seven danger signals of cancer, U of U was superior to USU students in knowing that all of the characteristics mentioned were found in the danger signals. This was the material called for in Question No. 27.

Question 29 was concerned with the description of the condition known as multiple sclerosis. Both groups were low in their correct responses. Utah State, however, was superior in the pertinent knowledge that this condition is caused by a chronic disease in which the myelin sheath of the nerve is destroyed and replaced with scar tissue.

University of Utah students were greater in correct responses regarding the cause of glaucoma. They were more able to detect the correct answer as an increased intra-ocular pressure than were USU students.

Question No. 35 had to deal with immunity and the type gained when antibodies have been produced in one body and subsequently injected into another individual. University of Utah students were more capable in the identification of passive immunity than were students at USU. Table 13 presents the mean correct responses for students at both Universities concerning this area.

Table 13. Mean correct responses of students on questions of personal health

Questions	15	26	27	29	30	35
Utah State University	27.59	45.69	90.52	30.17	33.62	12.93
University of Utah	39.22	40.20	95.10	25.49	38.24	20.59

Both groups displayed less than good knowledge in the question regarding passive immunity. The only one displaying superior knowledge was Question 27 concerning the danger signals of cancer. As can be seen in Table 14 this area is one in which much emphasis can and needs to be placed.

Table 14. Personal health mean correct scores for six questions

Utah State University	percent correct	40.09
University of Utah	percent correct	43.14

Sex education

In the area of health knowledge concerning sex education there were seven questions. Utah State University students were more capable in detecting the Trimester in which the contacting of German measles (Rubella) can be most critical. Question No. 8 dealt with the selection of the trimester in which, if German measles are contacted, a baby may be born with a defective heart or some other congenital defect.

Question 9 was concerned with the purpose or meaning of the physiological process of menstruation. Utah State University students were much more able to respond correctly that it meant that the mucus membrane of the uterus is being sloughed out.

University of Utah students were much greater in knowledge concerning the purpose and function of the prostate gland. Question No. 10 dealt with this information and U of U students responded with a larger percent of the correct answer which was, provides fluid for sperm.

Question 11 was concerned with ovulation of the female and when in the menstrual cycle this occurs. Utah State students were slightly ahead of U of U in the correct answer of, at the midpoint of the menstrual cycle.

Question No. 12 was concerned with the discussion of the symptoms of pregnancy. University of Utah students were more capable in the identification of these symptoms.

In identifying the cause of a condition known as cryptorchism, both groups scored very low. Question No. 13 had regard to this information and USU was slightly higher than U of U in responding correctly that this condition is due to the gonad or testicle failing to descend during the last month of pregnancy.

Question 14 dealt with the purpose of the seminiferous tubules. University of Utah students displayed a greater degree of superiority than did USU. The correct responses of U of U were almost double that of USU in stating that the seminiferous tubules serves in sperm production. Table 15 presents the mean correct responses for students at both universities concerning this area.

Table 15. Mean correct responses of students on questions of sex education

Question	8	9	10	11	12	13	14
Utah State University	66.38	55.17	51.72	68.97	70.69	18.97	18.97
University of Utah	58.82	45.10	62.75	66.67	84.31	14.71	34.31

The differences between knowledge concerning pregnancy and menstruation in which USU was greater was not as great as the differences between knowledge concerning the prostate gland, the

symptoms of pregnancy and the seminiferous tubules in which U of U was greatly superior. Both groups were low in knowledge regarding the condition known as cryptorchism.

Table 16 presents the mean score for both groups with regard to questions covered under this area.

Table 16. Sex education mean correct scores for seven questions

Utah State University	percent correct	50.10
University of Utah	percent correct	52.40

#### Summary

The purpose of this study was to compare health knowledge between sophomore students at the University of Utah and sophomore students at Utah State University. The information gained was to be used in making recommendations regarding the requiring of a basic health class at Utah State University where no class is required or even offered.

Method. Through the cooperation of Utah State University and the University of Utah, 500 questionnaires were mailed to 250 students from each University. Of the 500 mailed 218 were returned. One hundred and sixteen were returned from Utah State University and 102 from the University of Utah. Names were selected by random sampling from the sophomore students at Utah

State University and from the University of Utah Department of Health, Physical Education and Recreation class rolls. The questionnaires were mailed to each of the 500 respondents and when questionnaires were returned with the address unknown, another name was selected until 250 questionnaires were accepted through the mail.

When responses were received they were scored and keypunched on IBM-5080 cards. The cards were then processed through the IBM-350 Model 44 computer system using Analysis of Variance and the "Quest" program. The results of these data were analyzed with "T" test scores for significance and the specific question according to means was recorded.

Findings. Computation of student "T" scores verified that students at the University of Utah were superior in health knowledge at the .05 level of significance based on the one tailed test.

The .05 level of significance is descriptive of a degree of confidence, (level of confidence) that a definite difference does exist. This in turn indicates that the observed difference does exist and is not due to the caprice of sampling.

The variable or property whereby these two groups differ then must be due to specific instruction received by the superior group, which in turn has created positive learning as was found in the positive relationship which does exist between U of U students having had a class in basic health education and being significantly superior based on the .05 level of confidence.

The second series performed on the responses was the "Quest" series which provided a breakdown of each question as to percentage correct and missed. From this series a comparison was possible for each question and a mean score for each area. University of Utah students were superior to USU students in five of the eight areas and by a higher percent than the difference existing in the three areas in which USU was greater. The areas and percentage greater are as follows:

1. Alcohol and tobacco - U of U - 6 percent
2. Community health and communicable disease - USU - 2 percent
3. Consumer health - USU - 2 percent
4. Drugs and narcotics - U of U - 5 percent
5. Food fads and medical quackery - U of U - 12 percent
6. Mental health - USU - 3 percent
7. Personal health - U of U - 3 percent, and
8. Sex education - U of U - 3 percent.



CHAPTER IV  
CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The findings of this study justify the following conclusions:

1. Students at the University of Utah displayed superior knowledge of health education at the .05 level of significance.
2. University of Utah students were superior on five of the eight areas of prominence determined from sources used in the field of health education.
3. There exists a positive relationship between specified health instruction and positive learning of health education material as verified by the .05 level of confidence.
4. The variable whereby members of these sample groups differed was dependent upon health instruction.
5. The low scores obtained on these area questions indicate the need for qualified health instruction.

Recommendations

From the results of this study it is recommended that:

1. The curriculum at Utah State University include a required class in Basic Health Education. This is based

on the findings that students having had health education at the University of Utah did demonstrate superiority in health knowledge based on the .05 level of significance.

2. The University of Utah reinstate their required health education classes. This is based on the findings that students having had a class in basic health education did demonstrate superiority in health knowledge based on the .05 level of significance.
3. Further study should be taken to evaluate a basic health program, both for the University of Utah, inasmuch as no consideration was given their health curriculum in preparation of this questionnaire, and for Utah State University.
4. A study to compare other universities having a health class of basic education and those having no such class would be beneficial.

## BIBLIOGRAPHY

- American Medical Association House of Delegates Resolution.  
(Meeting held at Miami Beach, June, 1960).
- "Battle for Breath." Today's Health, XLIII (February, 1967), 42-43.
- Commission on Philosophy for School Education. "A Point of View for School Health Education." Journal of Health, Physical Education and Recreation, XXXIII (November, 1962), 47-48.
- Dearborn, Terry H. "Comparative Class Performances and Gains in Junior College Health Education." Research Quarterly, XXXIV (October, 1963), 299-304.
- Educational Policies Commission. National Education Association. The Central Purpose of American Education. (1961), 57 pp.
- Fraleigh, Warren P. and Gustafson, William F. "Can we Defend Required Programs." Journal of Health, Physical Education and Recreation, XXXV (February, 1964), 32.
- Hinrichs, Marie A. "Some Notes on a College Proficiency Test in Hygiene." Research Quarterly, XXIV (March, 1953), 18-21.
- Humphrey, James H. "Health Problems of Interest to College Men." Research Quarterly, XXIII (May, 1952), 319-21.
- "Is Your Food Safe? Dispute Over Testing." U. S. News and World Report, LXVII (December 15, 1967), 44-46.
- Johnson, Perry B. "An Academic Approach to College Health and Physical Education." Journal of Health, Physical Education and Recreation, XXXVII (March, 1966), 23-25.
- Means, Richard K. "Required College Health Education Past and Present." Journal of Health, Physical Education and Recreation, XXXV (September, 1964), 30-31.
- Moss, Bernice. "Can Health Education Command Respect." Journal of Health, Physical Education and Recreation, XXVIII (May, 1957), 26-27.
- "1969 Cigarettes and Society: A Growing Dilemma." Time, XCIII (April 25, 1969), 44-46.
- President's Commission on Higher Education. Higher Education for American Democracy. Establishing the Goals. Washington, D.C.: (December, 1947), 347 pp.

APPENDIX

UTAH STATE UNIVERSITY · LOGAN, UTAH 84321  
COLLEGE OF EDUCATIONDEPARTMENT OF HEALTH,  
PHYSICAL EDUCATION  
AND RECREATION

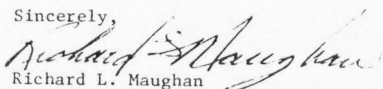
Dear Student:

The enclosed questionnaire is of vital importance to the completion of my thesis. It is a survey of basic health knowledge pertaining to Health Education.

In completing this questionnaire you will remain anonymous. However, if you wish to know the results of this study, please indicate so when you return the questionnaire in the enclosed self-addressed envelope. Would you please return this by March 2, 1970.

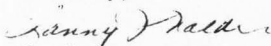
Your cooperation in this study will be greatly appreciated.

Sincerely,

  
Richard L. Maughan

Richard Maughan, as indicated above, is researching the field of Health Education. I have encouraged him to make this study, the results of which will be used to give definition to our program in health education. Your analysis of the questionnaire is very important to us. I trust that you will find the time to give consideration to it and forward it at the earliest convenience.

Sincerely,

Dr. Lanny J. Nalder  
Chairman of Health Education

Enclosures a/s

Dear Student:

This letter is in reference to the questionnaire which was sent to you the first of March. As of yet I have not received sufficient response to insure a valid study. Perhaps this questionnaire has been misplaced during your studies. I would appreciate it very much if you would please check your files and if the questionnaire is still in your possession, would you complete it as soon as possible and return it to me. Your cooperation in this survey will be greatly appreciated.

If you have completed your questionnaire, please disregard this letter.

Once again thank you for your assistance.

Sincerely,

Richard L. Maughan

## PLEASE COMPLETE THE FOLLOWING INFORMATION

Year in School: \_\_\_\_\_ Sex: \_\_\_\_\_

Have you had any classes which you felt were helpful in answering these questions? If so, please list the classes:  
\_\_\_\_\_  
\_\_\_\_\_

PLEASE ANSWER THE FOLLOWING QUESTIONS FROM MEMORY USING NO RESOURCE MATERIAL. PLACE THE CORRECT RESPONSE IN THE SPACE PROVIDED AT THE LEFT HAND SIDE OF THE QUESTION.

- \_\_\_\_\_ 1. Of the following statements concerning nicotine, choose the correct one.
- Nicotine is a rapidly acting poison.
  - Nicotine is a stimulant for some people and a narcotic for others.
  - Irritants in tobacco tar are a greater threat to the smoker's health than is nicotine.
  - All of the above.
- \_\_\_\_\_ 2. Which of the following drugs fits this description? It is by far the most potent of the opium derivatives and may cause death by asphyxiation.
- Marijuana
  - LSD
  - Amphetamines
  - Morphine
- \_\_\_\_\_ 3. Which of the following terms best fits this description? Shock symptoms are apparent and body temperature falls. Death usually results from paralysis of the respiratory center.
- Heroin
  - Barbiturates
  - Hallucinogens
  - Diethyltryptamine
- \_\_\_\_\_ 4. Which of the following terms best fits this description? The effects of one dose usually last about eight hours and are best described as wild hallucinations.
- Heroin
  - Hallucinogens
  - Amphetamines
  - Barbiturates
- \_\_\_\_\_ 5. Health scientists regard as the most serious health problem in the United States:
- Nicotine addiction
  - Heroin addiction
  - Alcoholism
  - Marijuana use

- \_\_\_\_\_ 6. The term "speed kills" refers to:
- Homicidal and self-destructive tendencies of someone coming down off amphetamines.
  - Aggressive behavior of someone under the influence of marijuana.
  - The speed of which blood pressure along with body temperature fall under a certain drug which may cause death.
  - All of the above.
- \_\_\_\_\_ 7. Marijuana use is:
- A more serious problem in the United States than the use of alcohol.
  - A more serious problem in the United States than cigarette smoking.
  - Harmful because of the nicotine it contains.
  - A major factor in crime.
- \_\_\_\_\_ 8. A child may be born with a defective heart or other defects if the mother contracts German Measles (Rubella) during which trimester of pregnancy?
- 1st trimester
  - 2nd trimester
  - 3rd trimester
  - 4th trimester
- \_\_\_\_\_ 9. The physiological process of menstruation indicates that:
- An egg (ovum) is passing out of the uterus.
  - That the waste products resulting from the death of the ovum are passing out of the uterus.
  - That the mucus membrane of the uterus is being sloughed out.
  - Poisons are being excreted.
- \_\_\_\_\_ 10. The prostate gland:
- Secretes urine.
  - Provides fluid for sperm.
  - Secretes androgen.
  - Produces sperm.
- \_\_\_\_\_ 11. Ovulation of the female normally occurs:
- At the beginning of the menstrual cycle.
  - At the midpoint of the menstrual cycle.
  - At the end of the menstrual cycle.
  - Several times during the cycle.
- \_\_\_\_\_ 12. Which of the below is a symptom of pregnancy:
- Cessation of menses.
  - Enlargement of the uterus.
  - Brown discoloration of the breasts (around nipples) and discoloration of the sagittal line of the abdomen.
  - All of the above.



- \_\_\_\_ 13. When the male gonad or testes fail to descend during the last month of pregnancy the condition is known as:  
a. Cryptorchism                                c. Urethra cavernosism  
b. Mellitism                                     d. Not listed
- \_\_\_\_ 14. What is the function of the seminiferous tubules?  
a. Serves in sperm production.  
b. Storage of sperm.  
c. Secretes clear fluid for assisting the sperm in the process of mobility.  
d. Not listed.
- \_\_\_\_ 15. In comparing the longevity of life of the female and male, the women will on an average outlive the man by:  
a. 2 years                                         c. 6 years  
b. 4 years                                         d. 8 years
- \_\_\_\_ 16. The first defense against mental illness for an individual is:  
a. A good psychiatrist  
b. To have no frustrations  
c. Adequate food and rest  
d. To withdraw from adverse situations.
- \_\_\_\_ 17. A condition outside of the normal range of behavior but one that is not frankly disordered, best describes which condition?  
a. Psychosis                                     c. Peranoia  
b. Neurosis                                      d. Personality disorder
- \_\_\_\_ 18. Of the following, the least important factor of mental health is:  
a. Good physical health.  
b. Exceptional intellectual capacity.  
c. Popularity with the opposite sex.  
d. Good social health.
- \_\_\_\_ 19. Which of the following most frequently cause personality disintegration:  
a. Fatigue                                         c. Financial problems  
b. Illness     d. Family disaster
- \_\_\_\_ 20. The type of disorder that occurs when an inadequate release of emotional tension creates functional bodily disorders, such as headaches and high blood pressure is known as:  
a. Psychosomatic condition     c. Neurosis  
b. Insanity                                        d. Psychosis

- \_\_\_\_\_ 21. Which of the following concerning nutrition are not true?
- All disease is caused by faulty diet.
  - Most Americans suffer from hidden nutrition deficiencies and hence must supplement their diets with vitamin or mineral pills or foods.
  - Soil depletion results in foods that can cause malnutrition.
  - All of the above.
- \_\_\_\_\_ 22. Which of the following substance will provide the most energy?
- Protein
  - Carbohydrates
  - Fats
  - Sugars
- \_\_\_\_\_ 23. A deficiency of what vitamin results in an inflammation of the nerves (polyneuritis).
- Thiamine
  - Carotene
  - Calciferol
  - Riboflavin
- \_\_\_\_\_ 24. Which of the following are characteristics of the lack of ascorbic acid (vit. c)?
- Undue hemorrhaging
  - Soft gums and loose teeth.
  - Anemia from disturbance of bone marrow.
  - All of the above.
- \_\_\_\_\_ 25. The essential four food groups include:
- Milk, meat, eggs, bread, cereal.
  - Meat, milk, vegetable, bread.
  - Meat, vegetable-fruit, milk, bread-cereal.
  - Milk, poultry, fish, cereal.
- \_\_\_\_\_ 26. Which of the following statements about hypertension is false:
- As in any other disorder, something may have gone wrong with the way some body's organ works.
  - Emotions are involved in high blood pressure.
  - Hypertension often runs in families.
  - Average age of onset is in the late fifties.
- \_\_\_\_\_ 27. Which of the following is one of the danger signals of cancer:
- Any sore that does not heal.
  - A lump or thickening of the breast or elsewhere.
  - Unusual bleeding or discharge.
  - Any change in a wart or mole.
  - Persistent indigestion or difficulty in swallowing.
  - Persistent hoarseness or cough.
  - Any change in normal bowel habits.
  - All of the above.

- \_\_\_\_\_ 28. A condition causing reduced rate of metabolism, lowered vitality, mental sluggishness and increased body weight and an enlargement of the thyroid gland is quite possibly due to lack of:
- a. Iodine
  - b. Phosphorous
  - c. Iron
  - d. Calcium
- \_\_\_\_\_ 29. A chronic disease in which the myelin sheath of the nerves is destroyed and replaced with scar tissue is called:
- a. Cysticfibrosis
  - b. Multiple Sclerosis
  - c. Cerebral Palsy
  - d. Myasthenis Graves
- \_\_\_\_\_ 30. Glaucoma is caused by:
- a. A virus.
  - b. An increased intro-ocular pressure.
  - c. Development of an opaque area in the lense of the eye.
  - d. Destruction of the optic nerve.
- \_\_\_\_\_ 31. Which of the following is the cause of muscular dystrophy?
- a. Too much exercise.
  - b. Not enough exercise.
  - c. A virus.
  - d. The cause is unknown.
- \_\_\_\_\_ 32. Chiropractic principle has the vertebral subluxation as:
- a. Cause of arthritis.
  - b. Cause of Appendicitis.
  - c. Cause of epilepsy.
  - d. All of the above.
- \_\_\_\_\_ 33. Which of the following is the least effective means of avoiding influenza:
- a. Avoid crowds.
  - b. Get sufficient rest.
  - c. Exercise two hours daily.
  - d. Don't allow yourself to become chilled.
- \_\_\_\_\_ 34. Infectious hepatitis is a viral disease localizing in:
- a. The spleen.
  - b. The heart.
  - c. The liver.
  - d. The kidney.
- \_\_\_\_\_ 35. When antibodies have been produced in one body and subsequently injected into another individual it is said to be:
- a. Passive immunity.
  - b. Acquired immunity.
  - c. Active immunity.
  - d. Not listed.
- \_\_\_\_\_ 36. The disease causing the greatest economic loss in society is:
- a. Tuberculosis
  - b. Pneumonia
  - c. Influenza
  - d. Common cold

- \_\_\_ 37. Of the following diseases the one that remains the least controlled problem in the United States today is:
- a. Scarlet fever
  - b. Tuberculosis
  - c. Leprosy
  - d. Diphtheria
- \_\_\_ 38. Which of the following is a primary drawback concerning fads, fallacies, and quackery concerning health:
- a. Delay in receiving medical attention.
  - b. Expense.
  - c. Nutritional deficiency during quack treatment.
  - d. Not listed.
- \_\_\_ 39. The best reason for not using patent medicine is:
- a. They cost too much for the good derived from them.
  - b. They delay the individual from seeing a physician.
  - c. They cause addiction.
  - d. Testimonials in favor of them are slanted.
- \_\_\_ 40. Which of the following is a nostrum?
- a. Galvanic belt.
  - b. Electronic gadget to cure cancer.
  - c. Magic potion for the liver.
  - d. All of the preceding.

VITA

Richard L. Maughan

Candidate for the Degree of

Master of Science

Thesis: A Comparative Survey of Health Knowledge Between Sophomores at Utah State University and Sophomores at the University of Utah

Major Field: Health Education

Biographical Information:

Personal Data: Born at Wellsville, Utah, 21 October 1939, son of Ariel H. and Gladys Leishman Maughan; married Ruth B. Poppleton, 19 July 1968.

Education: Attended elementary school in Wellsville, Utah; graduated from South Cache High School in 1957; attended College of Eastern Utah from 1959-61; received a Bachelor of Science degree from Utah State University in 1967, with a major in Speech Pathology and a minor in Psychology; completed requirements for the Master of Science degree in Health Education at Utah State University in 1970.

Professional Experience: 1967-69 taught Seminary for the Church of Jesus Christ of Latter-Day Saints at Brigham City, Utah.