

A STUDY TO DETERMINE THE EFFECTIVENESS  
OF A MOBILE SEMINAR AS A LEARNING  
EXPERIENCE IN HEALTH EDUCATION

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A THESIS  
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COLLEGE OF HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE

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We hereby recommend that the Thesis prepared under  
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## DEDICATION

To EDDIE, with love ...

Whose death made me realize

the importance of overall growth.

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## CHAPTER 1

### THE PROBLEM

#### Rationale

While the traditional class room has been the focal point of the learning environment in education for much of our history, there remain many limitations to this setting as a place for learning. Merki (1981) pointed out that the traditional classroom is stationary in that the learning activities and experiences take place in a fixed setting. He suggested that an alternative would be to take the participants to various situations where learning might take place. He pointed out that by making the classroom "mobile", several things could be achieved: (a) a greater variety of learning experiences could take place, (b) people and programs could be viewed in operation, and (c) experiences not possible in the traditional setting could be enjoyed.

This was the genesis of the mobile seminar, a travelling learning experience designed to visit exemplary persons and programs concerning health education and health services. It was thought that this different type of learning experience would stimulate additional learning in several areas.

#### Purpose

The purpose of the study was to evaluate the effectiveness of a mobile seminar as a learning experience in health education.

### Statement of the Problem

The problem was to determine the effectiveness of a mobile seminar learning experience in health of selected professional and personal factors as indicators in the learning experience. A traditional classroom experience was used as a control situation. The problem investigated was divided into eleven subproblems that were directed to the mobile seminar and the traditional classroom learning experience. The study was set in a posttest only experimental-control group design with the participants in the mobile seminar serving as the experimental group. The study was conducted from March of 1982 through May of 1983. There were twenty subjects chosen from the traditional classroom group and twenty subjects from the mobile seminar group.

### The Subproblems

The first subproblem. The first subproblem was to determine whether participants in the mobile seminar and the traditional classroom used professional contacts that were initiated during the learning experience.

The second subproblem. The second subproblem was to determine whether participants in the mobile seminar and the traditional classroom used material received from the learning experience during the class.

The third subproblem. The third subproblem was to determine the usefulness of handout materials received by participants in the mobile seminar and the traditional classroom after completion of the learning experience.

The fourth subproblem. The fourth subproblem was to determine whether participants in the mobile seminar and the traditional classroom contributed to their field of study, i.e., contributed time, energy, or interest into community projects, or doing volunteer work in a health related field.

The fifth subproblem. The fifth subproblem was to determine whether personal lifestyle changes by participants in the mobile seminar and the traditional classroom were made either in a negative or positive direction.

The sixth subproblem. The sixth subproblem was to determine whether career goals by participants in the mobile seminar and the traditional classroom were altered as a result of the learning experience.

The seventh subproblem. The seventh subproblem was to determine whether an increase of publications by participants in the mobile seminar and the traditional classroom developed as a result of the learning experience.

The eighth subproblem. The eighth subproblem was to determine any difference in the amount of new information about health and/or health education received by participants in the mobile seminar and the traditional classroom as a result of the learning experience.

The ninth subproblem. The ninth subproblem was to evaluate the learning experience of the participants in the mobile seminar and the traditional classroom about their learning experience.

The tenth subproblem. The tenth subproblem was to determine whether the participants in the mobile seminar and the traditional classroom expanded their knowledge of health.

The eleventh subproblem. The eleventh subproblem was to determine whether participants in the mobile seminar and the traditional classroom, if given a choice, would elect to take these courses again.

### Hypotheses

The following hypotheses were tested:

1. There will be no significant difference in the scores on the semantic differential in the use of professional contacts resulting from a mobile seminar experience versus contacts made in a traditional classroom learning experience.
2. There will be no significant difference in the scores on the semantic differential in the frequency of use of materials received from the mobile seminar and the traditional classroom learning experience.
3. There will be no significant difference in the scores on the semantic differential in the usefulness of materials received from the mobile seminar and the traditional classroom learning experience after completion of the courses.
4. There will be no significant difference in the scores on the semantic differential of participants in a mobile seminar as compared to those in the traditional classroom learning experience for contributions made in the field of health.



5. There will be no significant difference in the scores on the semantic differential for personal lifestyle changes made by participants in a mobile seminar as compared to participants in a traditional classroom learning experience.

6. There will be no significant difference in the scores on the semantic differential for alterations of career goal directions by participants in a mobile seminar as compared to participants in a traditional classroom learning experience.

7. There will be no significant difference in the scores on the semantic differential of mobile seminar participants when compared to participants in a traditional classroom learning experience relating to publications made to health education.

8. There will be no significant difference in the amount of new information about health, and/or health education received by participants in the mobile seminar when compared to the participants in the traditional classroom learning experience.

9. There will be no significant difference in the scores on the semantic differential in the course evaluation by participants in the mobile seminar versus the traditional classroom learning experience.

10. There will be no significant difference in the expansion of knowledge about health by participants in a mobile seminar experience versus the traditional classroom learning experience.

11. There will be no significant difference in the number of participants who would elect to repeat the mobile seminar learning experience versus the traditional classroom learning experience.

### Delimitations

The investigation was subject to the following delimiting factors:

1. The study involved only students attending the Texas Woman's University.
2. The study involved only those students who participated in a mobile seminar or a traditional classroom course in Health Update. Health Update is a course that covers much of the same material as a mobile seminar, but in the confines of classroom walls.
3. The study involved only those students who returned their questionnaires.
4. The study did not differentiate on the basis of sex, religion, affiliations, ethnic background, or grade point average.

### Limitations

The study was limited by the following factors.

1. The study was limited by the degree of cooperation of the participants in responding to the questionnaire.
2. The study was limited to the extent of truthfulness of the participants in responding to the questionnaire.
3. The study was limited by the small numbers of participants in each of the groups.

### Assumptions

The following assumptions were made by the investigator.

1. It was assumed that the participants answered the questionnaire in a sincere way.
2. It was assumed that the participants on the mobile seminar freely elected to take the mobile seminar.
3. It was assumed that the participants in the classroom freely elected to take that particular course.
4. It was assumed that all participants were interested in learning.

### Definitions of Terms

For the purpose of clarification, the following definitions were defined by the investigator:

1. Career Goal Changes -- refers to any alternate direction away from a current goal in the field of health education.
2. Interests -- encompasses any study, volunteer work, publications, journals and/or work in health education that one pursued as a result of the learning experience on the mobile seminar.
3. Lifestyle Changes -- includes any changes in present habits of daily living that are related, in some way, to health and fitness.

4. Material -- refers to the curriculum guides, hand-outs, brochures, and so forth that were received from the programs and organizations that were visited on the mobile seminar or distributed in the traditional classroom.

5. Mobile Seminar -- a travelling class designed to provide students and faculty with new opportunities for professional and personal growth through exposure to new ideas and different perspectives.

6. Professional Contacts -- all professional people who were met during seminar in other areas of the country and any references that students received about an organization through the traditional classroom.

7. Traditional Classroom -- a setting where students meet to have educational lessons mainly through one instructor's viewpoint at a fixed day and time.

## CHAPTER 2

### REVIEW OF THE LITERATURE

#### Introduction

A thorough review of the literature did not reveal completed studies involving a mobile seminar or any similar experience. This was not surprising in view of the fact that the mobile seminar is a relatively new concept in education. Research regarding a mobile seminar is available in the fields of language, travel, photography, and archeology, though extremely lacking in health education. As a result of the lack of research pertaining to a mobile seminar in health education, this chapter includes articles from journals, studies, field trips, and personal opinions from professionals in health education.

New techniques are continually being developed to improve the educational process and to enable students to receive the most benefits from their learning experience. Experiential learning is reputed to be an innovation that can enhance the learning situation. The following review of literature will be confined to material on experiential learning and mobile seminar as a learning experience of higher education.

#### Basic Objectives in Learning

Dykeman and Axelron (1972, pp. 179-180) states that the basic objectives in education may well remain the same. But within those objectives there must be changes and adaptations if society is to be

adequately and productively served. Experiential education as a university endeavor must remain essentially academic in nature, but at the same time provide for a new direction and level of function in higher education. The basic difference as compared to the more traditional classroom is that it seeks to appropriately incorporate and take advantage of learning sources beyond the campus in order to pursue a higher purpose in education (Arnold, 1973, p. 28).

Through flexibility (Dykeman and Axelron , 1972, p. 180) a student's options are increased in proportion to the number of program variations. At a time when educational opportunities are expanding for new populations and a more mature age group, diversity of programs and teaching methods are necessary. Certain subjects need the traditional setting, although this should not darken the horizons for expansion into other methods of learning. The development of different learning experiences will increase the possibility of more community involvement.

The effects of traditional education seem well documented with several examples of noteworthy achievements. The public wants more than is currently offered and this presents a problem. The public wants more education in a different, more flexible style (Dykeman and Axelron, 1972, p. 185).

Hertz (1974, p. 9) expresses that learning outside the school has implications for the student and teacher because it reaches beyond the limited sphere of the classroom. Students should see the mechanics of a community project at work and expand their career possibilities.

### Experimental Learning

According to Sexton (1976, p. 29), using experiential learning activities will expand the potential and enhance the effectiveness of liberal arts education which will in turn serve the most traditional goal of undergraduate education. The purpose of expanding knowledge is to provide students with an understanding of the world around them in its historical, social and economical contexts, at a time when the aspect of education is suffering great difficulties.

All learning is "experiential" (Sexton, 1976, p. 4), but recently the term experiential has come to be used for a number of formalized activities outside the classroom. These activities involve objectives articulated in advance by the professor with the assistance of professionals in the field.

The field trip at the university level, used as an instructional technique, has been utilized in many areas in order to facilitate students' conceptual awareness (Brown & Edelson, 1972, p. 2). Summer field courses have recently come into the picture in many areas including the humanities. Brown and Edelson stated that attempts have been made to involve senior citizens in educational pursuits through geographically-oriented field trips.

Some additional benefits according to Altman (1978, p. 56), include the opportunity to demonstrate problem process correction, and to connect concepts and thoughts taught in books and lectures with real situations. Being in contact with professionals in their own settings allows the

student to view education from other perspectives (Altman, 1978, p. 57).

McHugo and Jernstedt suggest that field studies may be organized according to three stages; selection factors prior to experience, immediate changes due to the experience, and the persistence of change following the experience. The authors conclude that, compared to the traditional campus activities, field experiences appear to have some significant affective impact on college students (McHugo and Jernstedt, 1973, pp. 180-188).

#### Murphy and Jenks Study

Murphy and Jenks conducted a study in 1981 "at or in conjunction with" Far West Laboratories for Educational Research and Development in San Francisco, California. The study examined ways to implement community-based learning activities, such as off-campus educational experiences and field trips. The field activities were meant to improve the course and not replace other forms of learning. The field activities were designed to provide students with opportunities for: (a) concrete experiences, (b) observation and reflection, (c) formation of abstract concepts and generalizations, and (d) testing implications of concepts in new situations.

The staff investigators completed 68 personal interviews with instructors who outlined the structure and process of their courses. The instructors then observed and discussed outcomes of the problems they encountered. The investigators found there was a significant value in



field trips and off-campus learning experiences in higher education (Murphy and Jenks, 1981, pp. 1, 273).

Merki (1981, p. 23) organized and conducted mobile seminars in health education at Texas Woman's University beginning in the summer of 1978. Merki (1981) states, "The traditional classroom has built-in restrictions to learning: exposure to one instructor's viewpoint, little opportunity for reinforcement, preoccupation with grading, and even stress from the long workday then classes in the evening for some students" (p. 24).

Merki attempts to reduce these obstacles through a mobile classroom. The travelling classroom is designed to provide students and faculty with opportunities for professional and personal growth which might not otherwise take place. Among the potential benefits of the mobile seminar as identified by Merki are:

1. opportunities for exposure to new ideas and different perspectives
2. reinforcement of the basic ingredients of quality programs
3. opportunity for personal growth
4. involvement of students in group dynamics at a deep level
5. faculty/student interaction in real-life settings
6. opportunities for individuals to view their own competencies as preprofessionals or professionals
7. a reference point against which to gauge programs and individual progress

8. opportunity to meet new people and establish new professional ties
  9. source of new ideas for faculty
  10. opportunities to see programs in the actual settings
  11. chance to enjoy some of the natural beauty of our country
- (Merki, 1981, p. 23).

## CHAPTER 3

### METHODOLOGY

This chapter was divided into seven sections. The seven sections consist of the following: (a) design, (b) preliminary procedures, (c) site, (d) criteria for selection of site, (e) study site, (f) population, (g) criteria for selection of population, (h) study population, (i) instruments, (j) criteria for selection of instruments, (k) study instruments, (l) treatment of data, (m) preparation of final report.

#### Design

The study included 20 students randomly drawn from a population of 30 students from the past mobile seminars sponsored by the Department of Health Education at Texas Woman's University. In addition, there were 20 students randomly drawn from traditional graduate classes in the Department of Health Education at Texas Woman's University who have not participated in a mobile seminar. The participants were drawn from the time period of 1977-1982. The instruments were distributed in the fall of 1982. Data were collected, then calculated and analyzed by means of t-tests and Chi square ( $x^2$ ).

A posttest - only experimental design was used in the study. Participants from the mobile seminars were identified as Group I or the Experimental Group. The participants in the traditional classroom were labeled as Group II, the Control Group.

The posttests were administered to everyone in Groups I and II. The posttests for Group I and II contained the same investigative material except the questionnaires were directed to either the traditional classroom or the mobile seminar learning experiences.

### Preliminary Procedures

Permission was secured from the Department of Health Education at Texas Woman's University to use participants from the classroom and the mobile seminar according to the following criteria:

1. participants in the study were not requested to sign permission slips from the Human Research Review Committee at Texas Woman's University
2. participation must be voluntary
- 3.- returned questionnaires on the part of the participants indicated a willingness to participate in the proposed investigation
4. a random sample of 20 students from Group I and Group II were taken from the 30 students who were mailed questionnaires
5. the investigator did not have time with the participants during the instructor's classroom period.

The following procedures were carried out in preparation for data collection.

1. Names and addresses of past and present students enrolled in either a mobile seminar or Health Update course were found in the records at Texas Woman's University.

2. Questionnaires were sent to the participants in both an Update class and a mobile seminar class with a letter of explanation and a self-addressed stamped envelope to return the questionnaire to the researcher.

3. The questionnaires were distributed in the fall of 1982.

4. The data were analyzed by hand by the investigator.

The prospectus for the thesis was signed by the investigator's committee and the Dean of the College of Health, Physical Education, Recreation and Dance.

Duplication of the instruments to be used was made. The best procedure for administering the instruments and gathering the data was determined. The questionnaires were sent out to the participants with a self-addressed return envelope.

### Site

#### Criteria for Selection of Site

Several criteria were identified for the selection of the site of the study. First, the site had to be a university that had a graduate program in health education. Secondly, the university also had to offer a mobile seminar-type course in health education or a related field. Thirdly, the investigator had no influence on the prior arrangements made by the university as to the travel plans of these seminars.

### Study Site

The site chosen by the investigator was Texas Woman's University in Denton, Texas, because that was the one institution using a mobile seminar teaching technique in health education. Another important consideration was the presence of a well established health education graduate program. Texas Woman's University offers graduate major programs in school health education and community health education.

### Population

#### Criteria for Selection of Population

The criteria for selection of the study population consisted of the following: (a) a group of graduate students who had been on a mobile seminar in health education and (b) a group of graduate students in health education who had not been on a mobile seminar. The traditional classroom participants came from a Health Update course. Both of these courses are established offerings in the graduate program in the Department of Health Education at Texas Woman's University. This course covers very similar content when compared to the mobile seminar, though the mobile seminar is not confined to only a classroom setting.

#### Study Population

The study population consisted of two groups, Group I and Group II. Groups I and II were selected after they had already enrolled in either

the mobile seminar or a traditional class in the Health Education Department at Texas Woman's University in Denton, Texas.

#### Groups I and II

20 participants each

Gr I	mobile seminar	X	0 <sub>1</sub>
Gr II	traditional classroom		0 <sub>2</sub>

Group I consisted of the 20 students who had participated in a mobile seminar. Four members of Group I participated in the 1982 seminar. The four participants were observed first hand by the investigator during the 1982 seminar. Group II consisted of the 20 randomly drawn students from the students enrolled in a traditional classroom learning experience at Texas Woman's University. An equal number of subjects was drawn from the pool of potential participants in the traditional classroom once the number of participants in the mobile seminar, who agreed to be in the study, had been established.

#### Instruments

##### Criteria for Selection of Instruments

The criteria for selection of instruments were developed in order to select an instrument designed to reflect lifestyle changes. The questionnaire also examined subjects' attitudes and useable knowledge in

health education that they had received from their experience. A wide range of responses needed to be available on the instruments. The variety of options in responses was a rather critical consideration in the selection of the instrument.

### Study Instruments

Finding no existing instruments which met the established criteria, the investigator developed the necessary instrument that included a questionnaire. The questionnaire was used to measure students' attitudes and useable knowledge they received from the mobile seminar and/or traditional classroom learning experience.

The questionnaire was composed of eleven questions. Six questions dealt with the overall expectations of the course concerning usefulness of handout material, activities in the health field, personal lifestyle changes, possible career goal alterations, professional contacts, and possible publications. The remaining questions dealt with personal evaluation of the usefulness of the courses in future endeavors in health related fields. There were seven items from Breslow's study concerning lifestyle changes. When it was decided that the pretest was not possible, the information from Breslow's study was no longer needed.

Demographic information about the participants was not obtained through the questionnaire. The researcher received this information from records on the participants at Texas Woman's University.



### Treatment of Data

A t-test was used to determine whether there was a significant difference in the effectiveness of the learning experience on the material received from either the traditional classroom or the mobile seminar.

This t-test for independent samples was used to determine whether there was a significant difference in the effectiveness of the two learning experiences as determined by the responses to questions 1-7 and number 9. Means and standard deviations from the questionnaires were computed for these data. A 2 X 6 contingency table was used to calculate question 8. A 2 X 2 contingency table was used to calculate the scores for questions 10 and 11.

### Preparation of Final Report

A final report of the study was submitted to members of the thesis committee for suggestion and corrections. Each chapter was revised in accordance with the recommendations made and was resubmitted to the members of the thesis committee. The paper was organized into chapters, tables, appendices and a reference list was added. The completed thesis was presented to appropriate Administrative components.

## CHAPTER 4

### Analysis of Data

The purpose of this study was to evaluate the effectiveness of a mobile seminar as a learning experience in health education. Two groups were formulated with twenty subjects in each group.

Data were collected from the two groups through the use of a questionnaire that was mailed to each of the respondents. Data were collected during a six week period from September 1982 to October 1982. The questionnaire consisted of (a) post-experience responses to the effectiveness of the materials and overall learning experiences, (b) lifestyle and career changes attributed to either of the learning situations, (c) the use of personal contacts and publications made as a result of these experiences, and (d) an evaluation of the learning experiences. All hypotheses were tested at the .05 level of significance.

### Demographic Data

Group I consisted of 20 randomly drawn students who had participated on a mobile seminar. Group II consisted of 20 randomly drawn students from the traditional classroom learning experiences in the Department of Health Education. Table 1 is a description of the two groups according to sex. There were 11 males and 29 females in the program who were tested.

Table 1

Subjects According to Sex

Group	Female	Male
	<u>n</u>	<u>n</u>
I	16	4
II	13	7

Table 2 represents a categorization of the subjects according to their classification as students at Texas Woman's University. All of the participants were graduate students.

Table 2

Subjects According to Graduate Classification

Group	Classification	
	Master's Level	Doctoral Level
	<u>n</u>	<u>n</u>
I	3	17
II	5	15

The first hypothesis question was stated as follows: there will be no significant difference in the scores on the semantic differential in the professional contacts resulting from a mobile seminar experience versus contacts made in a traditional classroom experience. See Table 3 for the summary data concerning the research questions referring to the establishment of professional contacts. Means and standard deviations

were calculated for the data in the two groups. The raw data for both groups are found in Appendix A. A t-test was used to determine the significance of difference between the means of the two groups. The calculated t-value was .8. At the .05 level of significance, with 19 degrees of freedom, the critical value needed for significance was 2.092. Therefore, the calculated value did not exceed the critical value.

Table 3

Professional Contacts

Group	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>
I	20	6.35	2.91	.8
II	20	6.65	2.11	

df = 19

critical value = 2.09

The second hypothesis was stated as follows: there will be no significant difference in the scores on the semantic differential in the frequency of use of materials received from the mobile seminar and the traditional classroom learning experience. See Table 4 for the summary data concerning the research question referring to the frequency of using handout materials. Means and standard deviations were calculated for the data in the two groups. The raw data for both groups are found in Appendix A. A t-test was used to determine the significance of the difference between the means of the two groups. The calculated t-value

was 1.43. At the .05 level of significance, with 19 degrees of freedom, the calculated value did not exceed the critical value.

Table 4

Frequency of Using Handout Materials

Group	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>
I	20	7.85	1.92	1.43
II	20	7.5	1.90	

df = 19  
critical value = 2.09

The third hypothesis was stated as follows: there will be no significant difference in the scores on the semantic differential in the usefulness of materials received from the mobile seminar and the traditional classroom learning experience after completion of the course. See Table 5 for the summary data concerning the research question referring to usefulness of materials upon completion of the courses. Means and standard deviations were calculated for the data in the two groups. The raw data for both groups are found in Appendix A. A t-test was used to determine the significance of difference between the means of the two groups. The calculated t-value was .51. At the .05 level of significance, with 19 degrees of freedom, the critical value was 2.09. Therefore, the calculated value did not exceed the critical value.

Table 5

Usefulness of Handout Materials

Group	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>
I	20	8.2	1.67	.51
II	20	7.4	1.64	

df = 19

critical value = 2.09

The fourth hypothesis was stated as follows: there will be no significant difference in the scores on the semantic differential of participants in a mobile seminar as compared to those in the traditional classroom learning experience for contributions made in the field of health. See Table 6 for the summary data concerning the research question referring to contributions made to the health field. Means and standard deviations were calculated for the data in the two groups. The raw data for both groups are found in Appendix A. A t-test was used to determine the significance of difference between the means of the two groups. The calculated t-value was .98, At the .05 level of significance, with 19 degrees of freedom, the critical value was 2.09. Therefore, the calculated value did not exceed the critical value.

Table 6

Contributions Made to the Health Field

Group	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>
I	20	6.45	2.86	.98
II	20	6.65	2.89	

df = 19

critical value = 2.09

The fifth hypothesis was stated as follows: there will be no significant difference in the scores on the semantic differential for personal lifestyle changes made by the participants in a mobile seminar as compared to the traditional classroom learning experience. See Table 7 for the summary data concerning the research question referring to lifestyle changes. Means and standard deviations were calculated for the data in the two groups. The raw data for both groups are found in Appendix A. A t-test was used to determine the significance of differences between the means of the two groups. The calculated t-value was 1.48. At the .05 level of significance, with 19 degrees of freedom, the critical value was 2.09. Therefore, the calculated value did not exceed the critical value.

Table 7

Lifestyle Changes

Group	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>
I	20	7.15	2.64	1.48
II	20	7.25	1.94	

df = 19  
critical value = 2.09

The sixth hypothesis was stated as follows: there will be no significant difference in the scores on the semantic differential for alterations of career goal directions in a group of mobile seminar participants as compared to a group in a traditional classroom learning experience. See Table 8 for the summary data concerning the research question referring to career goal alterations. Means and standard deviations were calculated for the data in both groups. The raw data are found in Appendix A. A t-test was used to determine the significance of difference between the means of the two groups. The calculated t-value was .73. At the .05 level of significance, with 19 degrees of freedom, the critical value was 2.09. Therefore, the calculated value did not exceed the critical value.



Table 8

Alterations of Career Goals

Group	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>
I	20	5.65	3.2	.73
II	20	5.93	3.34	

df = 19

critical value = 2.09

The seventh hypothesis was stated as follows: there will be no significant difference in the scores on the semantic differential of mobile seminar participants when compared to participants in a traditional classroom learning experience relating to publications made to health education. See Table 9 for the summary data concerning publications made to the health field. Means and standard deviations were calculated for the data in the two groups. The raw data for both groups are found in Appendix A. A t-test was used to determine the significance of difference between the means of the two groups. The calculated t-value was .44. At the .05 level of significance, with 19 degrees of freedom, the calculated value did not exceed the critical value.

Table 9

Publications Made in the Health Field

Group	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>
I	20	1.7	1.65	.44
II	20	1.5	.24	

df = 19

critical value = 2.09

The eighth hypothesis was stated as follows: there will be no significant difference in the amount of new information about health, and/or health education received by participants in the mobile seminar when compared to the participants in the traditional classroom learning experience. A 2 X 6 contingency table was used to calculate the data in the two groups. The raw data for both groups are found in Table 10.

A chi square was used to determine the significance of difference between the groups. The calculated chi square was -.72 at the .05 level of significance, with 1 degree of freedom. The critical value needed for significance was 3.84. Therefore, the calculated value did not exceed the critical value.

Table 10

Percentage Value of Amount of New Information

	0%	20%	40%	60%	80%	100%	
Gr I	0 / 3.3	0 / 3.3	2 / 3.3	5 / 3.3	10 / 3.3	3 / 3.3	= 20
Gr II	0 / 3.3	0 / 3.3	3 / 3.3	6 / 3.3	10 / 3.3	1 / 3.3	= 20
Totals							n = 40

$$df = 39$$

$$\chi^2 = -.72$$

The ninth hypothesis was stated as follows: there will be no significant difference in the course evaluation by the participants in the mobile seminar versus the traditional classroom learning experience. See Table 11 for the summary data concerning the research question referring to the evaluation by participants of the learning experience. Means and standard deviations were calculated for the data in the two groups. The raw data for both groups are found in Appendix A. A t-test was used to determine the significance of difference between the mean of the two groups. The calculated t-value was .41. At the .05 level of significance, with 19 degrees of freedom, the critical value was 2.09. Therefore, the calculated value did not exceed the critical value.

Table 11

Evaluation of Learning Experience as Indicated by Participants

Group	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>
I	20	8.9	1.25	.41
II	20	7.85	1.35	

df = 19

critical value = 2.09

The tenth hypothesis was stated as follows: there will be no significant difference in the expansion of knowledge about health by participants in a mobile seminar experience versus the traditional classroom learning experience. A 2 X 2 contingency table was used to calculate the data in the two groups. The raw data for both groups are found in Table 12. A chi square was used to determine the significance of difference between the groups. The calculated chi square value was 1 at the .05 level of significance, with 1 degree of freedom. The critical value was 3.84. The calculated value did not exceed the critical value.

Table 12

Expansion of Health Knowledge

	Yes		No		
Gr I	19	10	1	10	= 20
Gr II	20	10	0	10	= <u>20</u>
Totals				n	= 40

df = 1

x<sup>2</sup> = 1.00

The eleventh hypothesis was stated as follows: there will be no significant difference in the number of participants who would elect to repeat the mobile seminar learning experience versus the traditional classroom learning experience. A 2 X 2 contingency table was used to calculate the data in the two groups. The raw data for both groups are found in Table 13. A chi square was used to determine the significant difference between the two groups. The calculated chi square was 3.48 at the .05 level of significance, with 1 degree of freedom. The critical value was 3.84. The calculated value did not exceed the critical value.

Table 13

Reaction of Participants Who Would Elect to Repeat the Course

	Yes	No	
Gr I	18 10	2 10	= 20
Gr II	17 10	3 10	= <u>20</u>
Totals		n	= 40

$$df = 1$$

$$\chi^2 = 3.48$$

## CHAPTER 5

### SUMMARY, TESTS OF HYPOTHESES, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

#### Summary of the Study

The purpose of this study was to evaluate the effectiveness of a mobile seminar as a learning experience in health education. A survey of related literature did not reveal that the mobile seminar was more effective due to the fact that this is a new teaching technique in health education. The study was conducted from March 1982 through May 1983.

The subjects included 30 participants drawn from a population of students that had participated in a mobile seminar sponsored by the Department of Health Education at Texas Woman's University. Twenty students were then randomly drawn from the 30 subjects who participated in the study. Thirty participants were drawn from HEED 5473 Health Update, a traditional 3-hour graduate course sponsored by the Department of Health Education at Texas Woman's University. Twenty students were then randomly drawn from the 30 participants to comprise the control group. Group I was identified as the experimental group which was composed of those subjects who had been on a mobile seminar. The members of Group II, identified as the control group, consisted of subjects drawn from HEED 5473 Health Update class.

The study took place at Texas Woman's University because it offers a graduate major program in the school health education and community health

education and had used the mobile seminar teaching technique in health education.

A questionnaire was used to measure students' attitudes and perceived use of knowledge received from the mobile seminar and the traditional classroom learning experience. The questionnaires were mailed and included a self addressed return envelope by the researcher.

The posttests were administered to Groups I and II. Questionnaires administered to Group I and Group II were the same except for the headings. The headings were different only in that they identified the course they were to evaluate.

Means and standard deviations were computed from the findings. Differences between means were analyzed by the use of a t-test. A chi square,  $\chi^2$ , was used to determine any differences in the expansion of knowledge of health education and health related fields of study, and interest by participants who would elect to repeat the course were also compared and calculated by the use of a chi square,  $\chi^2$ .

### Tests of Hypotheses

The following hypotheses were postulated and tested at the .05 level of significance:

1. There will be no significant difference in the scores on the semantic differential in the use of professional contacts resulting from a mobile seminar experience versus contacts made in a traditional classroom learning experience. Accepted

2. There will be no significant difference in the scores on the semantic differential in the frequency of use of materials received from the mobile seminar and the traditional classroom learning experience. Accepted
3. There will be no significant difference in the scores on the semantic differential in the usefulness of materials received from the mobile seminar and the traditional classroom learning experience after completion of the courses. Accepted
4. There will be no significant difference in the scores on the semantic differential of participants in a mobile seminar as compared to those in the traditional classroom learning experience for contributions made in the field of health. Accepted
5. There will be no significant difference in the scores on the semantic differential for personal lifestyle changes made by participants in a mobile seminar as compared to participants in a traditional classroom learning experience. Accepted
6. There will be no significant difference in the scores on the semantic differential for alterations of career goal directions in a group of mobile seminar participants as compared to a group in a traditional classroom learning experience. Accepted



7. There will be no significant difference in the scores on the semantic differential of mobile seminar participants when compared to participants in a traditional classroom learning experience relating to publications made to health education. Accepted
8. There will be no significant difference in the amount of new information about health, and/or health education received by participants in the mobile seminar when compared to the participants in the traditional classroom learning experience. Accepted
9. There will be no significant difference in the scores on the semantic differential in the course evaluation by participants in the mobile seminar versus the traditional classroom learning experience. Accepted
10. There will be no significant difference in the expansion of knowledge about health by participants in a mobile seminar experience versus the traditional classroom learning experience. Accepted
11. There will be no significant difference in the number of participants who would elect to repeat the mobile seminar learning experience versus the traditional classroom learning experience. Accepted

### Discussion

Having been an active participant in two mobile seminars, the researcher believes that learning is greatly enhanced in the mobile seminar. It was after the first seminar that the interest to do a research paper became a goal. In the second seminar the researcher had the added experience of watching the participants during the learning process with the personal goal of a research paper in mind.

When the researcher went on the second mobile seminar, the research paper had begun, however, the participants were not aware of the researcher's added interest in any way except as a student. A tremendous enthusiasm was observed among the participants in this learning experience that had not been witnessed in the traditional classroom.

Perhaps one of the reasons this research paper revealed no significance between the teaching techniques was because of the small number of participants involved in a mobile seminar. The validity of the participant's responses on the questionnaire was also a variable where the researcher had no control. The researcher was able to witness on the first and second seminar that some individuals have more difficulty than others in sharing small quarters over a four to six week period. It is possible that the responses of individuals regarding the educational experience may have been negatively affected by their inability to expect and cope with the personal discomforts of a mobile seminar learning experience. A great deal of personal growth does take place in a mobile seminar that may alter a participant's positive and negative personal views of the course.

Verbal comments from participants upon completion of both seminars indicated that they had learned and experienced more than they ever had in a classroom setting. Those participants in HEED 5473 who served as controls in this study had no other experiences except those in a traditional classroom, therefore, their scores revealed they were satisfied with their learning experience.

The results of this study indicated that the mobile seminar technique of teaching did not have a more significant impact on learning than the traditional classroom learning experience in health education on any of the variables. The data, for all the questions after being analyzed, did not show any significant difference in the teaching techniques, although questions 2, 3, 4, 7, 8, 9, 10, and 11 all did have a slightly higher mean score for the participants in the mobile seminar versus the traditional classroom as indicated in Tables 3-13.

The scores for Group I and Group II were similar. This result indicated not only a similarity in the participants' feelings about the courses, but seems to indicate that each group felt positive about their respective learning experiences. The data in Appendix A, especially for questions 9, 10, and 11, indicates the positive attitudes about the mobile seminar and the traditional classroom learning experience.

### Conclusion

The scores of the 40 subjects in this study indicated the mobile seminar as a learning experience does not have any significant advantage over the traditional classroom method in health education.

### Recommendations

The following recommendations were made by the investigator to encourage future studies in this area:

1. Conduct the study again using a larger number of participants in Group I and Group II.
2. Conduct a study in which the emphasis would be made more on a comparison of the effectiveness of the teaching method. The students could evaluate a course more accurately if they knew in advance about the questionnaire.
3. Conduct a study in which participants must have taken a health update course and the mobile seminar method of teaching to be able to compare them accurately.
4. Conduct a pretest of each group's expectations of the courses offered, so they are more aware of how they will evaluate the learning experience. The participants also need to know that they will be evaluating each course after completion of both said courses. The prospectus for this study originally did include a pretest, although the researcher changed that after

the prospectus had been accepted. The researcher wanted the participants to be unaware of her added interest on the second mobile seminar.

5. Conduct the study using the same instructor for each learning experience. Using the same instructor would allow for more validity to the outcome of the study.

## APPENDIX A

### Data

## APPENDIX A

## ACTUAL RESPONSES FOR ITEM #1 ON QUESTIONNAIRE

Publications Made

	Never Published							Many Publications		
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Gr I	15	1	3					1		
Gr II	15	2	2		1					

## ACTUAL RESPONSES FOR ITEM #2 ON QUESTIONNAIRE

Handout Materials During Class

	Useless							Beneficial		
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Gr I				2		2	5	3	2	6
Gr II				2	2	4	3	4	2	3

## ACTUAL RESPONSES FOR ITEM #3 ON QUESTIONNAIRE

Handout Materials Upon Completion of Class

	Useless							Beneficial		
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Gr I				1		2	3	5	3	6
Gr II			1	1		1	6	7	3	1

## ACTUAL RESPONSES FOR ITEM #4 ON QUESTIONNAIRE

## Contacts in Health

	Useless								Beneficial	
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Gr I	2	2		2		1	2	7	3	1
Gr II			2	3	1	1	4	6	2	1

## ACTUAL RESPONSES FOR ITEM #5 ON QUESTIONNAIRE

## Lifestyle Changes

	Remain Same								Improved	
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Gr I	1		1	2	2		2	6	1	5
Gr II			2			4	5	3	4	2

## ACTUAL RESPONSES FOR ITEM #6 ON QUESTIONNAIRE

## Career Goal Alterations

	Remain Same								Many Alterations Made	
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Gr I	5			3		1	2	6	2	1
Gr II	3	1	2		1	2	2	5	3	1



## ACTUAL RESPONSES FOR ITEM #7 ON QUESTIONNAIRE

## Contributions to Health

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	No. Contritutions							Many Contributions		
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Gr I	2		3	2		2	2	6	-1	3
Gr II	4	1			2	2	6	3	1	1

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## ACTUAL RESPONSES FOR ITEM #9 ON QUESTIONNAIRE

## Class Evaluation

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	Poor							Excellent		
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Gr I					1			6	5	7
Gr II					2	1	3	7	6	1

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APPENDIX B -

Questionnaire

September 1982

Dear Fellow Student:

Would you please fill out and return the enclosed questionnaire about your learning experiences in Health Update (HEED 5473) taken at Texas Woman's University. I am doing a research paper to evaluate the effectiveness of a mobile seminar versus the traditional classroom learning experience. Your assistance by filling out and returning this questionnaire will be greatly appreciated.

If you have any questions regarding the questionnaire please feel free to call me collect at 214-690-0507.

Thank you.

Karen Brown Metters

September 1982

Dear Fellow Student:

Would you please fill out and return the enclosed questionnaire about your learning experiences on a mobile seminar taken at Texas Woman's University. I am doing a research paper to evaluate the effectiveness of a mobile seminar versus the traditional classroom learning experience. Your assistance by filling out and returning this questionnaire will be greatly appreciated.

If you have any questions regarding the questionnaire please feel free to call me collect at 214-690-0507.

Thank you.

Karen Brown Metters

## POSTTEST

LIFESTYLE CHANGES<sup>3</sup>

Identify which of the following positive lifestyle habits you currently practice on a regular basis. Respond to each with yes or no; then count the number of yes responses, and write this number in the blank provided.

POSITIVE LIFESTYLE HABIT	RESPONSE
Not smoking	_____
Drinking moderately <sup>4</sup>	_____
Sleeping seven to eight hours per night	_____
Eating regular meals and no snacks <sup>5</sup>	_____
Eating a regular, balanced breakfast	_____
Maintaining recommended weight	_____
Exercising regularly	_____
Total number of positive lifestyle habits currently practiced	_____

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<sup>3</sup>Adapted from N. Belloc and L. Breslow, "Relationship of Physical Health Status and Health Practices," Preventive Medicine, 1972, 1, 409-421.

<sup>4</sup>Moderate drinking is defined as an average of zero to two mixed drinks per day and not more than four drinks at one time.

<sup>5</sup>If snacks between meals consist of fruit (or an equivalently healthful food) and less is eaten at mealtime, respond with yes.

## POSTTEST

## QUESTIONNAIRE

Rate each of these questions and statements in relation to your past performances in health education. Rate on a scale of 1-10 (10 being the highest). Circle the number value which best describes your rating.

1. How would you rate yourself on publications you have made to the field of health?

1	2	3	4	5	6	7	8	9	10
Never Published								Many Publications	

2. How often in the past have you considered your handout material from class to be helpful during the class?

1	2	3	4	5	6	7	8	9	10
Useless								Very Helpful	

3. Are your materials received from class useful after the course is completed?

1	2	3	4	5	6	7	8	9	10
Useless								Very Helpful	

4. Professional contacts made during a course have been beneficial to me after the course was completed?

1	2	3	4	5	6	7	8	9	10
Useless								Very Beneficial	

5. My personal lifestyle has improved during this course in health education.

1	2	3	4	5	6	7	8	9	10
Remained the Same								Greatly Improved	

6. Career goals have been altered due to this course taken in health education.

1	2	3	4	5	6	7	8	9	10
Remained the Same								Many Alterations	

7. How would you rate yourself on contributions you have made to the field of health? (i.e., volunteer work, publications, and/or writing articles for journals etc.)

1	2	3	4	5	6	7	8	9	10
Remained the Same								Many Contributions	

## POSTTEST

## QUESTIONNAIRE

Answer the following questions so they best describe your responses and feelings.

8. What percentage value would you place on the amount of new information about health you have received in this course?

0% 20% 40% 60% 80% 100%

9. How would you evaluate this learning experience?

[illegible]

YES NO

10. Did this course expand your knowledge of health?

11. If given a choice, would you elect to take this course?

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