

INNOVATIVE TEACHING USABLE IN  
UNDERGRADUATE FOODS AND NUTRITION COURSES

105

by

349 5839

KATHRYN JEAN AUMAN GROESBECK

B.S., Hec, Kansas State University, 1972

---

A MASTER'S REPORT

submitted in partial fulfillment of the  
requirements for the degree

MASTER OF SCIENCE

Department of Foods and Nutrition

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

1973

Approved by:

*Dwendolyn L. Jinklin*  
Major Professor

LD  
2668  
R4  
1973  
675  
C.2  
Document

TABLE OF CONTENTS

INTRODUCTION . . . . . 1

TRENDS IN AMERICAN EDUCATION . . . . . 1

AIMS OF UNIVERSITY TEACHING . . . . . 3

THE DIVERSIFIED NATURE OF FOODS AND NUTRITION . . . . . 5

EDUCATIONAL TECHNOLOGY AND INNOVATIONS . . . . . 5

    Contributions of Audiovisual Materials to Learning . . . . . 8

    Factors Affecting Adoption of New Media . . . . . 8

TYPES OF INSTRUCTION AND RELATED STUDIES IN FOODS AND NUTRITION . . 9

    Programmed . . . . . 9

    Audio-tutorial . . . . . 14

    Individualized . . . . . 16

    Laboratory . . . . . 19

    Mini-courses . . . . . 21

    Telephone Network (Telenet) . . . . . 22

SUMMARY . . . . . 23

ACKNOWLEDGMENTS . . . . . 25

REFERENCES . . . . . 26

## INTRODUCTION

It has become obvious to educators because of population and knowledge explosions that the use of traditional teaching methods is inefficient and ineffective in keeping pace with current educational demands. Further, the percentage of the population demanding more education is increasing and the problem of using traditional teaching methods is increasing in geometric proportions as more educated people contribute to the enlarging volume of knowledge (Postlethwait et al., 1969). Among the many problems university administrators and educators have to face is improvement of undergraduate instruction (Kerr, 1964). Tope (1969) reported that undergraduate students are not getting enough attention in the university.

The objective of this study was to examine trends in American education and to review literature concerning innovative teaching utilized in undergraduate courses in foods and nutrition. It is hoped that the study may be useful in future curriculum building and/or change.

## TRENDS IN AMERICAN EDUCATION

Changes in our society have brought changes in education. Since World War II, the federal government has placed heavy emphasis on establishing new goals to increase knowledge, to increase the number of persons to be educated, and to improve teaching methods. The National Defense Education Act of 1958 provided funds to accomplish those goals (Brown et al., 1969).

As a result of federal funding, several important trends resulted.

Among them are increased emphasis upon innovation, changes in instructional patterns, increased individualization of instruction, and greater use of new media (Brown et al., 1969).

Innovations in curriculum, methods, and instructional organization have become characteristic of today's educational research. Such innovations may be completely new approaches or may be only variations of traditional methods made possible by new technological devices. Three types of instruction used currently in American schools are large group, small group, and individualized. Federal support has made it possible for schools to be provided with more instructional materials. There is evidence that these materials are used in all levels of education (Brown et al., 1969).

It has been estimated that our fundamental knowledge has been increasing at a phenomenal rate — doubling every ten years (Brown et al., 1969). This new knowledge explosion presents one of the greatest challenges to teaching (Henderson, 1969). Tope (1969) identified three significant trends in college today: (1) changes in students, (2) growth of knowledge, and (3) advances in educational technology. She discussed increased numbers of students going into higher education, their increased range of abilities, and diversity of backgrounds and experiences. She believed that those factors must be recognized at the undergraduate level, since most undergraduate students were not getting enough attention when compared with graduate students.

Various media of communication may convey different types of messages (Brown et al., 1969). These media are means to ends, the ends being the unique goals of each educator (Dale, 1969). Brown et al. (1969) cited a paper by Jackson to point out that educational technology can improve the quality of education through greater individualization of instruction and

can provide a greatly enriched library of teaching materials. They mentioned threatening possibilities to be recognized in educational technology: (1) depersonalization of instruction, (2) expense involved in the truly creative use of technological devices, (3) reduction of the professional integrity of the live teacher, (4) subtle alterations in the social character of the learning process, and (5) the risk that poorly trained teachers depend too much upon media when they should be spending time to improve their own abilities.

#### AIMS OF UNIVERSITY TEACHING

McKeachie (1960) stated that research to date indicates that new media can be used to achieve educational objectives, depending upon the objectives, characteristics of students, and excellence of the materials. However, he believed that it is unlikely that professors will disappear from the academic scene because there is a definite need for face-to-face contact between faculty and students.

Henderson (1969) discussed the important task university teachers have of teaching large numbers of young people at critical professional and technological levels. He believed there is sufficient evidence to show that many college teachers are not sufficiently trained to teach college classes. He pointed out that systematic investigations of teaching in the last few years reveal too many costly examination failures which could have been prevented, too many remedial-type student learning difficulties, too many incidents of inadequate classroom management and poorly organized laboratories, and too many signs of poor lecturing. He emphasized the fact that many university teachers cling to traditional mass-teaching techniques to the neglect of more effective alternative and supplementary methods.