Closed Circuit Television and Primary Health Care

JOE T. LEKE

Forty-three subjects were used in the study comprising 25 in the experimental and 28 in the control group. Both groups were exposed to two sessions of classroom practice teaching of 10 minutes and 20 minutes each. The experimental group in addition was exposed to two sessions of closed circuit television teaching practice of 10 minutes and 20 minutes each. Observations and grading of subjects during teaching practice in Schools of Health Technology using a prepared score sheet were made.

Analysis of the score using a Student's 't' test showed a significant difference in performance between the experimental and the control groups.

A CONSIDERABLE amount of research has been conducted in comparing the use of the various audio-visual materials with traditional methods of teaching such as the lecture. In almost all cases, research has established that audio-visual aids can enhance learning and extend the range of a good teacher (Heidgerken, 1965). In Health Education, it must be decided what audio-visual aids to introduce which will best help to make Health Science curriculum truly effective educational programmes.

In preparing teachers of Primary Health Care attached to School of Health Technology, Idah-Benue State of Nageria, one of the audio-visual aids utilized is the Closed-Circuit Television (CCTV) for practice sessions. Students are provided with the opportunity of observing themselves teach so that each will improve his teaching skills before actually going to the field.

Literature Review

Various psychologists have dealt at length with the effect of practice on learning. Thorndike (1898) in his theory of connectionism identified the law of exercise as one of the principles of learning. He states that other things being equal, the more frequently a connection between a stimulus and a response is made the stronger the connction will be. He further stated that repeating situations does not alone strengthen connections unless the connections are rewarded as the law of effect states. Guthrie (1960, 1966) is of the view that skill or performance is made up of several habits or movements which, properly rehearsed, lead to acts and consequently behaviour. Watson (1914) does not only make provision for practice but believes very strongly in practice. He is of the view that repetition of a sequence of stimulus is seen to establish the certainty of the sequence more firmly. Hull (1975) found that habit strength increases with reinforcement and concluded that practice would have a similar effect of enhancing learning.

One method of assisting student teachers of Primary Health Care develop their skill in teaching is by exposing them to Closed Circuit Television practice sessions prior to the actual teaching practice in the various schools of Health Technology.

The Purpose

The purpose of this study is to determine the effectiveness of the CCTV session on the teaching practice performance of Student Teachers of Primary Care and the usefulness of such sessions.

The Hypothesis

There will be no difference in the performance of students who had classroom teaching practice prior to field experience and those who had classroom teaching practice plus CCTV sessions.

Population and Sample

The subjects for the study were 52 final year Education students. The study is retrospective and the design experimental.

Group I: Experimental group, comprised 25 students, 17 males and 8 females with age ranging from 27-37 years, mean age 27.1 years.

Group II: The control group comprised 28 students, 7 males and 21 females with ages ranging from 27-33 years, mean age 29.3 years.

All subjects were matched for educational level as they all satisfied the entry requirements of the teaching college and had gone through the same courses till their final year.

The Method

Each of the subjects from both groups participated in two classroom micro teaching sessions of 5 minutes and 15 minutes each. At the end of each session, self, peer and teacher evaluation were performed using the selected skill as guides.

In addition to the two classroom micro-teaching sessions, the experimental group also had two teachnig practice sessions in the CCTV studio of 10 minutes and 20 minutes for the first and second practice respectively. Each subject in the experimental group was evaluated by peers and teacher while teaching. At the end of the presentation, the television is played back and each subject observed and evaluated own performance before his peers and the experimenter.

The author is from the Department of Health Education, University of Nigeria, Nsukka.

This process is continued until all the subjects in the experimental group have each had two sessions of CCTV practice.

All subjects were allocated to various government and private schools of Health Technology for six weeks' teaching practice/field experience. See Table I. Each subject was evaluated at least 10 times by the tutors of the various schools of Health Technology. In addition, the experimenter evaluated all the subjects (control and experimental) once during the field experience.

To determine the teaching practice grade of subjects, an average of the best ten evaluations from the school of Health Technology was found. The result is added to the grade by the experimenter and another average is found by Statistical Methods for Analysis:

(i) Descriptive statistics, mean and standard deviation

(ii) Student's 't' test to determine if there is a difference in the means of the two groups

Table I

Distribution of Group for Teaching Practice

	N	*Govt. School of Health Technology IDAH*	*Mission (N.K.S.T.) School of Health Technology MKAR*
Control Group	28	24	4
Experimental Group	25	21	4

Results

Data relevant to the main hypothesis of the study which states that there will be no difference in performance of subjects during teaching practice field experience is shown in Table II.

The experimental group showed an increase of 0.68 mean score compared with the controlled group. The difference between the mean scores of both groups produced a 't' value of 5.67 which is statistically significant at the .01 level of significance.

The hypothesis that there is no difference in performance of both control and experimental group was therefore rejected. There is a real difference in performance between the two groups and the obtained mean of 7.32 would be expected to occur in less than 1% of the controlled group.

Table II

Comparison of Scores during Teaching Practice Field Experience

	N	*Mean Scores*	*SD*	*'t' Value*
Control Group	28	6.64	0.39	
Experimental Group	25	7.32	0.48	5.67
Df 51, 't' 2.660		P∠.01		

Discussion

This study shows that the CCTV practice sessions improved the teaching practice performance of students when coupled with the normal classroom micro-teaching practice. This confirms the reports by psychologists (Hull, Thorndike and Skinner, 1975) that the more the senses utilized during the learning situation the better the encoding of information by the individual resulting in improved learning. Also increased skill practice enables the individual to perfect that skill (Guthrie, 1960).

It can be concluded that the CCTV practice sessions are very useful in improving the teaching skills of student teaches of Primary Health Care and it is highly recommended to all Health and Nursing Schools and various teachers' colleges. As the enrolment of student teachers into these schools doubles or triples and without substantial increase in college members, it becomes imperative to critically examine the possibility of allowing students to develop teaching skills within the colleges although other educational administration experiences would still have to be acquired in various schools of Health and allied institution. Adequate facilities in terms of personnel and technical staff for operating the unit and maintenance of the equipment may make it an expensive venture.

Limitations

The sample size is very small and does not allow for generalizations to a wider population.

The constitution of the sexes in each group might have affected the results as cluster samples were used.

Replication of this study over a period of time and using larger sample size could produce more concrete and generalizable data.

Summary

The performance of a group of 25 student teachers final year students in teaching practice was compared with those of 28 others who did not have the CCTV practice sessions prior to field experience. The experimental group showed and increase in the mean score over the control group. The 't' test used to determine any difference between the means of the two groups showed a significant difference in performance.

References

1. Guthrie, E.R. (1960) *The Psychology of Learning*, Peter Smith & Co, Cloycester, Mass, pp. 136-154.

2. Guthrie, E.R. (1965) *Conditioning as a Principle of Learning in* Readings in Introductory Psychology, (Eds) Teevan, R.C. and Bernay Harcourt Brace Jovanovich. New York Pg. 202.

3. Heidgerken, Loretta, E (1965) *Teaching and Learning in Schools of Nursing*, J. B. Lippincot Co., Philadelphia, Pg. 527.

4. Hull, C.L. (1975) *Systematic Behaviour Theory in Theories of Learning* (Eds) Hilgarde, E.R. and G.H. Bower, Printice-Hall Inc., New Jersey, pp. 152-206.

5. Skinner, B.F. (1975) *Operant Conditioning in Theories of* Learning, (Eds) Hilgards E.R. and G.H. Bower, Prentice-Hall Inc., New Jersey, pp. 28-61.

6. Thorndike, E.L. (1898) Connectionism in Theories of Learning, (Eds) Hilgarde, E.R. and G.H. Bower, Prentice-Hall, Inc., New Jersey, pp 28-61.