

Influence of Some Social Indices on Nigerian Teacher's Understanding of Educational Technology

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Abstract: The study examined the influence of some social indices on Nigerian teacher's understanding of educational technology. A randomly selected sample of 148 practising teachers in Nigeria responded to the Educational Technology Concept and Effect Questionnaire (ETCEQ) developed by the researcher to collect data for the study. Four hypotheses were tested and statistical analyses were done using mean scores, variance, t-test and one-way ANOVA. All the hypotheses were retained as the results showed that there were no significant differences in the understanding of educational technology between each of the variables considered, viz male and female teachers, N.C.E. holders and Degree holders, Science teachers and Social Science/Arts teachers and teachers having below 5, below 10 and above 10 years of experience. Based on these findings, some recommendations were made.

Key words: ETCEQ, educational technology, hypothesis, variables, social indices

INTRODUCTION

Perhaps educational technology is one of the most controversial fields of study in education in Nigeria today. This is not that it is new, for its official presence could be said to have been marked by the establishment of the National Educational Technology Centre at Kaduna since, 1977, but because the term itself invokes in a lot of people a lot of associations, depending on their own orientations. These include instructional materials, educational filmshows, mass media, educational communications, improvised materials, graphic arts, photography, etc.

Therefore, it is not out of place to say that educational technology means different things to different people (Ogunojemite, 2002; Ukeje, 1991; Ogunmilade, 1984) and this may not be peculiar to Nigeria (Alloway, 1980). Today, we talk about different concepts of educational technology: hardware concept, software concept; product approach, process approach; level one definition, level two definition; technology in education and technology of education (Ajelabi, 2005; Adeosun, 2002b; Ukeje, 1991; Ogunmilade, 1984; Lumsdaine, 1964). All these have stemmed out of controversies on the import of educational technology.

A rallying point had been found in the definition of educational technology given by the America-based Association for Educational Communications and Technology (AECT), emphasizing the systems approach to finding out problems in all aspects of human learning,

solving them and managing solutions to them (AECT, 1979). Moreover, some specialists had determined the sub-systems of the field such that it could be claimed that any understanding of educational technology must entail an understanding of these sub-systems which include curriculum development, instructional development, instructional material production, system approach to instruction, etc. (Ogunmilade, 1984; Alloway, 1980; Butts and Megarry, 1977).

Since educational technology is concerned with solving the problems existing in all aspects of human learning, it, therefore, has a lot to do with 'technocrats' of our learning systems. In other words, if the discipline is to contribute meaningfully to our educational system, our teachers must have a good understanding of it and if they do, what are the social indices determining this understanding? This is necessary to confirm the claims that the meaning given to educational technology by different people has been influenced by their background training and experience (Agun and Imogie, 1988). This study therefore, attempted to find out if differences existed in practicing teacher's understanding of educational technology due to their social indices.

Research questions: This study attempted to answer the following research questions:

- Is there any difference in the understanding of educational technology between male and female teachers?

- Is there any difference in the understanding of educational technology between Nigeria Certificate in Education holders and Degree holders?
- Is the understanding of educational technology influenced by teaching experience?
- Is the understanding of educational technology influenced by teacher's field of study?

Hypotheses: The following hypotheses were tested in the study:

- There is no significant difference in the understanding of educational technology between male and female teachers.
- There is no significant difference in the understanding of educational technology between N.C.E. holders and Degree holders.
- There is no significant difference in the understanding of educational technology among teachers having below 5 years, those having below 10 years and those having above 10 years of experience.
- There is no significant difference in the understanding of educational technology between Science teachers and Social Science/Arts teachers.

MATERIALS AND METHODS

Sample: A total number of 148 Nigerian teachers were randomly selected to make up the sample for the study. These were practising teachers drawn from nine southern states of the federation. The sample consisted of 76 males, 72 females and 80 of them held Bachelors degrees while 68 of them were N.C.E. holders.

Instrument: The 'Educational Technology Concept and Effects Questionnaire' (ETCEQ) was developed and used by the researcher. It is a 20-item questionnaire with 3 sections. Section A consisted of items on the personal data of the respondents, such as sex, qualification, years of experience, subject specialization, etc. Section B consisted of test items on the concept of educational technology while Section C consisted of items testing the effect of educational technology on the teachers. Some of the items in Section B and C have sub-sections reaching up to 9 in number.

The validity of the instrument was determined by expert judgment as experts in field of educational technology assessed and made necessary modification to the instrument. To determine the internal consistency of the instrument, a split-half reliability coefficient of 0.80 was obtained by the researcher.

The instrument was administered by the researcher and also making use of research assistants. The researcher administered some copies of the instrument to a set of teachers who gathered together for a training programme and also used research assistants to administer the remaining copies to teachers in various locations and states. Statistical analyses were done using the mean score, variance, t-test and one-way ANOVA to find the significant mean differences between the variables considered.

RESULTS

From Table 1 the calculated t-value was less than the table value of 1.96. Hypothesis 1 was hence retained. There is no significant difference in the understanding of educational technology between male and female teachers.

Table 2 shows that the calculated t-value was less than the table value of 1.96. Hypothesis 2 was thereby, retained. There is no significant difference in the understanding of educational technology between N.C.E. holders and Degree holders.

Table 3 shows that the F value was found not significant at 0.05 level of significance. Hypothesis 3 was retained. There is no significant difference in the understanding of educational technology between teachers having below 5 years, those having below 10 years and those having above 10 years of experience.

Table 4 shows that the calculated t-value was less than the table value of 1.96. Hypothesis 4 was thereby,

Table 1: Difference in the understanding of educational technology between male and female teachers

Variable	N	\bar{x}	S ²	df	t	p-value
Male	76	9.23	18.36	146	0.60	0.05
Female	72	9.09	18.22			

Table 2: Difference in the understanding of educational technology between N.C.E. holders and degree holders

Variable	N	\bar{x}	S ²	df	t	p-value
N.C.E. holders	68	8.88	15.24	146	0.60	0.05
Degree holders	80	9.32	21.72			

Table 3: Difference in the understanding of educational technology among teachers according to years of experience

Source	df	SS	MS	F
Between groups	2	14.82	7.41	
Within groups	117	2133.97	18.24	0.14
Total Variation	119	2148.79		

Table 4: Difference in the understanding of educational technology between science teachers and social science/arts teachers

Variable	N	\bar{x}	S ²	df	t	p-value
Science teachers	57	9.56	22.64	142	0.60	0.05
Social science/arts teachers	87	9.05	17.46			

retained. There is no significant difference in the understanding of educational technology between Science teachers and Social Science/Arts teachers.

DISCUSSION

This study has revealed that the identified social indices have no significant influence on practising teachers understanding of educational technology. It has shown specifically that practising teachers do not differ in their understanding of educational technology by sex, qualification, years of teaching experience and field of study.

It is not surprising however, except in the case of hypothesis 1, that this study has come out this way; for, the outcome of the study has confirmed further the findings of earlier researches conducted by the researcher. It has been revealed in one of such researches (Adeosun, 1997) that teacher's experience may not significantly influence a better understanding of educational technology. This tallies with the findings in this study that teachers do not differ by years of teaching experience in their understanding of educational technology.

Although, in that same research, a significant difference was found when practicing teachers who held Bachelors degrees were compared with N.C.E. student-teachers, This confirms, again, the findings of hypothesis 2 that practicing teachers do not differ by qualification in their understanding of educational technology. It also shows that, although, practice may not significantly influence a better understanding of educational technology, it nullifies the differences that may exist in understanding due to qualification before practice.

It was also found that teachers did not differ in their understanding of educational technology by field of study. It, therefore, means that the claim that people's background and training affect their interpretation of educational technology (Agun and Imogie, 1988; Ogunmilade, 1984.) may well apply only to non-professionals and non-teachers.

The outcome of this research is, however, at variance with an earlier one (Adeosun, 2000a) in which it was found that male student-teachers showed a significant difference in their acquisition of education technology from their female counterpart. In this research, this difference could be said to have been nullified by practice.

CONCLUSION

This study has focused on the influence of some social indices on teacher's understanding of educational

technology. The outcome has shown that none of the variables considered viz sex, qualification, years of experience and field of study was significantly influential on teacher's understanding of educational technology. It has been explained, therefore that, contrary to some specialists' claims, practising teacher's views of educational technology are not necessarily influenced by their various backgrounds and trainings.

Perhaps, the most striking outcome of this study is the finding that though, practice may not significantly influence a better understanding of educational technology, it, however, nullifies whatever differences might have existed between trainees of educational technology before they began to practice.

RECOMMENDATION

Based on these findings, the following recommendations are hereby made:

There is need for further studies to determine what variables influence a better understanding of educational technology in Nigeria.

There is need to do an aggressive training and re-training of administrators who have to do with educational technology viz ministry officials and officials of media houses who may not have degree in education and have not been teachers.

It is hoped that when these are done, educational technology would be better taken care of and our education system would be better for it.

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