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Chapter 20

THE ROLE OF RESEARCH AND EVALUATION IN TEACHER EDUCATION.

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INTRODUCTION

The recent move towards qualitative education in Nigeria cannot be successful without a particular focus on teacher education. Quite often, expression like "falling standard of education", which has become the opinion and expression of many people, does not denote a lowering of the standard of curriculum materials or contents. It does not mean a lowering in the grading standard, either. What the expression means and connotes, basically, is that the output or products of our educational system are no longer meeting the societal needs and expectations. They are not able to demonstrate, with proficiency, the knowledge acquired during their period of formal instruction.

While there are, obviously, multiple remote and immediate causes of this unpleasant observation, it is indisputable that the teacher and teacher education programmes do significantly influence the output of our educational system. As stated in the national policy on Education, "no educational system can rise above the quality of its teachers" (FME, 1981:38). One of the primary ways of ensuring the quality of teachers is by researching into and evaluating teacher education programmes, both pre-service and field-based. It is therefore the concern of this paper to discuss the role of research and evaluation in teacher education.

Before this discussion, it is, perhaps, necessary, to remind ourselves of the meanings of research and of evaluation, for proper conceptualization and meaningful discussion.

RESEARCH:

This literally means a close, careful and objective study or investigation that tries to find out new facts about something or that tries to solve an existing problem. It is the process of getting and developing valid knowledge about something we directly or indirectly come in contact with. These things could be of material, social, economic or educational values.

Research, as it could be called, means searching again. It connotes that a search has previously been conducted with its findings. Research in this context means probing into the problem to ascertain the reliability or otherwise of the solution or knowledge discovered. Through research new knowledge, methods, or new solutions to a particular problem can be discovered. Moreover, in this perspective, research also serves the purpose of ascertaining whether or not the previous findings still hold or can be replicated or diversified. It should be noted or remembered that the experiments we perform today, if successful, will need replication and cross-validation at other times under various conditions before they can be accepted by the scientific community with confidence.

Research is a scientific way of settling dispute and of dispelling rumours. It is recognized as a basic language of proof, a way of avoiding solutions by 'trial error' technique. In teacher education programme, educational research is of paramount importance. According to Nwana (1981), educational research, in a technical and professional perspective, is that involving the study of problems of teaching and learning. However, generally, educational research seeks solution to educational problems.

EVALUATION:

Evaluation has to do with having a qualitative judgement or idea of the worth of something. Educational evaluation is, therefore, the formation of judgement as to the worth of educational programmes, materials and all other educational matters. Generally, evaluation is "the process of analysis and control designed to determine the relevance, worth, effectiveness, significance, and impacts of the specific activities and the degree of efficiency with which they are carried" (Chiwona, 1989).

There are basically, two types of evaluation formative (on -going) and summative. Summative evaluation is subdivided into terminal and ex-post evaluations. While terminal evaluation comes few months after the completion of a programme or project, ex-post evaluation is often undertaken at the full implementation and development of a programme. Generally, formative evaluation is concerned with the changes taking place in the process of implementing the programme, with the aim of detecting defects and thereby providing feedback for instituting corrective measures. On the other hand, summative evaluation (whether terminal or ex-post), generally, is geared towards assessing the achievements of the overall results, efficiency, outputs effect, impacts and problems of implementation of the programme.

Relationship between Research and Evaluation::

On the whole, research is concerned with problem solving. It is an embodiment of all activities that occur during a problem solving process. For a meaningful problem solving, the data generated from research must be evaluated in order to make a qualitative judgement towards classification or solution of the problem. Research and evaluation, therefore, are mutually related, the later being a subset of the former. That is, evaluation is utilized in a research paradigm.

The Role of Research In Teacher Education:

Research in teacher education can be conducted in two broad categories, viz:

- (a) research by teacher educators
- (b) research by teacher -trainees themselves.

The areas of research by teacher educators include investigations into teacher education and training programmes. More specifically, teacher educators probe into the suitability, workability, efficiency, etc, of teacher education programmes. Moreover, the relevance of the contents with respect to both trainees and societal needs and aspiration, teacher effectiveness, morale, motivation, etc., are all subjects for research in this area. Research in these and others areas of teacher education will serve immense purposes in providing information and suggestions for overhauling and keeping the programme in good shape. Research findings resulting from teacher educators' investigations and

experimentations can contribute significantly in the following areas:

- (a) Curriculum development: The findings provide a feedback to curriculum designers and developers as to the work ability and usefulness of teacher education programme implemented or being implemented. With such information, the teacher education curriculum can be reshaped, overhauled and made more marketable to the consumers.
- (b) Methodology: By observing teachers in the field, teacher educators, who are themselves very conversant with both the theories of learning and developmental psychology can contribute positively in the area of methods of teaching. The contributions here include correcting, modifying and suggesting more appropriate and innovative ways of teaching different concepts. This will be of optimum benefit to both pre-service and in-service teachers.
- (c) Improving decision making in schools:

At all levels of education, one of the greatest problems of administrators has often been that of decision making. Wrong decisions have often resulted to student riots, staff discontentment, low productivity, etc. Researches by teacher educators, in no small way, can help the personnel involved in making decisions that affect teachers and students to improve greatly.

- (d) Examination of educational theories and their implications

 Proper research into various educational theories, their implications and
 applications in the classroom context and in various disciplines, will serve a s
 useful tools to teachers.
- (c) Identifying manpower need: By virtue of student population explosion in our nation and consequent increase in the number of schools, there has been a high teacher-student ratio. Some schools especially at the secondary level are in great need of teachers in some disciplines, particularly physical sciences and mathematics. Through research, educational data can so be generated to see the manpower need and therefore make adequate projections and planning.
- (f) Improving public relations between schools and their immediate communities:

A sour relationship between schools and their communities can be amended appropriately through research. This is so because causes of such

misunderstanding can in investigated into through research. Recommendations for terminating or ameliorating the sour relationship will therefore be meaningful and effective if based on research findings. With this, a steady growth of schools will be ensured.

(g). Professionalism and Accountability in Teaching:

One of the most striking features of a professional association is its ability to account for the actions of professional members Owie (1981). To be able to account for the practices and ethical behaviour of its members, the prof ssional association should be able to establish policies which stipulate standard; formulate code of ethic for reference in enforcing ethical conduct; formulate clear definitions of competence and performance; insist on conditions necessary for professional performance; among other things. If teaching is to be regarded as a profession, the conditions mentioned above should be applicable.

Properly channelled researches in these areas can help in solving the aged-long controversy of whether or not teaching is a profession.

Through research, befitting policies and ethics can be formulated for teachers, notions of competence and productivity can be clearly defined and the problem of measuring productivity in teaching can be solved. It is important to emphasize that teacher educators who are expected to carry out researches to achieve the above mentioned and similar purposes, were themselves trained as teachers.

For their products to be as good as or better than they, it is imperative that research - its principle and technique, be adequately entrenched in teacher education programmes.

On the other hand, research by teachers themselves are in two dimensions - preservice and field-based. For the pre-service teachers research is useful in the following areas;

(a) Initiation into research culture:

Research can imbue pre-service teachers with the language and systematic mode of solving problems as contained in research paradigm. This is capable of changing the attitude of teachers about problems.

(b) Awareness: It creates awareness in student teachers of the various areas of problems beclouding teacher education and the need to investigate into each to seek solution. Student teachers are also made aware of research findings in different areas of teacher education and can then be interested in reading research reports.

(c) Participation in elementary research:

Exposure of pre-service teachers to research provides an on-the-spot training in research culture. Their participation in elementary research such as projects and term papers can serve the purpose of contributing to knowledge alongside with the existing literature in the area.

The importance of research to field-based teachers is basically in the areas of improving standard of teaching, professional growth and employment. From the training received in the teacher education programme a practising teacher is able to investigate several factors affecting his students performance. This can and does help him to improve upon his teaching style. Through research, a field-based teacher can grow professionally by means of getting involved in both individual and group research and publishing. Moreover, as there are many research-oriented jobs in our society, a teacher with a good knowledge of research stands a chance of getting a job especially educational research institutions or councils.

The pole of Evaluation in Teacher Education:

Evaluation, as earlier seen, is concerned with qualitative judgement. This judgement can only be made through tests, measurements and assessments, all of which are subsets of research. Since research findings are more or less judgemental, the role of research and of evaluation in teacher education are very similar. However, for clarity, it could be necessary to discuss the subject with a particular reference to in-service teachers.

The importance of evaluation to a classroom teacher cannot be over emphasized. Evaluation is useful, at both formative and terminal levels in the following areas:

(a) Evaluation of students' previous knowledge:

Experience with many teachers have shown that introduction to a lesson, which they often consider as the test of previous knowledge, is often not befitting. In most cases the previous knowledge assumed is either not there or not properly entrenched in learner repertoire of knowledge. A research minded teacher can avoid this embarrassment by giving a diagnostic test to diagnose students' weakness and strength.

- (b) Evaluation of students performance will serve as a green light to the teacher to know how much learning has taken place in the students and how he can probably adjust his teaching techniques for better result. Hence by evaluating students' performance the teacher is both evaluating the students and himself.
- (c) Making some far reaching decisions like promotion of students from lower to upper classes, certification, class positioning etc, cannot be done without proper evaluation. It is also through this process that the teacher and school authority will communicate with parents and the public about the progress or otherwise of students and the school.
- (d) Qualitative judgement on students' performances can serve as a useful information to the teacher and career counsellors. Areas of individual's weakness or strength can be discerned and remedial or advance work can then be recommended.
- (e) Knowledge of performance, from evaluation, can motivate some students to work harder as they discover their progress or lack of progress in given areas.
- (f) Evaluation of programme, student performance and teacher effectiveness, can integratively help in predicting the general trend in the development of teaching learning process.

CONCLUSION

It could be seen, from the roles of research and evaluation discussed, that research and evaluation are very crucial in teacher education. Many other authors (Ferman and Levin,1975; Johnson,1977; Awokoya, 1980; Nwana,1981; Obioma,1986; Chiwona,1969; and setidisho,1989) have acknowledged the importance of research and of evaluation in teacher education. The success of a teacher in the profession as well as the meaningfulness and relevance of teacher education programmes, to a large extent, depend on the quality and quantity of research and evaluation works carried out.

It is therefore the recommendation of this paper that the credit hours for research methodology course in our faculties of Education be increased from three to six. Also the use of Computer in data analysis should be incorporated into the course. These will ensure a pragmatic programme and teachers of remarkable sagacity.

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