

PROFESSIONAL IN-SERVICE NEEDS OF TECHNICAL TEACHERS IN DELTA AND EDO STATES

By

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ABSTRACT

The purpose of this study was to identify the professional competencies in which the technical teachers need in-service training. The design of the study was an ex-post facto survey. The data was analysed using means, t-test, one-way Analysis of Variance (ANOVA), and Scheffe test. The findings show that the technical teachers possessed 18 (50%) out of the 36 professional competencies at "high level", 14 (39%) at an "average level", and 4 (11%) at a low level. In-service and professional improvement needs of technical teachers were identified under eight categories. Implications of the study were identified and recommendations made to improve the quality of teaching.

INTRODUCTION

Teacher education is important for the success of any nation's educational goals. Fafunwa (1980) remarked that the quality and quantity of all the other professions are influenced by the calibre of the teachers because no adequate training can take place without competent teachers to handle the programme. The National Policy on Education (1998) recognised this fact by stating that the purpose of teacher education should be to produce highly motivated, conscientious and efficient classroom teachers for all levels of our educational system. Actually, if teachers are to cope adequately with the requirements of the job, they have to be well trained and acquire periodic training on the job for effective performance of their duties. This is because the curriculum keeps constantly changing, new topics are being integrated and new methods of instruction are being developed. The quality of

teaching will be enhanced if appointment and promotion of teachers are based on teaching effectiveness (Arubayi, 2003).

Teachers of technical programmes have been found to need additional in-service training that will update them with the new curriculum content and methodology of teaching in the 6-3-3-4 system of education. (Gbenedio, 1992; Itotoh, 1991; Ejofodomi, 1989). It has also been observed that such training should be based on their expressed needs, interest and values for suitability and effectiveness. (Dubraveic, Chinien and Pratzner, 1986; Little, 1984; Mertens, 1981; Baker and Mayer, 1977). It would be appropriate, therefore, to identify the in-service needs of technical teachers and relate them to their roles in the teaching-learning process so as to meet the new challenges. Identification of the in-service needs of technical teachers in Delta and Edo States will assist administrators in planning meaningful in-service programmes that would help technical teachers fulfil their roles in the educational process.

Specifically, the study sought answers to the following questions:

- (i) What are the professional education competencies perceived as important by post-primary school technical teachers in Delta and Edo States?
- (ii) What are the expressed performance levels of the technical teachers on identified professional competencies?
- (iii) What are the professional education competencies in which technical teachers need in-service training?

The study further tested an hypothesis thus: There is no significant difference among technical teachers' mean scores for expressed performance level of professional competencies with regard to their years of teaching experience ($P < .05$).

METHOD

The population of this study consisted of 317 technical teachers in Delta and Edo States. There was no sampling because the population of technical teachers was not large. Hence the entire population was used for the study. The design for this study is a survey. The instrument used for the study was a questionnaire, which consisted of two parts. The first section contained demographic data while the second section contained 36 professional competencies grouped into nine categories. The instrument was developed to elicit from the respondents their self-

perceived importance of each competency and their self-expressed current ability to perform each competency. It was face validated by four vocational educators and two measurement and evaluation experts. A test-retest exercise was used to determine the reliability. This yielded a correlation coefficient of 0.94 for the importance column and 0.93 for performance column. The internal consistency of the instrument was 0.88 for all professional competency items using Cronbach's Alpha (a). The respondents were drawn from Government Technical Colleges and Secondary Schools in Delta and Edo States.

A total of 317 copies of the questionnaire were distributed and only 283 copies were correctly filled and returned, representing 89.3 per cent return. The data was analysed using means, one-way Analysis of Variance (ANOVA) and Scheffe test. The hypothesis of the study was tested at 0.05 level of significance. Professional competencies with mean scores equal to or greater than 3.5 were considered essential and important to the technical teacher. Indices used to determine a need are that the competency must be important to the technical teachers and the mean level of performance of such competency should be less than 3.5. The scaling point of "slightly above average importance" has a numerical value of 3.5 to 4.49. Value limits below 3.5 was considered as a need.

RESULTS

Table 1 presents the professional education competencies perceived as important by the technical teachers.

Table 1: Means of respondents' ratings of importance of professional education competencies.

Competency	\bar{X}	Remarks
Programme planning, Development and Evaluation		
1. Developing a course of study	4.39	High
2. Conducting a student follow-up study	4.19	High
3. Evaluating your technical programme	4.36	High
4. Conducting an occupational analysis	4.04	High
Instructional Planning		
5. Determining needs and interests of students	4.33	High
6. Developing a unit of instruction	4.34	High
7. Developing a lesson plan	4.59	High
8. Preparing teacher-made instructional material	4.39	High

Instructional Execution		
9.	Demonstrating a manipulative skill	4.35 High
10.	Presenting information with models, real objects and flannel boards	4.24 High
11.	Employing the project method	4.13 High
12.	Employing reinforcement technique	3.97 High
13.	Using guided discovery method	4.97 High
14.	Providing individualised instruction in the classroom	3.52 High
Instructional Evaluation		
15.	Assessing student performance: Knowledge	4.52 High
16.	Assessing student performance: Attitude	4.29 High
17.	Assessing student performance: Skill	4.50 High
18.	Evaluating your instructional performance	4.51 High
Instructional Management		
19.	Providing for student safety	4.60 High
20.	Managing the technical workshop/laboratory	4.49 High
21.	Project instructional resource needs	4.24 High
22.	Organising the technical workshop	4.46 High
School-Community Relations		
23.	Making use of community resources	4.18 High
24.	Obtaining feedback about your technical programme	4.23 High
25.	Co-operating with state and local government educators	4.42 High
Professional role and development		
26.	Collecting and using professional and technical publications that will help to keep-to-date professionally	4.42 High
27.	Participating in in-service education programme	4.57 High
28.	Participating actively in professional organisation	4.32 High
29.	Observing classes taught by successful technical teachers in other schools	3.18 Average
Co-ordinating of student industrial work Experience		
30.	Securing training stations for your programme	4.09 High
31.	Evaluating the students on-the-job performance	4.49 High
32.	Preparing for students' related instruction	4.25 High
Interpersonal needs		
33.	Exhibiting confidence	4.33 High
34.	Exhibiting initiative	4.39 High
35.	Exhibiting reliability	4.39 High
36.	Exhibiting enthusiasm	4.43 High

Analysis of the responses revealed that 35 professional competencies were perceived as important for successful teaching by technical teachers in Delta and Edo States. These had a mean rating above 3.5. The competency that had a moderate importance is that of "Observing classes taught by successful technical teachers in other schools" (3.18).

Table 2 presents the performance levels of the teachers on professional competencies.

Table 2: Means of respondents' ratings of performance levels on professional competencies.

Competency	\bar{X}	Remarks
Programme planning, Development and Evaluation		
1. Developing a course of study	3.59	High
2. Conducting a student follow-up study	3.37	Average
3. Evaluating your technical programme	3.36	High
4. Conducting an occupational analysis	2.11	Low
Instructional Planning		
5. Determining needs and interests of students	3.51	High
6. Developing a unit of instruction	3.72	High
7. Developing a lesson plan	3.93	High
8. Preparing teacher-made instructional material	3.62	High
Instructional Execution		
9. Demonstrating a manipulative skill	3.74	High
10. Presenting information with models, real objects and flannel boards	3.47	Average
11. Employing the project method	3.28	Average
12. Employing reinforcement technique	3.20	Average
13. Using guided discovery method	2.02	Low
14. Providing individualised instruction in the classroom	1.90	Low
Instructional Evaluation		
15. Assessing student performance: Knowledge	3.86	High
16. Assessing student performance: Attitude	3.40	Average
17. Assessing student performance: Skill	3.86	High
18. Evaluating your instructional performance	3.77	High
Instructional Management		
19. Providing for student safety	3.72	High
20. Managing the technical workshop/laboratory	3.72	High
21. Project instructional resource needs	3.23	Average

of possession of competencies, and in-service needs of technical teachers.

Competencies important to technical teachers

The technical teachers rated 35 (97%) of all the competencies selected for the investigation very high. This indicates that the professional competencies are essential to the role of the technical teacher. The findings are consistent with those of Gorman (1978), and Okatahi (1983) in which most professional competencies were perceived as being important. Also, Hwang (1985) and Wu (1986) conducted similar studies and all the professional competencies were perceived as important for successful teaching by vocational teachers. The average rating of "Observing Classes taught by successful technical teachers in other schools" "might be due to the limitations of carrying it out. It might involve leaving one's primary work role and spending time and money to visit another school for observation study. This competency item was rated low in an earlier study by Agwubike (1985).

Level of Possession of Competencies

The result showed that the technical teachers could perform 50% of the competencies at a high level, 39% at an average level and 11% at a low level. Similar observations were made in the study conducted by Agwubike (1985) in which self-expressed performance level was lowest in two major categories, which are:

- (1) Professional role and development and
- (2) Instruction execution.

Laid (1985) considered inability to perform assigned tasks satisfactorily as an indicator of training need. It can be inferred that technical teachers will likely need improvement in areas with low and average levels of performance. This idea appears to be reasonable especially when the teachers perceived some competencies as of high importance and their performance in those competencies are rather low.

In-service Needs of Technical Teachers

Competency items having low or average performance standards need priority consideration in a training programme. The findings of this study supports the contention by Itotoh (1989) that serving and practising teachers lacked professional expertise that would assist

in achieving the demands of the National Policy on Education. In this study, teachers rated the first eight competencies needed for in-service as follows:

1. Collection and using professional and technical publications that would help keep "up-to-date".
2. Using guided discovery method
3. Conducting an occupational analysis
4. Providing individualised instruction in the classroom
5. Participating in in-service education programme
6. Making use of community resources
7. Project instructional resource needs
8. Preparing student related instruction.

The guided discovery method was recommended for the teaching of pre-vocational subjects. (National Curriculum for Junior Secondary Schools. Vol. 2). The findings of this study have shown that the use of this method is very limited in the school system. This and other identified needs could affect teachers' achievement of the desired learning objectives.

Implications

The findings of this study have important implications for the administrators, the teachers of technical programme and the students offering technical subjects in schools and colleges.

Based on the findings, the school administrators and policy makers will have better understanding of the needs of technical teachers in Delta and Edo States. The findings could certainly serve as an initial input into the development and implementation of functional in-service programme for technical teachers. The assessment of the performance of the present technical teachers helped to indicate the strengths and weaknesses of the teachers as they relate to their teaching in the schools and colleges. Based on the findings, the teachers can re-examine their own competence to handle the teaching of occupational programmes.

The success of the students in examinations will depend, to a large extent, on the competence of the teachers. With an improved in-service programme, technical teachers will be better equipped and prepared to teach effectively in the school system.

CONCLUSION

The professional competencies identified as important in this study represent what the technical teachers in Delta and Edo States considered essential for successful teaching at the secondary school level. Furthermore, the in-service needs identified in this study represent a consensual list of what the technical teachers considered as needs for effective performance of their tasks in schools and colleges.

Further investigation could be undertaken to determine the technical in-service needs in Auto-mechanics, Building Construction, Electrical Installation, Electronics, Metal works, Woodwork and Technical Drawing.

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