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Evaluation of Pre Nigeria Certificate in Education (Pre-NCE) Programme in Colleges of Education in Nigeria

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ABSTRACT

The study evaluated the Pre-NCE programme within 2000-2004. Tyler's goal-oriented approach with Scriven's goal-free model was adopted. A total of 996 respondents from different cohorts of stakeholders participated in the study; six validated research instruments were used. The data gathered was analysed using descriptive statistics, t-test and multiple regressions. 59% of the students admitted to study Science, Language and Technical Education in Colleges of Education were products of the Pre-NCE programme, also 80% of them could transit beyond the 1st year of the NCE programme. The programme was rated as an effective intervention strategy for the production of pre-service teachers.

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1. INTRODUCTION

The establishment of higher education in Nigeria dates back to 1930 when the then Yaba Higher College was established to give post-secondary preparation in various professions including the teaching profession. By 1939, seven science masters had completed their courses and gone back to their schools. This number was no doubt a far cry from the quantity required then, to man the over 15 secondary schools and 19 training colleges in the then Southern Province of the country. The outstanding difficulty at that time, which subsists to date, is in the recruitment of suitable students with background in science at the secondary school level. This situation then necessitated the institution of a preparatory year for science masters from mission schools.

Teacher education is designed to produce highly motivated, sensitive, conscientious and successful classroom teachers who will handle students effectively and professionally for better educational achievement [1],[2]. The Nigeria National Policy on Education (2004) articulated the objectives of Teacher Education to include providing teachers with intellectual and professional background adequate for their assignment. The Nigeria Certificate in Education (NCE) is stated as the minimum entry qualification into teaching. With these laudable objectives, it would be expected that only the intellectually promising and qualified persons should be trained as teachers.

Most of the students admitted into our Teacher Education Institutions are usually the worst academically. Better qualified youths prefer to seek admission into other departments and faculties different from education [3],[4]. Dike reported that about 23% of the over 400,000 teachers employed to teach in the nation's primary schools do not possess the Teachers' Grade Two Certificate, even when the minimum educational requirement to teach in the nation's primary schools had been upgraded to NCE [5]. The United

Nations (UN) has reported that the world needs an estimate of eight million teachers to ensure universal access to primary education by 2015. In the report, twenty-eight countries within Africa and Asia are ranked in the order they are in dire need of primary school teachers. Nigeria, ranked seventeenth (17^{th}) in the listand she needs to increase her teaching workforce annually by seven percent until the year 2015. An acute shortage of primary school teachers was reported to be one of the biggest hurdles against the goal of universal basic (primary) education in the country.

Annually, only a few candidates indicate interest in seeking admission through the Joint Matriculation Examination into the Colleges of Education in Nigeria, leading to a situation which threatens the continuous existence of the colleges. The circumstance thus necessitated the introduction of the pre-NCE programme to serve as intervention strategy for ready intakes into the NCE programme. The students are exposed to a year (two semesters) preparatory classes in basic science and introductory language courses for those in science, technical and languages respectively. They, thereafter, are promoted to 100 level (year one of their intended higher education course) upon satisfactory performance in an internal examination and the ability to make up their ordinary level deficiencies within the period of remedial training. The programme runs for 2-semesters using uniform curricula for all the colleges of education in Nigeria.

1.1 Objectives of the Pre-NCE Programme

The objectives of the Pre-NCE programme as stated in the NCCE manual are:

1. To produce a continuous flow of students into the NCE programme in areas of acute student shortage in terms of minimum entry qualifications;
2. To assist the students with academic deficiency, make advancement in their studies;
3. To feed the NCE programme with student input in the area of Language Science and Vocational Education where there is dearth of qualified candidates; and
4. To assist students who hitherto had academic deficiencies compare favourably with their counterparts on the NCE programme.

The objectives of the programme cannot be realized in isolation; they have to do with the context under which the students are learning. Some of these include the qualifications of programme participants, the student – lecturer ratio, which affects the demand on lecturers and the quality of the curriculum and the degree of congruence of the curricula content with ordinary level syllabus of examining bodies, so that deficiencies can be addressed.

Akinbote and Obemeata asserted that those who enrol to train as teachers are usually not the best materials. They further said that students, who enrol to train to become teachers, do so because they cannot cope with other courses [4],[6]. It is against this background that the National Commission for Colleges of Education (NCCE) approved the mounting of Pre-NCE Programme to take care of those students who fall below the admission requirement for Science, Technical and Language education courses with a view to meeting the admission quota and ascertain continuous manpower flow into the stream of the teaching profession in these specialized fields that are pertinent to national growth and technological advancement.

Evaluation is categorized into two main types namely: Formative and Summative [7]. Formative Evaluation is concerned with the development of a programme, or an on-going classroom process that keeps students and educators informed on study objectives [8]. Bhola indicated that Formative Evaluation is a method of judging the worth of a programme while the programme activities are forming or happening [9]. Tyler proposed a model in which he emphasized that educational evaluation should be geared towards ascertaining the achievement of desired outcomes.

The present study adopted the Tyler's goal-fixed model with goal free model of Scriven. The two provide the framework for the evaluation of the Pre-NCE programme consisting of the evaluation components, the objective variables, data source, techniques and instrument and the research questions.

1.2 Statement of problem

This study sought to evaluate the Pre-NCE programme in order to determine the extent to which the programme was achieving its objectives. It was designed to evaluate the Pre-NCE programme of colleges of Education in Science, Language and Technical Education courses in the South Western Zone of Nigeria for the period 1999 to 2004. The Pre-NCE students admitted by 2004 that were expected to graduate by 2008 make up part of the population for the study. All the conventional public Colleges of Education in the six South-Western States in Nigeria took part in the study. The study also considered the entry qualifications, programme objectives, lecturers' quality, curricula adequacy and class size as they affect transition to the NCE programme and assist participants make up their initial academic deficiencies.

1.3 Research Questions

Within the context of the problems stated above, the study provided answers to the following questions:

1. Has there been a consistent admission of Pre-NCE students to NCE 100 level between 1998 and 2004?
2. What proportion of students admitted into the Pre-NCE programme transited to the NCE programme?
3. How adequate are the curricula content of the programme to meet the academic deficiencies of students?
4. What is the rating of stakeholders (Programme Managers, Lecturers, Pre-NCE students and product of Pre-NCE programme), on the effectiveness of the Pre-NCE programme as an intervention strategy?
5. What are the composite and relative contributions of the predictors' variables Pre-NCE grade, entry grade and teacher's effectiveness to students' achievement at NCE 100 level?
6. What is the pattern of performance of the Pre-NCE and PCE students in 100, 200 and 300 levels?

What is the success expectancy of the Pre-NCE products on the NCE programme?

2. RESEARCH METHOD

This study is an evaluation of an Educational Programme and as such it is a non-experimental study. The research adopted the Tyler's goal-fixed model with the Scriven's goal-free model of Evaluation. The population consisted of students, the programme graduates, lecturers and programme managers in the 10 conventional public Colleges of Education in South-Western Zone of Nigeria that run the Pre-NCE Programmes. Stratified sampling was employed in the selection of three Federal and three State Colleges of Education. The sample covered four states in the south western zone namely: Oyo, Osun, Ondo and Lagos States. The cohorts for two sets, drawn for all colleges were used. Through simple random sampling of programme lecturers, students, products and managers, a total of 996 respondents made up the sample. Equal numbers of students, (300), were selected from Science, Technical and Language Education across the sampled colleges.

Five instruments for data collection were constructed and validated by the researcher. They are:

(i) The Pre-NCE programme rating scale (PNCE/PRS)with a reliability coefficient of 0.84

(ii) Questionnaire for Pre-NCE Programme Managers (Q/PNCE/PM)

This was validated using 100 NCE students; a Cronbach alpha of 0.81 was obtained. This was a form of an anecdote, face validated by psychometrians.

(iii) Questionnaire for Pre-NCE Programme Lecturers (Q/PNCE/L)

(iv) Questionnaire for Pre-NCE graduates (Q/PNCE/G)

(v) Questionnaire for Pre-NCE students (Q/PNCE/S)

The researcher also collected the cumulative grade point average of Pre-NCE and PCE students in the NCE 100 level examination in the selected colleges.

The data were subjected to analysis using frequency counts, mean and percentages. The CGPA of the students admitted through Pre-NCE programme and those admitted through JAMB/PCE were also subjected to cohort analysis to ascertain significant difference at the end of their first year. The rating of stakeholders was subjected to t-test while regression analysis was also carried out.

3. RESULTS AND ANALYSIS

3.1 Research Question 1

Has there been a consistent admission of Pre-NCE Students to NCE 100 level between 1999 and 2004?

This question was answered using the physical number of students admitted each year for the programme by their mode of admission. The result is shown in Table 1.

Table 1: Frequency and Percentages of Students Enrolment by Mode of Admission

Name of College	2002/2003		2003/2004		2004/2005		2005/2006		2006/2007		Total	
	Pre-NCE	PCE	Pre-NCE	PCE	Pre-NCE	PCE	Pre-NCE	PCE	Pre-NCE	PCE	Pre-NCE	PCE
A	N.A.		N.A.		790 (78)	221 (22)	610 (65.9)	315 (34.1)	516 (64.1)	289 (35.9)	1916 70%	825 30%
B	227 (23.0)	737 (77.0)	237 (42)	320 (58)	215 58	152 42	215 (59)	146 (41)	227 62.8	134 34.2	1121 43	1489
C	548 (79.7)	139 (20.3)	437 (56)	343 (44)	352 (56.9)	267 (43.1)	298 (59.2)	205 (40.8)	440 (85.3)	76 (14.7)	2075 (66.8)	1030 (33.2)
D	343 (55.9	271 (44.1)	266 (62)	163 (38)	N.A	N.A	248 (58.7)	173 (41.3)	357 (61.9)	220 (38.1)	1212 (59)	827 (41)
E	557 (92)	48 (08)	596 67	293 33	378 (58)	274 (42)	561 (68.2)	261 (31.8)	220 (25)	677 (75)	3312 (60)	1551 (40)
F	76 (19.7)	309 (80.3)	113 (33.8)	221 (66.2)	NO ADMISSION		218 (66.1)	1112 (33.9)	163 (53)	142 47	570 (42)	784 (58)
TOTAL	1751 (53.8)	1502 (46.2)	1649 (55.2)	1340 (44.8)	1735 (68.1)	914 (31.9)	2148 (63.9)	1212 (36.1)	1923 (55.6)	1538 (44.4)	9206 59%	6506 41%

- Figures in brackets represent percentages of student admitted through each model

The percentages of intake through Pre-NCE mode ranged between 55.9% and 85.3% as against those who were admitted through the Polytechnics and Colleges of Education Matriculation Examination (PCE) which ranged between 14.79% and 41.1%.

The findings revealed that the number of students admitted through the Pre—NCE programme was significantly substantial thus establishing consistency in the supply of intakes through this mode of admission. However, in Adeniran Ogusanya College of Education (AOCOED) [College B] and Federal College of Education (T) Akoka [College F] the situations were different: for instance, in AOCOED, more students were admitted through the PCE mode. A further investigation revealed that the College admits students who have required qualifications but who did not write the PCE Examination through a process known as re-regularisation. Consequently, in this college in 2002/2003 23% were admitted through Pre-NCE, 42% in 2003/2004 and 43% on the average for the study period. In FCE (T) Akoka, only 19.7% were admitted through Pre-NCE mode in 2002/2003 and 33.8% in 2004/2005. However, the trend changed from 2003/2004 when more students were admitted through the Pre-NCE mode.

This increase is corroborated by the findings of Bassey who reported a similar trend in the evaluation of Pre-NCE programme in Cross River State College of Education, Akamkpa [10]. The current enrolment level is quite in consonance with one of the objectives of the programme which aims at ensuring increased enrolment of potential teachers of Science, Technical and Language education where there is the dearth of qualified applicants.

3.2 Research question 2

What proportion of students admitted into the Pre-NCE programme transited to the NCE programme?

The question was answered by considering the number of Pre-NCE students admitted and the percentage that transited to NCE as well as the percentage that successfully proceeded beyond the first year of the NCE programme. Table2 shows the result. The table indicates that between 84.9% and 94.5% of the students admitted for the Pre-NCE programme preceded to the NCE class while between 80% and 89% of them were successful at the end of the first year.

Table 2: Proportion of Successful NCE students beyond first Year, Admitted through the Pre-NCE Programme.

Years	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	Total
Proportion that proceeded to NCE	1662 (94.9%)	1468 (89%)	1601 (92.3%)	1890 (88%)	1633 (84.9%)	8250 (89.7%)
Proportion that successfully Proceeded beyond 100L NCE	1329 (80%)	1215 (82.8%)	1435 (89.6%)	1533 (89.6%)	1344 (82.3%)	6856 (83.1%)

This trend allays the fears generated by the problem identified by Omoregie that the NCE programmes in Colleges of Education draw their intakes from the not-so-brilliant secondary school leavers who would in no way get admission into other tertiary institution because of poor academic qualifications [3].

3.3 Research Question 3:

How adequate are the curricula content of the programme to meet the academic deficiencies of students?

The Q/PNCE/L designed for programme lecturers provided input for the table used in ascertaining the adequacy of the Pre-NCE curriculum at meeting the deficiencies of the enrolees. This is further buttressed by comparing the SSCE WAEC syllabus with the Pre-NCE curricula in the respective courses. The percentage of the content of SSCE syllabus covered by the Pre-NCE curriculum is used to determine the adequacy. (See Table 3)

Table 3: Rating of Pre-NCE Curriculum Content with SSCE Curriculum based on Subjects basis

Subject	No of Lecturers involved in the rating	Level of coverage of SSCE Curriculum by the Pre-NCE Curriculum in percentage
English Language	12	96.3
Mathematics	12	98
Physics	12	97
Chemistry	12	100
Biology	12	96.3
French	10	97
Basic Nutrition & Food Science	6	34

In all the subjects, over 96% of the curricular content of the SSCE is also covered by the Pre-NCE Curriculum. However, for Basic Nutrition and Food Science only 34% of the content of SSCE is covered by the Pre-NCE Curriculum, thus it can be said to be inadequate to meet the needs of the participants and thus need to be reviewed.

Bassey while carrying out an impact evaluation of Pre-NCE programme in Cross-River State College of Education Akamkpa between 1990 and 1997,using goal-free and CIPP evaluation models, with a total of 1,470 subjects found, among other things, that though course contents are adequate in most subjects, several aspects of the curriculum are inadequate [10].

3.4 Research Question 4:

What is the rating of stakeholders (Programme Managers, Lecturers, Pre-NCE students and product of Pre-NCE programme), on the effectiveness of the Pre-NCE programme as an interventional strategy?

The mean rating of stakeholders which ranges between 31.73 and 32.90 is sufficiently high, it indicated between 72% and 74% positive rating for the programme. The analysis revealed that there was no significant difference in the ratings of Pre-NCE students and the graduates of the programme. It was equally established that there was no significant difference in the ratings of programme managers and lecturers.

3.5 Research Question 5:

What are the composite and relative contributions of the predictors' variables Pre-NCE grade, entry grade and teacher's effectiveness to students' achievement at NCE 100 level?

The students' achievement at the NCE 100 level was regressed on all the independent variables, entry grade, Pre-NCE grade, students' sex and teachers' effectiveness. The result is depicted in Tables 4 and 5.

Table 4: Analysis of Variance of the criterion variables of Pre-NCE grade, entry grade, student's gender and teacher's effectiveness in predicting students' achievement in 100L NCE

Source of Variation	Sum of squares	Df	Mean square	F-ratio	Significant F
Regression	21.202	10	2.120	4.013	0.000
Residual	113.593	215	0.528		
Total	134.795	225			

Table 5: Parameter Estimate

Variable	B	SE B	Beta	T	P value
Entry qualification	0.042	0.044	0.065	0.961	.338
PNCE	0.169	0.044	0.247	3.829	.000
SSEX	-0.105	0.112	-0.065	-.941	.346
TEACHEFF	0.023	0.010	0.766	2.295	.023
Learning/value	-0.051	0.017	-0.317	-3.026	.003
Enthusiasm	-.051	0.018	-0.325	-2.902	.004
Individual rapport	0.003	0.021	0.018	0.150	0.881
Breadth of coverage	-.0049	0.021	-0.260	-2.353	0.020
Examination/grading	-0.025	0.025	-0.102	-1.022	0.308
Assignment	-0.014	0.016	-0.105	-0.839	0.402

The analysis of variance in Table 5 indicates that the combination of the independent variables has a significant effect on the 100L NCE performance.

The mean rating of programme lecturers on programme effectiveness was 32.9 out of a maximum of 44. The rating indicates a 74.8% positive rating for the programme as an effective intervention strategy. The lecturers rating indicate that Pre-NCE programme is helping to solve the manpower problem in the area of Science, Technical and Language Education, in the Colleges of Education in Nigeria. The lecturers, however, seem to be different on the proposition to abolish the PCE examination in favour of the Pre-NCE programme.

The mean rating of 31.73 out of 44 translated to 72.1% positive mean rating for the programme as an effective intervention strategy by products of the programme that are currently on the NCE programme. This means that, if not for the programme, they would have been unable to make advancement in their academic career owing to their deficiencies at entry point. The products of the programme equally rated the curricular as adequate in meeting the needs for ordinary level work which in turns assist in addressing their deficiencies. The mean rating of 31.84 out of 44 translated to 74% positive mean rating for programme effectiveness. The rating indicates that the programme is producing students with sufficient knowledge to cope with the demands in Science, Technical and Language Education.

3.6 Research Question 6

What is the pattern of performance of the Pre-NCE and PCE students in 100, 200 and 300 levels?

The cumulative grade point average (CGPA) of the students; Pre-NCE and PCE, were collected throughout their study period and the trend was analysed. Table 6 shows the result.

Table 6: Mean Cumulative Grade Point Average of Pre-NCE and PCE Students

	100LCGPA	200LCGPA	3OOLCGPA
Pre-NCE Group	2.26	2.86	2.61
PCE Group	2.11	2.57	2.24

The result indicated a mean CGPA of between 2.111 and 2.86 for the two groups of students the pattern of performance of the two groups of students was similar. They started low and improved at the end of the second year while in the third year their performances dropped slightly. However, the analysis revealed a consistent higher performance of the Pre-NCE products over their PCE counterparts.

The findings of a better trend by the Pre-NCE group over their PCE counterparts may not be unconnected with the fact that having spent a year in the Pre-NCE class they would have adjusted to the institutional environment and gained advantage over their PCE counterparts who are coming in fresh. One of the ultimate goals for setting up the intervention programme includes boosting the entry into the stream of teaching profession in areas where there was dearth of candidates. The Pre-NCE products would ordinarily not have been qualified for consideration into the programme by admission requirements but for the intervention. The results obtained by the study have justified the desirability for the intervention. These results have faulted the claim by Omoregie that intakes to the colleges of Education are intellectually deficient [3].

3.7 Research Question 7

What is the success expectancy of the Pre-NCE products on the NCE programme?

The cumulative grade point average (CGPA) of the students; Pre-NCE and PCE, were collected throughout their study period and trend was analysed**.** The results (See Table 7) of two cohorts of the programme were obtained for the duration of the NCE programme and the performances were analysed to determine the pass rate across the three levels.

Table 7: Percentages of performance of Pre-NCE students for two sets over the three levels

	100L cohort1	100L cohort2	200L cohort1	200L cohort2	300L cohort1	300L cohort2
Fail	13.21	0.90	9.16	0	9.43	0
Pass	86.79	90.10	90.84	100.0	90.57	100.0

The table indicates that between the 9.4% and 13.2% failure rate was recorded over the three years of the NCE programme by the Pre-NCE products. The implication is that the products of Pre-NCE recorded between 86.8% and 91% success on the NCE programme at each level. More information is further presented the Table 8.

Table 8: Success Expectancy table for Pre-NCE products on NCE programme(**2005-2007**)

Level (x)	Lx	Dx	Px	Qx	Level (x)
0	4071	208	94.9	5.1	0
1	3863	514	86.7	13.1	1
2	3349	308	90.8	9.2	2
3	3041	286	90.6	9.4	3

Lx – number of students
Dx – stands for the number that failed to transit (the number of causalities)
Px – the percentage that passed at all level
Qx – the percentage that failed at all level

The study revealed that the success expectancy of the Pre-NCE products is high to justify the sustenance of the intervention**,** which is also helping in actualizing the dreams of participants that could have been truncated by inability to secure admission into a tertiary institution.

4. CONCLUSION

The Pre-NCE programme has been observed to be achieving its set objectives to a large extent with respect to providing regular and continuous supply of teachers to primary schools in Nigeria. More importantly, the programme is providing teachers that are professionally prepared to teach the science, technological and language aspects of the primary school curriculum. The identified trend in the programme has helped to curb the instances of human waste which could have resulted in frustration, and other social vices for this crop of youths who could have been out of school doing nothing. In some instances there are secondary school graduates who have some potential for higher education but find it difficult to get admission. Therefore to meet up with global expectation and achieve gross national happiness, a programme like this may be put in place for such students. This will also boost the education industry especially those of developing nations. The pre-service teachers who participated in this current study are happy that they are being moulded eventually, in spite of their academic deficiencies to contribute their quota into the education industry.

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