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ABSTRACT

The problem of meeting the demands of a rapidy expanding educational system is a common one to many developing nations. A major component of the problem lies in the fact that many of the teachers presently in the schools lack the necessary educational background that would permit them to enroll in advanced level programs in order to upgrade their qualifications. The problem has been addressed by various mature age entry programs in which students without the usual academic credentials may qualify for university entrance. This paper describes the Bachelor of Education Program in Primary Education at the University of Botswana, and looks at some of the entering characteristics of those students who constitute the first three intakes into the program and who have by now completed it. The major focus of the paper documents the academic performance of those students during the program and makes tentative comparisons of their performance with those of students in a non-mature entry program. Entry characteristics are examined for predictors of success in the program. The paper concludes with a discussion of implications for this and similar mature age entry programs. (JD)

PERFORMANCE OF THREE COHORTS OF STUDENTS ENROLLED IN A DEGREE PROGRAMME IN THE DEPARTMENT OF PRIMARY EDUCATION AT THE UNIVERSITY OF BOTSWANA

by

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The problem of a rapidly expanding educational system is one that is shared by many countries in Africa. A major component of this problem lies in the difficulty of finding suitably trained teachers--not only to teach in the increasing number of primary and secondary classrooms but also to serve as trainers of the classroom teachers. Compounding the problem--particularly for primary education--is the fact that many of the teachers presently in the schools lack the necessary educational background that would permit them to enrol in university or other advanced level programmes in order to upgrade their qualifications.

At the university level in Africa as well as elsewhere, this problem has sometimes been addressed by various Mature Age Entry programmes (e.g. see Sebatane, 1987) in which students without the ususal academic credentials may nevertheless qualify for university entrance. Such schemes are not uncommon, however, there seems to be a general scarcity of published information about the performance of such students when they have actually enrolled in a university programme--particularly in the African context.

The purpose of this paper is to briefly describe the Bachelor of Education programme in Primary Education at the University of Botswana (which has at it's core a Mature Age Entrance Scheme) and to look at some of the entering characteristics of those students who constitute the first three intakes into the programme and who have by now completed it. The major focus of the paper documents the academic performance of those students during the programme and makes tentative comparisons of their performance with those of students in a non-mature entry programme. Entry characteristics are examined for predictors of success in the programme. The paper concludes with discussion of implications for this and similar mature age entry programmes.

Background

The Department of Primary Education at the University of Botswana has its roots in the study of the National Commission on Education (NCE) completed in 1977. That study included an assessment of student achievement at various levels in reading and mathematics and - at the secondary level - in science which showed that the performance of Batswana students tended to be unacceptably low in comparison with other developing countries.

At the time of the NCE study, the primary teacher training colleges (PTTCs) were heavily dependent upon expatriate staff and there was general consensus on the desirability of reducing this dependency where possible. In addition, both the local and expatriate staff in the PTTCs were mainly prepared as secondary school teachers. Furthermore, the supply of qualified primary school teachers fell considerably short of the number required. In 1979, 36 percent of the teachers in the schools were unqualified, i.e., they lacked a Primary Teachers Certificate or other acceptable certificate: most of the untrained teachers were standard 7 leavers. These problems were compounded by the very rapid increase in primary school enrollments. A 40 percent increase from 156,000 to 221,000 pupils was projected for the period 1979-1985, (Note: the actual 1985 enrollment was 223,608).

In recognition of these problems, primary education was established as a government priority within the education sector. This was stated as such in the 1979-85 National Development Plan (p. 107).

> The GOB (Government of Botswana) attaches the highest priority within education to the primary education sector. First, in the interests of equality of opportunity and of developing the potential of all children, the Government seeks to provide universal access to primary education. Secondly, since primary education lays the foundation for further education and training and for productive employment, the Government seeks to improve its quality and relevance.

In the period 1979-80, the Botswana Primary Education Improvement Project (PEIP) was conceptualized as the major instrument for addressing problems related to the preparation of primary school teachers. In cooperation with the United States Agency for International Development (USAID) and Ohio University, the contractor, PEIP was launched in July 6, 1981 with a set of four objectives to be sought over a five-year period. The

objectives were:

(1) A functioning Department of Primary Education as a new entity in the University of Botswana.

(2) Batswana graduates of the UB with B.Ed. degrees or two-year diplomas in primary education, qualified to serve as PTTC tutors, head teachers, MOE officers and in other leadership positions.

(3) Batswana trained in the U.S. to the masters degree level in appropriate fields of primary education to replace U.S. project staff at the UB.

(4) Institutional base established for the systematic and effective in-service training of head teachers, deputy heads, and senior teachers in the 480 primary schools, and for the development of staff of the PTTCs and the Inspectorate.

(United States Agency for International Development, 1981)

From the forgoing, it can be seen that the major purpose of establishing a Department of Primary Education at UB was to prepare PTTC tutors, education officers and leaders in primary schools. Therefore only experienced primary teachers could be admitted into the programme. Since very few, if any, primary teachers could meet the normal requirements for entrance to Bachelors degree programmes at UB (Cambridge Overseas School Certificate in the 1st or 2nd Division), admissions to the Department of Primary Education were through the provisions of the Mature Age Entry Scheme. This scheme essentially requires the following: applicants must be at least 25 years of age; possess a junior certificate or its equivalent; and have at least two years of experience as (a) primary school teacher or (b) a PTTC tutor or (c) an Education officer (Primary). An entrance examination composed of an objective test and an essay is required. The names of those candidates who meet the university's admissions requirements under the Mature Age Entry Scheme are submitted to the Ministry of Education where the decision is made as to who will be released for the programme and supported by a bursary.

The first intake into the Department of Primary Education took place in August, 1981. The annual intake target for the first five years was 30 students. During the first three years, the students were sectioned upon admission into either the Diploma programme (10) or the B.Ed. programme

(20) on the basis of their examination scores. Those with lower scores were assigned to the Diploma programme. When it became apparent that the admissions-examination was not necessarily a reliable predictor of academic achievement, the sectioning of students was deferred until the completion of year one, which is a common programme of both Diploma and B.Ed. degree students

Student Characteristics

At the time of this study, three classes of students have entered and completed the B. Ed. Programme in Primary Education. For purposes of the comparisons to follow, all students who entered the programme in a given year are treated as a cohort or group, thus resulting in three cohorts which form the basis of the study. For the most part, the three cohorts (or entry year groups) are comprise the unit for comparison although where appropriate average or combined values across the cohorts are used as well.

Selected characteristics of the entering groups are presented in Table One.

TABLE ONE

SELECTED ENTERING CHARACTERISTICS OF B.ED. PRIMARY CLASSES

	Number Of Applicants	Number Accepted*	Percent Accepted	Percent Female	Age Mean/SD
1981-82	188	30	16%	42%	35 2/6
1982-83	350	31	9%	47%	30.4/5
1983-84	144	29	20%	58%	30.3/4

*Includes both B.Ed. and Diploma Admissions

As can be seen from the table, a far larger number of applicants applied each year than were able to be accepted into the programme. The average acceptance rate for the three years was 15 per cent and ranged from a low of 9 per cent to a high of 20 per cent. In two of the groups slightly more than half were males, while in one group females were slightly predominant. The group entering in 1981-82 were, on the average, about five years older than those in the two succeeding groups.

The difference in age of the first entering class is further reflected in the

number of years of teaching experience which they had prior to beginning the programme. This can be seen in Table Two where the first group had a mean of 13.1 years of experience compared to the two following groups which had 7.3 and 8.9 respectively. It is interesting to note that while the mean ages at entry of the second and third cohorts were approximately the same, the third cohort had on the average one more year of experience. This group began working sooner than the following group, doubtless at the expense of an additional year of educational preparation.

TABLE TWO

LAST POST HELD AND MEAN YEARS OF EXPERIENCE
BEFORE ENTERING B. ED. PRIMARY PROGRAMME

Entry Year	N	Assistant Teacher	Senior Teacher	Dep/Actg Head	Head Teacher	Education Officer	PTTC Tutor	Years Exp. Mean/SD
1981-82	20	30%	5%	10%	15%	5%	35%	13/5.4
1982-83	17	59%	18%	12%	6%		6%	7.3/3.8
1983-84	17	47%	29%	6%	18%			8.9/3.9
Total	54	44%	17%	9%	13%	2%	15%	9.9/5.1

Note: Percentages are calculated as proportions of persons for whom information was available. The N reported for each entry year may not agree with those reported elsewhere in this paper

Table Two shows additionally, that, taken as a combined sample, almost half of the entering students (44 percent) were at the assistant teacher rank when they entered the programme. The next greatest number (17 percent) had been senior teachers while 15 percent had been PTTC tutors and 13 percent head teachers. Examination of the patterns for the three cohorts shows striking differences between them. Almost a third of the first group were PTTC tutors while only one of the remaining two groups, combined, fell into that category. The 1982-83 cohort contained a higher percentage of assistant teachers and relatively fewer senior teachers as compared to those admitted the following year. The percentage of students who had been head teachers remained fairly constant across the three years.

As was noted earlier, students coming in to the B. Ed. Primary programme may have either of three levels of secondary school qualification: standard seven, Juniour Certificate (JC) or COSC/GCE. Regardless of the secondary level achieved, all of them will have completed the Primary Teacher Training certificate. Table Three shows the educational background of the students and the level of their PTTC qualification. The fact that complete information was not available, particularly for the 1981-82 group, makes identification of trends or comparisons between the groups difficult. A few observations can nevertheless be made.

Insert Table Three About Here

Standard seven leavers constitute a small number of the students admitted in each group. The largest number of these was in 1981-82 with four such students being admitted; in each of the following years the number decreased. Most students came into the programme with their highest level of qualification (prior to PTTC) being the Junior Certificate. While information on the level of the JC was not available for 1981-82, in the following year there were nine who indicated that they had received a pass compared with only three in 1983-84. It may be worth noting, however, that a significant number of the 1983-84 group did not indicate their level of JC. It may be that those who achieved merely a pass did not wish to have this documented in their university files. A relatively small number of students completed the COSC/GCE certificate at any level; the largest number (six) being in the 1981-82 cohort. All of these six were among those (seven in all) who completed their teacher training in the UK. Taken as a whole, for more than half of the intake during the first three years of the programme, the Junior Certificate was the highest secondary school qualification. The remainder were approximately equally divided between standard seven leavers and COSC/GCE completers.

Because a number of the first group (i.e. the 1981-82 cohort) had received their teacher training in the UK and (with the exception of the three "distinctions") because students did not record the level of their certificate it is again difficult to detect patterns or make comparisons of the level of teacher training qualifications achieved by each of the entering groups. The number of distinctions remains constant across the three years, however, with the number of credits moving upward slightly from six in 1982-83 to ten in 1983-84.

TABLE THREE

EDUCATIONAL BACKGROUND AND QUALIFICATION LEVELS

Year of Entry	Standard Seven		Junior Certificate						COSC\GC						Level of TTC Qualification								Total N
			Credit		Pass		N/G*		Credit		Pass		N/G*		Distiction		Credit		Pass		N/G*		
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
1981-82	4	20%					8	40%		0%	2	10%	6	30%	3	15%		0%		0%	17**	85%	20
1982-83	3	16%	3	18%	9	53%	1	6%			1	6%		0%	3	18%	6	35%	4	24%	6	35%	17
1983-84	1	5%	2	11%	3	16%	10	53%	1	5%	1	5%	1	5%	3	16%	10	53%	1	5%	5	26%	19
Total	8	15%	5	9%	12	23%	19	36%	1	2%	1	2%	7	13%	9	17%	16	30%	5	9%	28	53%	53

* N/G = Level Not Given

** Of this number 7 completed Teacher Training in the UK.

Notes: 1) Category totals do not necessarily equal total admissions for a given year because of incomplete information available.

2) Percentage is given as proportion of those for whom information was available.

Performance

To make comparisons between the achievement of groups of students who are in different programmes or even in different faculties is problematic. There is almost no satisfactory way of equating marks achieved by different students in different courses so as to permit comparisons at more than a superficial level. This is further complicated at the University of Botswana in that there has been a high degree of dependence on expatriate teaching personnel who are on one or two year contracts. This obviously inevitably results in some lack of consistency in grading practices from one year to the next and from one class to the next. More often than not differences between marks awarded by different lecturers or by departments may be a reflection of marking practices and/or philosophy rather than any real differences between students. Thus any conclusions which might be drawn from such comparisons must, at best, be highly tentative. Nevertheless, within these limitations we shall note some of the performance patterns of students in the programme and make limited comparisons between the performance of students in the B. Ed. Primary programme with students in the B. A. programme in the Faculty of Humanities. The B.A students were chosen as the basis for comparison because the majority of them represent an example of Cambridge (COSC/GCE) level entry. Additionally, some of the B.Ed. Primary students sit in common courses with the B.A. students thus making possible comparisons of achievement within the same course.

In making comparisons, it should also be noted that less than 25 percent of the courses which may be taken by students in the B. Ed. Primary programme are actually taught by the Primary Education Department (see Table Four.)

TABLE FOUR

DISTRIBUTION OF B. Ed. PRIMARY COURSES
BY DEPARTMENT*

DEPARTMENT	COURSES			
	Compulsory	T. Option	Total	Percent
Primary Education	5.5	4.5	10	24%
Math/Science Ed	2	9 5	11 5	28%
Lang./Soc. Sci. Ed.	2.5	7	9.5	23%
Educational Foundations	3 5	0	3 5	9%
Nursing	0.5	0	0.5	1%
History (Humanit es Fac.)	0	1	1	2%
English (Humanities Fac.)	0	5	5	12%
TOTAL	14	27	41	100%

*Source: C. Personke, 1987.

Courses taught by the Department of Primary Education include, for the most part, compulsory courses (over one third of the total compulsory courses) as well as introductory level courses in some of the content areas. The balance of courses are taught in content area departments within the faculty of education or even in other faculties of the university. The actual percentage of courses taken by an individual student that are taught by the department of primary education will of course vary by student and specialization.

The University of Botswana has adopted a standard marking scheme which is universally followed by all departments and faculties at the university:

80 - 100 = A
70 - 79 = B
60 - 69 = C
50 - 59 = D
Below 50 = Fail

Faculty of Education regulations require that all marks be composed of equal weights between continuous assessment and final examinations which are taken each year at the end of the second semester; regulations for the Faculty of Humanities specify a continuous assessment/examination ration of 2/3. Table Five shows Overall Weighted Mean marks (as percentage scores)

for each cohort (i.e. for each Entry-Year group). These marks include all marks awarded to those students within the Department of Primary Education as well as those marks awarded to the B.Ed. Primary students in courses which they took outside the department. For purposes of comparison, similar statistics are provided for the complete group of students enrolled in the B.A. Humanities programme during the same years. The Overall Weighted Mean marks (OWM) are used in this comparison. This is a statistic calculated by the University of Botswana at the end of each academic year for each student and is computed as an average of marks received in all courses taken by that student but weighted according to whether the courses were taken across one or two semesters.

TABLE FIVE

OVERALL WEIGHTED MEAN MARKS BY YEAR

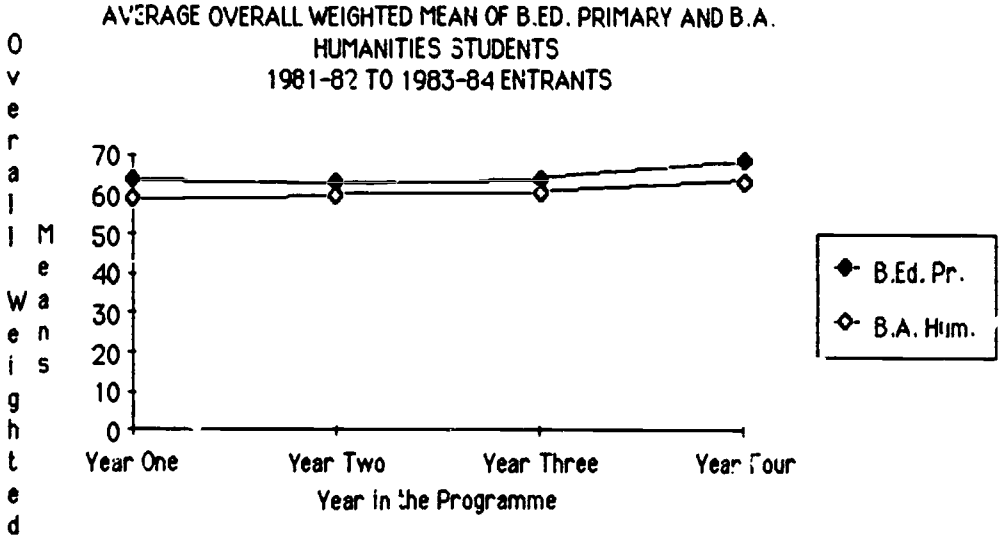
	Year One		Year Two		Year Three		Year Four	
Entry Year	B.Ed.Pr.	B.A.Hum	B.Ed.Pr.	B.A.Hum	B.Ed.Pr.	B.A.Hum	B.Ed.Pr.	B.A.Hum
1981-82	62.4	59.5	65.6	60.2	67.7	60.8	72.7	63.1
1982-83	64.9	60.2	60.1	61.3	63.8	61.6	66.2	64.1
1983-84	64.3	57.8	63.9	59	61.5	59.6	66.7	63.6
Average	63.87	59.17	63.2	60.17	64.33	60.67	68.53	63.6

Table Five indicates that on the whole, students in the B. Ed. Primary programme perform in the "C" or "Satisfactory range. There appear to be no consistent patterns of high or low scores across years or cohorts with the exception of the 1981-82 cohort who after their first year, achieved a consistently higher level of marks overall than those of the two following classes. For each group the fourth year appears generally as one with somewhat higher mark levels. When the three years are averaged together, performance from one year to the next seems nearly level, with the final year being, on the average, about four percentage points higher. Verification of these patterns across time must await additional data from subsequent cohorts, however. While the emphasis in this study has deliberately been focussed on what might be termed the "practical significance" rather than the statistical significance of comparisons, it may be worth noting that pairwise comparison of means by a t-Test Analysis for Correlated Samples

shows that the group means (for combined cohorts) for each of the years differ from the fourth year at a significance level of $p < .0001$. Marks obtained in year two differ from those in year three at a significance level of $p < .01$.

Table Five also shows, by way of comparison, parallel cohorts of students who were enrolled in the B. A. Humanities programme. With only a few exceptions these students consistently obtained overall weighted means from one to ten percentage points below that of the B. Ed. Primary students. Comparisons of the mean scores combined as a weighted average across the three entry years are depicted graphically in Figure One.

FIGURE ONE



As can be seen from the Figure, the averaged mean scores tend to be 3-5 percentage points apart each year. Patterns of differences across years tend to be similar for both groups of students. In both cases the fourth year means were consistently the highest of all the years. It goes without saying, of course, that the higher means of the B. Ed. Primary students do not necessarily indicate that they performed at higher absolute levels, instead what has been observed is quite possibly a reflection of differences in grading policies or practices between the two faculties.

An alternate indicator of student success in course work, is the pass/fail ratio in the courses taken. Table 6 shows the percentage of students in both the B. Ed. Primary and the B.A. programmes who failed at least one course during each of the years in question.

TABLE SIX

PERCENTAGE OF STUDENTS FAILING AT LEAST ONE COURSE

	Year One				Year Two				Year Three				Year Four			
Entry Year	N	B.Ed.Pri.	N	3 A.Hum.	N	B.Ed.Pri.	N	B.A.Hum.	N	B.Ed.Pr.	N	B.A.Hum.	N	B.Ed.Pri.	N	B.A.Hum.
1981-82	30*	20%	54	35%	19	5%	56	30%	20	30%	51	24%	20	0%	50	12%
1982-83	18	33%			21	33%	56	27%	23	48%	53	32%	22	32%	52	10%
1983-84	30*	23%	7'	34%	21	33%	53	34%	21	38%	52	35%	21	14%	41	20%
Total	78	24%	124	35%	61	21%	165	30%	64	39%	156	30%	63	15%	91	21%

*Includes students in Diploma Progamme

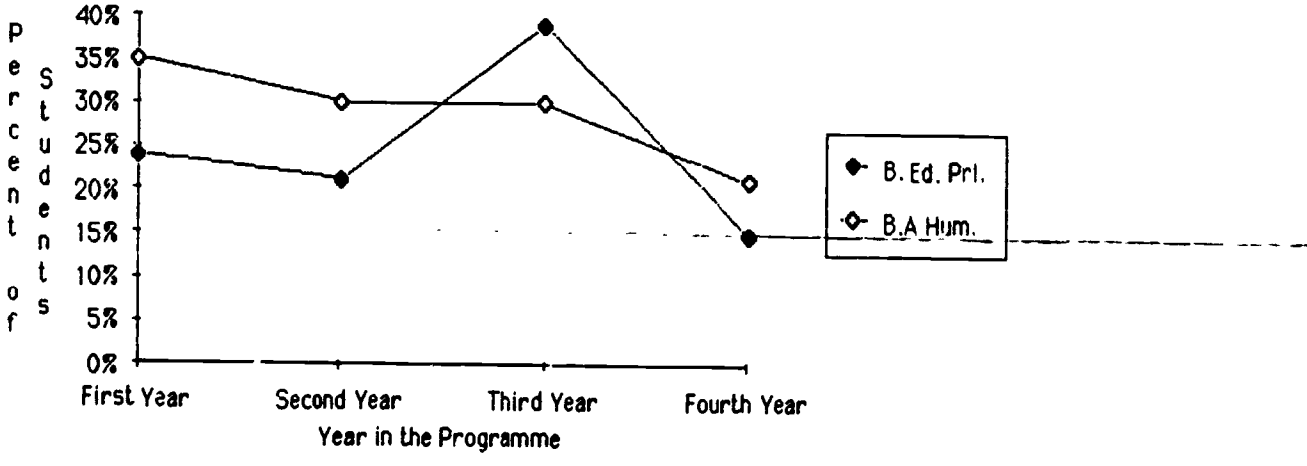
Insert Table 6 About Here

With only a few exceptions, between one fifth and nearly one half of the B. Ed. Primary students failed at least one course during each of the years shown, with percentages in the 30's being the most typical. In general it would appear that for B. Ed. Primary students the third year is most difficult as indicated by the number of course failures, while the fourth year is relatively easier. This observation is somewhat surprising given the generally level percentage scores that were observed across the years in the earlier table. That both can be the case indicates that while the failure rate in the third year is higher, it is apparently balanced by approximately equal numbers of students whose achievement during this year was even higher than that of the previous years. Thus, the spread between the higher and lower achieving students (or marks) has become greater by this time.

The above pattern does not seem nearly so marked for the B. A. students where the percentage of students who failed courses seems to decrease more or less consistently from the first year through the fourth. Both patterns can be seen more dramatically in the graphic representation of Figure Two where the percentage of students failing at least one course (before supplementation) are averaged across the three entering cohorts.

FIGURE TWO

AVERAGE PERCENTAGE OF STUDENTS FAILING AT LEAST ONE COURSE



Reasons for the apparent tendency of B. Ed. Primary students to experience a higher failure rate during their third year in particular are not immediately

obvious from the information available. It may, however, be related to the fact that much of the course work during this year is advanced level work in content areas--frequently outside the Department of Primary Education--and as such may draw upon specific subject area knowledge beyond the level of many of these students' limited secondary school experience. It should be noted in any case, that the failing marks which were used for purposes of this analysis are those marks which were received prior to "supplemenation." Within certain limitations, students at the University of Botswana may re-take (or "supplement") an examination which has not been at first passed. Thus the statistics used here do not indicate the number of students which actually failed after sitting for a supplementary examination. In reality, a relatively small number of students are in the end required to repeat a year of studies.

It can also be observed that the failure rate for students appears to vary significantly by year of entry into the programme. Those B. Ed. Primary students entering in 1981-82 experienced less failure than either of the other two groups, while the 1982-83 entering group, on the whole experienced a much higher failure rate--particularly during their first, third and fourth years. Whether this reflects a difference in the students themselves or merely differences in grading practices cannot be determined from the data given.

In addition to the above ways of looking at academic performance one can obtain a similar but slightly different view by looking at the percentage of students receiving each class of degree at the end of their four years in the programme. Table Seven shows the percentage of both the B. Ed. Primary and the B.A. students receiving each class of degree. Figure Three displays the same information graphically combined across the three entry cohorts.

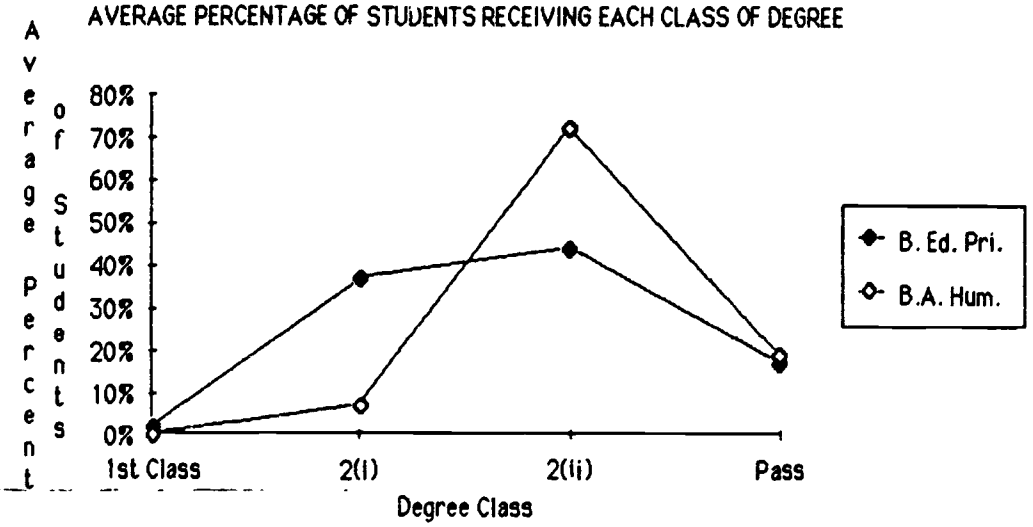
TABLE SEVEN

PERCENTAGE OF B. ED. PRIMARY STUDENTS AND B.A. HUMANITIES STUDENTS RECEIVING EACH LEVEL OF DEGREE

Entry Year	N		First Class		Second (i)		Second (ii)		Pass	
	B. Ed.	B. A.	B. Ed.	B. A.	B. Ed.	B. A.	B. Ed.	B. A.	B. Ed.	B. A.
1981-82	20	50	5%		55%	6%	35%	76%	5%	18%
1982-83	22	52			27%	12%	55%	65%	18%	23%
1983-84	21	41			29%	5%	43%	73%	29%	17%
Total	63	143	2%		37%	7%	44%	72%	17%	19%

FIGURE THREE

AVERAGE PERCENTAGE OF STUDENTS RECEIVING EACH CLASS OF DEGREE



Referring to Table Seven it can be seen that there is once again a striking difference in the patterns of degrees received between the entry years. The cohort entering in 1981-82 had a distinctly higher pattern of degree classes. One person (5 per cent of the class of 20) received a "first class" while more than half received a "2(i)." More than one third received "2(ii)" while one received a "pass." This pattern changed dramatically for the students in the second and third cohorts. There were no "first class" degrees among these

and a progressively greater number of "passes" each year. For the 1983-84 cohort the predominant level was "2(ii)."

Once again, the data at hand do not spell out reasons for the difference in patterns across the cohorts. Particularly with reference to the 1981-82 cohort, one may suspect the higher level of degree to have been at least partly the result of different marking policies within the faculties or departments in which the courses were taken. It should be remembered, however, that although in different cohorts, the students in this group were contemporaries of those in the following cohorts for at least part of the four year programme. Thus they would have taken courses in some of the same departments and from at least some of the same lecturers. If the high marks were solely reflections of liberal marking practices, there would not have been the differences between the marks of the cohorts which were noted earlier (see Table Five). To the extent that the greater number of high level degrees recorded in the earliest cohort in fact reflect higher absolute achievement, one must look elsewhere for the explanation. It may be that the larger number of PTTC Tutors in this group and the significantly greater number of years of experience, as well as the fact that a number of the group had studied abroad prior to commencing the programme may account for at least some of the differences that can be observed in level of achievement.

When one compares the pattern of degree levels obtained by the B.Ed. students with those of the B. A. students it is obvious that there are marked differences. Even though the total number of B. A. students is more than twice that of the B. Ed. Primarys there were no "first class" degrees awarded during the three years covered by the study. Combined across the three cohorts, seven per cent of the B.A. students received a "2(i)" while the greater number by far (seventy-two per cent) received "2(ii)" and a smaller but substantial number (nineteen per cent) received "pass." The difference in the patterns of the two groups of students becomes more clear in the averaged percentages of students at each level as shown in Figure Three above. It may again be suspected that differences in marking practices between departments account for some of the differences observed. However, comparison of the marks obtained by the B. Ed. Primary and the B. A. students in common courses can shed further light on the relative levels of performance since the students in those courses sit together in the same lectures, complete the same assignments and sit for the same examinations and are marked by the same persons. Table Eight and Figure Four indicate the performance of both groups of students in those courses in which they sit in common.

TABLE EIGHT

MEAN MARKS FOR COURSES TAKEN IN COMMON BY
B. ED. STUDENTS AND THOSE IN OTHER PROGRAMMES

Entry Year Programme	ENG 201 Mn/SD	ENG 203 Mn/SD	ENG 301 Mn/SD	ENG 302 Mn/SD	ENG 305 Mn/SD	HIST 201 Mn/SD	HIST 202 Mn/SD
1981-82							
B. Ed. Pri.	59/3.3	58.6/1.1	61.8/3.5		53.6/8.6	52.8/10.8	55.8/1.6
B.A. Hum	54/13.2	59/4.8	58.7/7.8		59.8/8.1	56/9.3	60/4.9
1982-83							
B. Ed. Pri	53.6/6.4		40.6/5.4	55.9/7	51.1/6.2	59.4/7.5	57.3/6.3
B.A. Hum	58/10.2		53.2/9.4	59.7/6.9		57.6/7.2	59.3/7.3
1983-84							
B. Ed. Pri	51/8	57.3/5.5				61.6/5.3	
B.A. Hum	56.1/9.2	49/6.1				55.8/4.9	57.6/7.2

Note: B.Ed. Pri. = B. Ed. Students enrolled in Primary Education Dept.
B.A. Hum = B.A. Students enrolled in Humanities Faculty

FIGURE FOUR

AVERAGED MEAN MARKS IN COMMON COURSES
1981-82 TO 1983-84

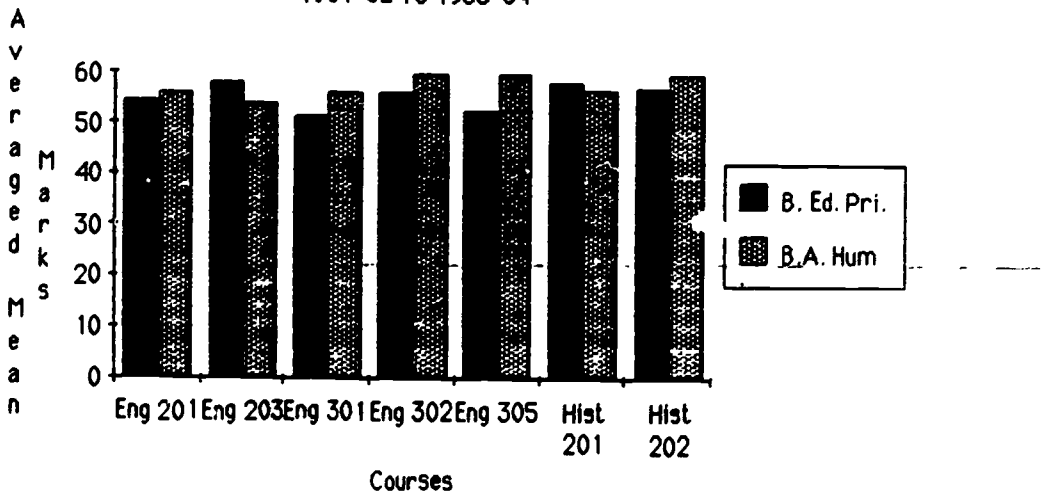


Table Eight shows fourteen pairwise comparisons of the average marks of students in both programmes. In five of these comparisons, the B. Ed. Primary students scored higher than the B.A. students; in eight comparisons the B. A. students scored higher and in one the difference was less than half of one percentage point from each other. Figure Four shows the marks averaged across the cohorts, resulting in a total of seven pairwise comparisons. In two comparisons the scores favour the B. Ed. Primary students by varying degrees of difference, and in six they favour the B.A. students--again by varying amounts. Based on these observations, one may conclude that while the B. Ed. Primary students will on occasion out perform their B. A. colleagues, more often than not the B.A. students will do better than B. Ed. Primary students. What is perhaps more significant, however, given the difference in educational background, is the fact that the difference between the performance of the two groups of students is not greater.

Summary of Characteristics and Performance

The typical person coming in to the B. Ed. primary programme is between thirty and thirty-five years old and is about equally likely to be male as female. S/he was selected from among a large body of applicants to the programme; is likely to have left secondary school at the junior certificate level; will likely have been an assistant teacher at the time of joining the programme and will have had approximately ten years of teaching experience. Marks achieved during the programme will typically be in the range of "C" although approximately one fourth of the marks received will be failing. S/he may find the third year of the programme to be the most difficult while the fourth one is likely to be easiest.

S/he is less likely to fail a course than fellow students enrolled in the B. A. programme in the Faculty of Humanities (except during the third year), and most of the marks which s/he receives are likely to be higher than theirs. When s/he sits in the same course with B.A. colleagues, however, it is likely that her/his marks will be slightly lower than theirs or about the same.

If s/he entered the programme in 1981-82 s/he is likely to be somewhat older and to have had more years of teaching experience; is more likely to have been a Tutor at a PTTC and will likely have achieved a higher overall mark at graduation from the university. It is not clear to what extent these differences in entering characteristics are related to the different patterns of achievement.

Correlates of Success in the B. Ed. Primary Programme

Prior to their acceptance into the programme through the mature age entrance scheme students are required to sit for an admissions examination. This examination has two parts: an objectively scored section which purports to measure factors related to academic ability such as solving verbal analogies, reading comprehension or arithmetic skills; and a English essay which is set by members of the Department of English at the University of Botswana and is marked by them. Students must pass both parts of the exam to be admitted into the programme. Table Nine shows the correlations between both parts of the admissions examination and the Overall Weighted Mean and First Year Mean marks of the students who have completed the B. Ed. Primary programme. The coefficients which are shown are calculated from marks which were combined across the three cohort years.

TABLE NINE

PEARSON CORRELATIONS
OF ADMISSIONS TESTS WITH FINAL OVERALL WEIGHTED
MEAN MARKS
(Combined Cohorts)

N = 54

	Objective Test Aggregate Scores	First Year Marks	Final Overall Weighted Means
English Essay	0.42	0.16	0.13
Objective Test Aggregate Scores	--	0.20	0.34*
Combined Essay and Objective	--	0.21	0.24
Final Overall Weighted Means	--	0.62	--

*p < .05

As can be seen from the table while scores on the two parts of the exam have some relationship to each other, there is minimal relation between scores on the English Essay examination at the time of admission and either First Year Marks or the Overall Weighted Mean marks received by the students at the end of the four year programme (r = .16 and.13 respectively). The objectively scored part of the examination shows a somewhat higher correlation with both First Year Marks and the Overall Weighted Mean marks although only the correlation with Overall Marks reached a level of statistical significance. Even for the Overall Marks, however, the amount of the variance which can be accounted for by the Examination is approximately twelve percent (i.e. $r^2 = .1156$). It should of course be pointed out that, as is true for any test which is used for selection, because the selection process eliminates those who did not meet the criterion level on the selection test (i.e. those below the cut-off line), the resulting truncated range of scores has the effect of producing a very conservative estimate of relationship between the two. Had it been possible to retain all of those who took the examinations, a better estimate of relationship could have been calculated. The amount of time elapsed between taking the admissions tests and completion of the programme four years later is of course an additional source of variance which is not controlled for.

On the basis of these figures one may nevertheless conclude that the English Essay has minimal value in helping to select students who are likely to do well in the programme. The objectively scored part contributes something more to the selection process, although it's use without other considerations would seem highly questionable. That the Objectively Scored Test should correlate more highly with the final Overall Weighted Mean than with First Year Marks seems noteworthy although the reasons for this difference are not immediately apparent.

Table Ten shows the Overall Mean Weighted marks of students who entered the programme with differing secondary and PTTC qualifications.

Insert Table Ten About Here

As can be seen from Table Ten, the number of persons coming into the programme with a particular level of qualification is in some cases too small to make reliable statistical comparisons. This is particularly true if one uses the cohort or year of admission as the unit of analysis. When the cohorts are combined (as a weighted mean) across the years, this situation is improved

TABLE TEN

OVERALL WEIGHTED MEAN MARKS BY LEVEL OF ENTRANCE QUALIFICATION

	Standard Seven			Junior Certificate			COSC\GCE			Level of TTC Qualification											
										Distinction			Credit			Pass			Not Given		
	Mn	SD	N	Mn	SD	N	Mn	SD	N	Mn	SD	N	Mn	SD	N	Mn	SD	N	Mn	SD	N
1981-82	74 5	3 9	4	70.4	3.3	10	68.8	5.7	6	73 3	5.9	3							70.1	4.2	17
1982-83	67.2	6.4	4	65.5	4.6	16	65.5	13.4	2	67.5	4.8	4	63.8	4	8	67	4.2	4	67	8.1	6
1983-84	56.5	3.5	2	65 7	5	16	60.7	5.1	3	63.3	6.1	3	65.2	5	12	70	0	1	63.8	5.9	5
Weighted Mn.	68	4.8	10	66.7	4.4	42	66	6.94	11	68	5.5	10	64 6	5	20	67 6	3.4	5	68.3	5.3	28

although there are still some categories in which the numbers remain small. These qualifications notwithstanding some trends do suggest themselves.

Table Ten seems to indicate no clear relationship between the level of secondary school qualification and performance in the B. Ed. Primary programme. In two of the three cohorts, those with Standard Seven qualifications scored higher than those with either the Junior Certificate (JC) or COSC/GCE. In no case did the entrants with COSC/GCE credentials score higher than those entering with the JC. It is worth noting, however, that the standard deviation of the COSC/GCE group is considerably greater than that for the other groups. This of course means that while some of this group scored lower than the other groups, there were at least some who scored appreciably higher.

The same lack of relationship seems evident between performance at Teacher Training College and marks received in the programme. With the exception of the 1981-82 cohort, even those who received "distinctions" in their PTTC programmes did not necessarily do appreciably better than those whose PTTC qualification level was lower.

Table Eleven indicates the Overall Weighted Mean broken down by the position which the students held most recently before entering the programme. Figure Five displays the same information graphically.

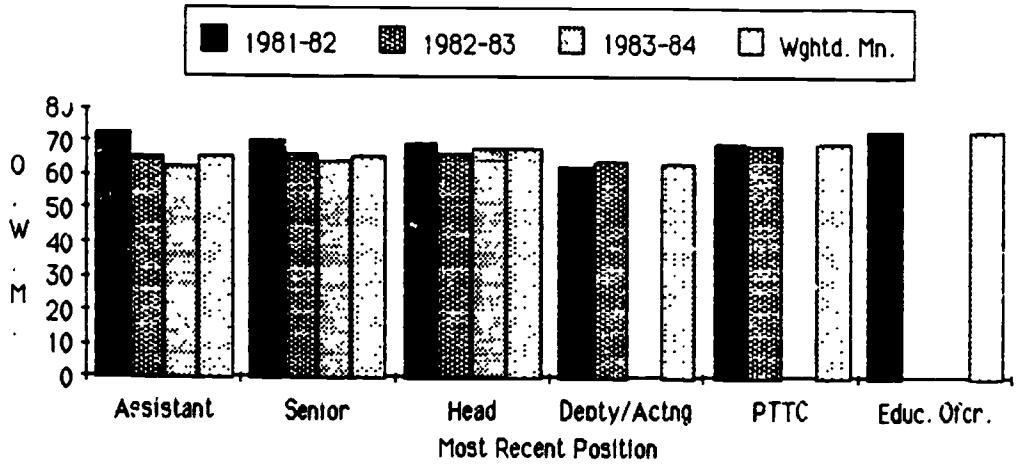
TABLE ELEVEN

FINAL OVERALL WIEIGHTED MEAN BY MOST RECENT PREVIOUS POSITION

Entry Year	Assistant Teacher			Senior Teacher			Head Teacher			Depty/Acting Head			PTTC Tutor			Education Officer		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
1981-82	73	4	7	71	0	1	70	4	3	63	7	3	70	6	6	74	0	1
1982-83	66	6	12	67	6	3	67	1	2	64	1	2	69	0	1			0
1983-84	63	5	11	64	7	6	68	3	3			0			0			0
Wghtd Mn.	66.5	5	30	65.6	6	10	68.5	3	8	63.4	5	5	69.9	5	7	74	0	1

FIGURE FIVE

OVERALL WEIGHTED MEANS BY MOST RECENT POSITION



Once again a major problem continues to be the limited number of cases in some of the categories, with the result that a number of the comparisons lack statistical power and thus are not reliable. Within these constraints, however, a few observations seem in order.

Considering the weighted means alone, there is the suggestion that PTTC Tutors are more likely to perform best in the programme (Education Officer provides an exception to this, but since there is only one case it can hardly be considered). Head teachers, Assistant Teachers, Senior Teachers and Deputy/Acting Heads follow in order of decreasing marks. Looking more carefully at the pattern, however, it can be seen that the major contribution to the higher scores of the Assistant Teacher and, to some extent the PTTC Tutor, comes from the marks received by persons in the 1981-82 cohort. To the extent that this cohort represents atypical achievement marks, their influence on the weighted mean marks should be discounted. If one considers only the 1982-83 and 1983-84 cohort as a combined group, PTTC Tutors still remain highest (although on the strength of a single case!) while Head Teachers continue comfortably in second place. Assistant Teachers and Senior Teachers become nearly equal while the Deputy/Acting Heads remain on the bottom--although now only on the strength of two cases.

By way of summary, one might conclude that there is some indication that PTTC Tutors and Head Teachers may do better in the programme than Acting or Deputy Heads, however lack of statistical power makes even such

conclusions of necessity very tentative. Beyond this, one can only say that the level of pre-teacher-training qualifications and the level of PTTC certificate do not permit one to make reliable predictions about the level of marks which are likely to be earned in the B. Ed. Primary programme.

Discussion and Implications

1. Seen from the context of the stated purposes of the B. Ed. Primary programme of preparing degree level personnel in the field of primary education, there is little question as to the programme's success. Sixty three persons have so far received B. Ed. degrees in primary education and are now serving in various capacities across the country. It is more difficult to make judgements about the quality of the work which was completed by the students. If one uses course marks, number of failed courses or level of degrees achieved as indicators, it would appear that the achievement of the students in the B. Ed. Primary programme is at the very least comparable to that of students in the Faculty of Humanities. While not possible within the scope of this paper, broader, more inclusive, comparisons with students from other faculties and from other departments within the Faculty of Education would be helpful in establishing a more reliable baseline as a point of comparison.

2. Academic qualifications which mature entry students obtain prior to beginning the B. Ed. Primary programme seem to have little relation to the level of their performance in the programme. Whether or not this same lack of relation holds true for students who enter the university as regular COSC/GCE entrants or as mature age entrants into other programmes is not demonstrated here. Nevertheless for the mature age entry student in the B. Ed. Primary programme, it would seem clear that other factors account for whatever level of academic success a student in the programme reaches. These may well be personal factors such as maturity, goal orientation and general motivation to succeed. (Indeed, one may speculate as to whether, in fact these characteristics are particularly strong in those individuals who have been promoted to the position of Head Teacher--hence the slightly higher marks obtained by these persons.) To the extent that these personal factors exist, they may serve to compensate for whatever academic deficiencies that may exist.

An additional factor which may help to explain the lack of relation between pre-entry qualifications and success within the programme is the fact that the work setting in which these students attained their minimum requirement of two years of experience (most had by far much more) was

itself educational. The informal learning which takes place as one prepares and teaches a lesson to others undoubtedly has an impact on the teacher himself. Even though the subject matter may be taught at a much lower level than that already attained by the teacher, it could be argued that in the process of preparing and teaching many lessons over a period of years, the teacher's own mastery of the subject moves to a higher, and perhaps more abstract, level. In this sense, then, his educational experience has been continued during each year of teaching experience.

3. The implication that entrance requirements for mature age entry programmes should emphasize experience, motivation and personality factors rather than academic factors seems obvious. How this can be operationalized into definable entrance requirements and selection criteria, is of course a much more difficult question and cannot be addressed within the scope of this paper. A point of departure, however, may be to investigate more systematically and thoroughly those personal and professional characteristics which are demonstrably related to programme success.

It would also seem worthwhile to further investigate the predictive value of the admissions examination--particularly the objectively scored section. While the noted correlation of .34 between the test score and the Overall Weighted Mean at graduation does not on the face of it seem very high, it should be recognized that the time lapse between the two measures is significant. That the admission test scores could account for even 10 percent of the variance in final marks after a period of four years may be the more remarkable.

4. The focus of this paper has been exclusively on performance defined in academic terms. It can hardly be over emphazised, however, that academic success in a professional preparation programme is not an end in itself. The final measure of success in any teacher preparation programme is not the level of degree attained but the competency and skill which the teacher demonstrates when he or she enters his or her own classroom. This study has not investigated the links between academic performance and teaching skill. Such investigation should, nevertheless, be given a high priority in future research on programme effectiveness (see for example, Sifuna, 1986)

5. The potential for individual and national development in university programmes for the mature student is self-evident. That previous academic experience is not necessarily a determinant of individual potential for achievement in such programmes seems also quite clear. Universities, and the faculties and departments within them should be encouraged to explore with both determination and creativity the possibilities in these areas.

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