



**Full Length Research Article**

**ASSESSMENT OF FEMALE PERFORMANCE IN INTEGRATED SCIENCE IN THE B.ED. PART-TIME PROGRAMME OF UNIVERSITY OF JOS**

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**ABSTRACT**

The study concentrated on female part-time students' performance in Integrated Science from 2009 to 2012. Three research questions were formulated and analyzed. Population of the study was 86 female part-time students. Sample was 86 students as well, due to the small size of the population. The result of the study showed that 'between' 2009 to 2012, about 67%, 60%, 40% and 49% of the female candidates who were to graduate could not because they failed in the subject area respectively. It was recommended that the examination time-table should not reflect more than one subject in a day, only related courses should be made electives and allowances could be given to lecturers teaching the courses in order to motivate them.

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**INTRODUCTION**

Part-time Adult Learner (PTL) refers to a subset of non-traditional learner who pursues higher education during long vocation to enable them function in their working place. This type of education has advantage to those who graduated from school and have desire to update their knowledge and skills in disciplines of their choice for continuing professional entrepreneurial development. The National Policy on Education (Federal Republic of Nigeria, FRN, 2004) vividly states the important goals attached to this forms of education. The goals are to provide access quality education and equity in education opportunities for those who otherwise would have stopped at a level. Another goals is to meet special needs of employers by mounting special certificate courses for their employers at their work place. Furthermore the goal of this education is to encourage internationalization especially of tertiary education curricula all over the country. The education is to also ameliorate the effect of international and external brain drain in tertiary institutions by utilizing Nigeria experts as teachers regardless of their places of work.

This forms of education offer to learners who lack sponsorship to sponsor themselves to whatever level they intend to reach. Women who were always busy when children are in schools also gain opportunity to enroll as they are back home to take over the domestic work from them. These part-time learners who read Integrated Science as their course come out to train those in the primary and secondary schools learning the subject. Integrated Science has been defined by various scholars. Dauda (1984) sees it as a modern approach to science education in that it emphasizes acquiring the essential intellectual skills of critical thinking and inquiring. He also defines it as a way of presenting science to learners such that they gain wide range of the knowledge of scientific processes and products. Urevbu (1990) views Integrated Science as an approach to science teaching in which concepts, principles and method of science are presented to express the fundamental unity of scientific thought. Integrated Science therefore is an undifferentiated course designed to show the unity, wholeness and inter-relationships of the separate disciplines that make up science. Generally, Integrated Science is regarded to be the key to successful study of other sciences as it forms its base and it is compulsory in secondary schools. The Nigerian National Policy on Education (2004) clearly stipulates equal educational opportunity for all citizens without sex difference but this has not been matched with necessary action.

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A lot of literature exists showing inequality in the education of boys and girls at all levels of education (Okogie, 2001, Kehinde, 2001, Habeeb, 2001 and Oboh 2005). Okogie (2001) revealed that: Girls have lower access to education than boys, fewer girls go to school than boys; wide gap between male and female enrolments at the higher level of education; retention rate are lower for girls than for boys and more drop outs are found among girls than boys leading to lower rate of completion for girls than boys.

Salau (2002) in his study of gender issue revealed that the enrolment of females into science courses is very low with a sizable proportion of non-completers. Generally, the persistent failure rate of Science Students has been an issue of great concern to the government, teachers and especially parents (Habeeb, 2001; West African Examination Council (WAEC), 2004; Ozoji, 2010). An analysis of results of studies carried out for five years by Ozoji (2010), on the performance of Junior secondary School Students in Plateau State showed significantly high and consistent failure rate of students in basic science. Hence, the need to assess the performance of female students in integrated science Bachelor of Education (B.Ed.) part-time final examination programme in the University of Jos from 2009 – 2012. This is the place where secondary school teachers in integrated science education are trained.

### Statement of the Problem

Integrated Science is one of the compulsory science subjects at primary and junior secondary school level. It is the key to the successful study of other sciences. This enables the science based students to specialize in professions such as medicine, engineering or teaching. The implication is that integrated science teachers in both secondary schools and other higher institutions of learning must be well trained to give students their best. The persistent failure of Science students has been an issue of great concern to researchers, teachers, parents and the government.

The results of students in West African Senior School Certificate Examination (WASSCE) and National Examination Council (NECO) in Science has been shown to be poor (WAEC, 2004; Oboh, 2005). This could perhaps be accredited to student's poor background in integrated Science at the lower level of education. Reports at the background of this study has shown that many secondary school teachers are not majors of integrated science education, also, many of the teachers are males with specializations in subjects such as mathematics, physics and biology. This has perhaps contributed to the high failure rates of students. This gap must therefore be filled, hence, the need to assess the performance of Integrated Science female students in the B.Ed Part-time programme of the University of Jos.

### Objective of the Study

The main objective of this study was to assess the performance of female B. Ed part-time integrated science programme of the University of Jos. The following specific objectives have been outlined;

- to determine the enrolment rate of female students in integrated science in the B.Ed part-time programme in the University of Jos,
- to determine the performance of female integrated science students of the B. Ed part-time programme in the University of Jos and
- to identify the fields of specialization of teachers teaching integrated science in the B. Ed part-time programme in the University of Jos.

### Research Question

Three research questions were formulated to guide the study as follows

- What is the enrolment rate of female students in integrated science in the B.Ed part-time programme in the University of Jos,
- What is the performance of female integrated science students of the B. Ed part-time programme in the University of Jos and
- What is the fields of specialization of teachers teaching integrated science in the B. Ed part-time programme in the University of Jos.

### The Design

The study adapted a descriptive survey research design in carrying out the investigation.

### Population and Sample

The target population for the study consists of all the female B.Ed part-time integrated science students in the University of Jos from 2009-2012. This consist of 86 students. Due to the small size of the population of female students, all the 86 female students were sampled.

### Instrument for Data collection

The instrument used for the study was the results of female integrated science students from the B. Ed part-time programme of the University of Jos from 2009-2012.

### Method of Data Analysis

The data were collated and analyzed using simple percentages.

## RESULTS AND DISCUSSION

**Research Question 1:** What is the enrolment rate of female students in integrated science in the B.Ed part-time programme in the University of Jos Data in table 1 reveal that majority of the integrated science B. Ed part-time students were male with 56.1%, 58.6%, 67.1% and 65.3% enrolment rate respectively for the four years period of study, while the female counterpart have a lower percentages of 43.9%, 41.4%, 32.9% and 34.7% enrolment rate for the four years under study.

**Research Question 2:** What is the performance of female integrated science students of the B. Ed part-time programme in the University of Jos.

**Table 1. Students enrolment**

S/N	Year	Enrolment	Male Enrolment	% of Male Enrolment	Female Enrolment	% of Female Enrolment
1	2012	41	23	56.1	18	43.9
2	2011	41	24	58.6	17	41.4
3	2010	76	51	67.1	25	32.9
4	2009	75	49	65.3	26	34.7

**Table 2. Students performance**

S/N	Year	Enrolment	Male Enrolment	% of Male Enrolment	Female Enrolment	% of Female Enrolment
1	2012	18	6	33.3	12	66.7
2	2011	17	8	40	9	60
3	2010	25	12	48	13	52
4	2009	26	11	42.3	15	57.7

**Table 3. Teachers field of specialization**

S/N	Field of specialization	No. of teachers	% of teachers
1	Integrated science	2	20
2	Other fields e.g. Mathematics, Geography, Biology, Physics, Chemistry etc	8	80
	Total	10	100

The result on table two showed that only 33.3% of female B. Ed part-time passed in 2012, 40% in 2011, 48% in 2010 and 42.3% passed out in 2009 respectively with high percentages failed of 66.7%, 60%, 52% and 57.7% respectively under the four period of study.

**Research Question 3:** What are the fields of specialization of teachers teaching integrated science in the B. Ed part-time? Results on table three showed that only 20% of the B. Ed part-time teachers are specialist in the field of integrated science while 80% are from other related science fields.

### Discussion

In the years under study, the performance of female students of the University has shown disparity. This could be attributed to student's poor background in integrated science at the lower level. This study agrees with that of Ozoji (2010) where an analysis of the Junior Secondary School Certificate Examination (JSSCE) in Plateau State showed a consistently abysmal performance of students in basic sciences for five consecutive years.

Reports of performance of integrated Science students from 2009 to 2012, revealed the percentage of female students that were able to graduate successfully in the University as 33% in 2012, 40% in 2011, 60% in 2010 and 51% in 2009 respectively. The highest percentage of graduate is in the year 2010 followed by 2009. While the percentage failed are 67%, 60%, 40% and 49% respectively. The year with high percentage of low graduation is that of the 2012 followed by 2011. The low performance of integrated Science students could also be attributed to the fact that, most (80%) of the teachers are from other related sciences rather than integrated science specifically. Only 20% of the teachers specialized in integrated Science Education.

### Recommendations

The following recommendations were made by the researchers:

- It was recommended that the examination time-table should not reflect more than one subject in a day.
- Only related courses should be made electives.
- Allowances could be given to lecturers teaching the courses in order to motivate them.

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