

Monograph No. 4

**SCHOOL OF EDUCATION
FACULTY OF HUMANITIES AND EDUCATION
THE UNIVERSITY OF THE WEST INDIES
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**Becoming a Primary School Teacher in Trinidad and Tobago
Part 1: The Curriculum in the Teachers' Colleges**

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School of Education
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The ideas and opinions expressed in this work are those of the authors and do not necessarily represent the views of the School of Education.

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PREFACE

This monograph is one of the products of a Primary Teacher Education Research Project conducted by the School of Education, The University of the West Indies (UWI), St. Augustine, as part of a much larger project organized by the Centre for International Education (CIE), University of Sussex Institute of Education, United Kingdom. The Sussex initiative, the Multi-Site Teacher Education Research (MUSTER) Project, involved research work in five countries--Ghana, Lesotho, Malawi, South Africa, and Trinidad and Tobago. The project was funded by the British Department for International Development (DFID).

The School of Education gratefully acknowledges the contributions made by the CIE, DFID, and other stakeholders in the execution of the Trinidad and Tobago component of the MUSTER Project.

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LIST OF ACRONYMS AND ABBREVIATIONS

CAP	Continuous Assessment Programme
CXC	Caribbean Examinations Council
GCE	General Certificate of Education
IAE	Internationally Acceptable English
OJT	On-the-Job Training
PET	Preparation for Effective Teaching
SEA	Secondary Entrance Assessment
SEMP	Secondary Education Modernization Programme
UWI	The University of the West Indies

CHAPTER 1

Background to the Study

1.1. Introduction

Any attempt to improve the quality of basic education in schools immediately places the preparation of teachers as the point of central focus, since teachers and teaching are accepted as important factors in the success or failure of children. The role of teachers in contributing to the quality of education has been well acknowledged. Joyce and Weil (1972, p. 4) refer to the teacher as the “mid-wife of educational change” who is expected to provide an education that will equip the young to survive and develop to their fullest, and which will provide them with a sense of social responsibility and the ability to make informed choices in a constantly changing, complex world. The preparation of teachers must, therefore, be afforded the care, attention, and support needed to ensure that the desired outcomes of the teaching/learning process are achieved.

Reforms in teacher education are occurring worldwide in both developed and developing countries. Within the last two decades, the pace of these reforms seems to have increased significantly. Yet, some measure of discontent with what is happening in schools persists, and teacher education “appears to be more in a state of turmoil than in a state of constant improvement. . . in fact, under attack” (Wideen & Grimmer, 1995, p. vii).

Teachers have often felt the sting of public upbraiding as blame for the inadequacies of the education system has been so often focused only upon them. Ensuring the success of teaching requires not just efforts to improve its quality but the recognition that contextual factors may set limits to what can be achieved (Avalos, 1991). The need to shift from the mechanistic, narrowly based skills approaches to an inquiry-oriented and interactive perspective has been acknowledged internationally, but, particularly in developing countries, this shift has been found to be difficult. Avalos (1991) attributes this difficulty to a number of factors. She explains, for example, that the developing world is experiencing a much higher rate of increase in the number of learners, and governments have resorted to cost-effective means of rapidly training the greatest number of teachers. Such a strategy, she claims, is detrimental to any effort to improve teacher education systems. Other factors identified by Avalos as affecting teacher preparation in the developing world relate to the education levels of recruits to the service, the status of teachers, and the conditions of service.

There is little by way of documented research which explores the quality of the teacher education programme offered in Trinidad and Tobago. It is unclear to what extent (if any) the factors identified by Avalos (1991) as negatively impacting on the quality of teacher education in developing countries are also operating in the Trinidad and Tobago context.

This study sought to investigate the quality of teacher education in the country through an examination of the primary teacher training curriculum as documented, espoused, and enacted within the teachers' colleges. A separate study, *Becoming a Primary School Teacher in Trinidad and Tobago, Part 2: Teaching Practice Experiences of Trainees*, explores the segment of the teachers' college curriculum that deals with the development of competence in practical teaching in trainees.

1.2. The Teacher Training Institutions

Training programmes for teachers at all levels of the education system are offered at specialized institutions in Trinidad and Tobago. Training for teachers at the primary level is conducted primarily at the two government teachers' colleges: Valsayn Teachers' College and Corinth Teachers' College, as well as at the privately operated Caribbean Union College. Students from all three colleges are certified by the Ministry of Education, on successful completion of the terminal examinations administered by the Ministry. Although the course of teacher training offered at the teachers' colleges is designed to equip the students for practice at the primary level, a few students, especially those who have specialized in the areas of the creative arts, are allowed to teach at the lower levels of the secondary school system.

1.3. Entry Requirements for the Teaching Service at the Primary Level

According to a Ministry of Education circular of February 2, 1985, applicants for entry into the teaching service are expected to have at least a secondary level education, with the attainment of a satisfactory level of achievement in five subjects at the Caribbean Examinations Council (CXC) and/or General Certificate of Education (GCE) O Level examinations. Further, these five subjects must include English language, mathematics, and a science subject. It is not part of the requirement that these five subjects be obtained at any one sitting of these examinations. It is, therefore, possible to qualify for entry into the service by accumulating these subjects over an extended period of time. These requirements amount to some small advance on what obtained prior to 1985. It was possible, then, to gain entry into the teaching service with a combination of any five--sometimes less--subjects. In 1985, for example, only 51% of trainees at teachers' colleges had secured a pass in mathematics and 62% a pass in a science subject.

1.4. On-the-Job Training

In 1993, the Ministry of Education, in collaboration with the National Training Board, introduced its On-the-Job Pre-Service Teacher Training Programme (hereafter referred to as the OJT programme). The rationale of this programme was to provide CXC/GCE O Level and GCE A Level graduates with employment and training, with a view, in the long term, to enabling the Ministry to identify trainees with good potential for becoming teachers. It is not very clear from the documents available what the indicators of "good potential" are.

The OJT programme, extending over a period of about one year, provides instruction in

the Foundations of Education, the Teaching of Reading, and the Teaching of Mathematics in an induction phase. This is followed by placement in schools with mentor teachers. During this second phase, opportunities are provided for teaching experiences in some of the departments of the primary school. Throughout the period following the induction phase, trainees are also required to attend Saturday classes, which are designed to meet the ongoing needs of the trainees as they function in the different departments of the schools. A Vacation School, organized by the School of Continuing Studies of UWI during the July-August vacation, provides experiences in the aesthetic areas for trainees. It is envisaged that, in the near future, all candidates for entry into the teaching service would be sourced fully from graduates of this programme.

This monograph does not deal with the curriculum offered on the OJT programme. Rather, it deals with the curriculum offered to trainees in the teachers' colleges only.

1.5. Selection of Trainees for the Teachers' Colleges

Trainees are selected by the Board of Teacher Training on the basis of seniority in the teaching service, and sent to the colleges on scholarship. This seniority is determined by length of continuous service in the teaching service. They are required to sign a contract on initial entry and, after their two-year tenure at college, they must serve the Government of Trinidad and Tobago for at least two additional years. Student teachers are employees of the Ministry of Education, which has final authority in almost all matters.

Trainees, on entry to a teachers' college, would have usually had two to three years of teaching experience in a primary school or, as in the case of a small number of students, in a secondary school. These trainees may or may not have been exposed to the OJT programme. This means that some trainees entering the teachers' colleges would have had some pre-service training, while others would have been teaching in the primary schools for two to three years without the benefit of any such pre-service training experience.

1.6. The Staff at the Teachers' Colleges

Both colleges are headed by a principal and a vice-principal. The principal at Corinth Teachers' College is female, while the principal at Valsayn is male. Both principals hold master's degrees in education.

In all, there are 29 members of staff at Corinth (including the administration)--13 male and 16 female. At Valsayn, there are 34 staff members--17 male and 17 female. Of the 29 staff members at Corinth, 11 (38%) hold master's degrees, while 20 of the 34 members at Valsayn (59%) are similarly qualified.

1.7. The Teaching/Learning Environment

Both Corinth Teachers' College and Valsayn Teachers' College are located on compounds that are away from the hustle and bustle of daily living. The physical locations are, therefore, suitable for teaching/learning activities. The physical structures in both colleges are reasonably sound, and at Valsayn, in particular, there is more than enough space for classes.

While space may not be a problem, other facilities and equipment are. Administration, staff, and students all complain that they are expected to function with the minimum of these amenities. Corinth recently acquired a computer laboratory equipped with 24 computers through the untiring efforts of the principal, who sought help from private organizations. At the time of writing, no such laboratory existed at Valsayn. There is little audio-visual equipment at either college and, sometimes, lecturers resort to borrowing AV equipment from students, or bringing their own, for activities such as micro-teaching. Valsayn has been operating with an antiquated public address system that the administration has been seeking to replace; Corinth seems to be a bit better equipped in this area.

The library at Valsayn had been a source of concern for many years but, within recent times, the library collection has been increased to a reasonable level. The library at Corinth is also thought to be functioning at an acceptable level.

Lectures either involve the whole year group of about 200 students (and such sessions are usually held in the Hall) or "small" groups, consisting of one third of the year group. Elective classes can be quite small, depending on the subject involved.

The atmosphere in the colleges is generally a pleasant one. On a visit to either of these colleges on a typical day, one is likely to see small groups of students conversing during the break and lunch periods. It is not uncommon to see lecturers conversing with students in an informal manner in the corridors. The principal at Corinth uses the metaphor of "family" to describe the atmosphere that she is trying to create and maintain in the College. Valsayn has recently had a change of administration with some attending teething problems.

Overall, then, the atmosphere in these colleges seems to be suitable for the intended purpose, but the provision of equipment and other amenities seems to be inadequate.

1.8. Purpose of the Study

The study sought to assess the philosophical orientation and content of specific aspects of the documented teachers' college curriculum in Trinidad and Tobago. The study also sought to describe how the lecturers at the two colleges articulate their understandings of what the documented curriculum demands, and how they try to implement it. This aspect of the study is referred to as the espoused curriculum. In addition, the curriculum as

enacted within the teachers' colleges was explored through an examination of teaching/learning episodes in specific subject areas in the colleges.

Specifically, the objectives that guided the study were as follows:

The documented curriculum

- What are the stated philosophies underpinning the teachers' college curriculum?
- What is the nature of the teachers' college curriculum?
- How is the delivery of the teachers' college curriculum organized?

The espoused curriculum

- What do teacher educators claim are their intentions with respect to the content, method of delivery, assessment, and outcomes of their teacher training efforts?

The enacted curriculum

- How well do the stated intentions of teacher educators mesh with what is revealed in the curriculum in action?

1.9. Organization of the Report

In addition to this chapter containing background information, the report consists of three other chapters. Chapter 2 provides an analysis of the documented curriculum and an account of the espoused curriculum. In Chapter 3, the curriculum as enacted in the teachers' colleges is described and analyzed. Finally, Chapter 4 contains a summary and a discussion which focus on the research questions that guided the study in the first place.

CHAPTER 2

The Curriculum – Documented and Espoused

2.1. Introduction

An overview of the general curriculum, as documented, was undertaken. In addition, a detailed study was done of specific aspects of the teachers' college curriculum: the Education courses and three of the core primary school courses, namely, mathematics, language arts, and science.

Data on the documented curriculum were gathered through content analysis of the curriculum document. Insights were gained by focusing on the four targeted areas (Education, mathematics, science, and language arts) and drawing on the work of Eraut (1976) for the analysis.

Eraut suggests that the curriculum can be viewed against a five-point diamond frame, with the points of the frame comprising the aims, objectives, content, pedagogy, and assessment procedures. The content analysis thus focused on these "points," and attempts were made to see if there is coherence among them, as should be the case with a well-documented curriculum.

Ideas about the espoused curriculum in education were obtained through the conduct and analysis of in-depth interviews with lecturers from the two colleges who are Heads of the Education Department. Lecturers in the other subject areas targeted were also interviewed. A total of 14 lecturers were interviewed, comprising 4 Education lecturers, 1 language arts lecturer, 2 literary studies lecturers, 2 science lecturers, and 5 mathematics lecturers. These interviews were transcribed and analyzed in an effort to identify the intentions and philosophy that these lecturers hold for the courses in which they are involved.

The research questions that guided this aspect of the work were as follows:

The documented curriculum

- What are the stated philosophies underpinning the teachers' college curriculum?
- What is the nature of the teachers' college curriculum?
- How is the delivery of the teachers' college curriculum organized?

The espoused curriculum

- What do teacher educators claim are their intentions with respect to the content, method of delivery, assessment, and outcomes of their teacher training efforts?

2.2. The General Curriculum

The colleges offer a full-time two-year course of study that lasts for 39 weeks each year, and coincides with the primary and secondary school year, beginning in early September and ending in early July. All courses at the colleges must be approved by the Board of Teacher Training, and are subject to continuous assessment, both formal and informal. Courses that follow a prescribed syllabus are assessed by a final external examination. On successful completion of the training programme, with passes in all the subjects taken at the final examination, the Teacher's Diploma of the Ministry of Education is awarded.

There is no official date on the curriculum document that is in current use in the teachers' colleges, but popular opinion is that it was published sometime in the period 1995-1996. This current document is a compilation of course outlines which had been in existence for a long time, but which (at least some of them) underwent varying levels of modification when the document was compiled.

2.2.1. General layout and organization of the programme

At the state teachers' colleges, the programme of study is designed for two years. The curriculum is organized and delivered along lines strongly reminiscent of a secondary school, that is, the day consists of seven 45-minute periods with a 15-minute mid-morning break and a lunch hour. There are no free periods during the day. Staff and students are expected to register their presence on campus; students must do this twice daily, before 8:30 a.m. and before 12:45 p.m. Classes begin at 8:30 a.m. and finish at 3:00 p.m. The college year is prescribed by the Ministry of Education, and coincides with the academic year for all public primary and secondary schools.

The courses offered at the teachers' colleges have been designed by persons identified by the Board of Teacher Training, who may or may not be lecturers at the colleges. The curriculum document is a compilation of course outlines in the various disciplines, which details the specifics of the various courses. Courses are broken down into units and information is provided on the aims, objectives, and content of each unit of work; and teaching methodologies, assessment procedures, and estimated teaching time for each course.

There is no stated overall philosophy of teacher education that governs the document. This has been a matter of concern to college administrators and staff. Proposals concerning policy issues have recently been made by the colleges, and have been submitted to the Board of Teacher Training for consideration.

The curriculum is broadly differentiated into (a) academic studies and (b) teaching practice. Both areas are examined through continuous assessment and a final

examination. Course lecturers are allowed to make some input into the final examinations, but the final form of these examinations is determined by persons external to the colleges, who have been appointed by the Board of Teacher Training as external examiners.

Academic studies

A basic, compulsory core consists of education or professional studies and subject specialties that are pursued over the two years.

The *education/professional studies* component consists of three courses--Education I, Education II, and Education III. These courses are described in detail below.

The *subject specialties* and their timetabled contact hours (in brackets) are as follows:

language education (101)	reading (105 1/2)
literary studies (86)	mathematics (150)
social studies (90)	integrated science (105)
family life education (90)	agricultural science (36)
physical education and health education (75)	

Unlike the other subjects that extend over a period of two years, family life education and agricultural science are one-year courses.

There is also a *basic, optional core* consisting of music (60 hrs.), art and craft (60 hrs.), dance (18 hrs.), and drama (19 1/2 hrs.). The college decides which two subjects will constitute the options in a given year, and students must select one of the options offered. This optional subject is assessed internally, by continuous means, and externally, at the end of the first year, by a final examination.

Finally, there is an *elective core*. Electives are courses offered by the colleges in which student teachers may choose to specialize. The level is usually above that of the basic core. The number and types of courses offered here are a function of the availability and expertise of resource personnel at any given time. Students select one of the electives to be done over the two-year period. At present, the offerings are as follows: art, agricultural science, craft, drama, early childhood education, educational technology, geography, home economics, integrated science, literature, mathematics, music, national heritage, physical education, psychology, sociology, measurement and evaluation, and special education. Some electives require the submission of a research report on a special area of study for the completion of the course.

Enrolment in the basic compulsory core, the basic optional core, and the elective core, results in students pursuing 14 subjects at any one time. This, therefore, involves the coverage of a considerable body of content, especially if the student has not had a previous foundation in the area, for example, agricultural science.

Teaching practice

This is structured differently at the two colleges. At Valsayn, the student engages in three block periods of teaching practice in a primary school. The block periods are arranged in three-week (2nd term), four-week (4th term), and five-week (6th term) sessions, to give a total of 12 weeks of teaching practice in primary schools. At both colleges, a weekly session of 1.5 hours is given to Preparation for Effective Teaching (PET), also known as Education III, designed specifically to prepare student teachers for their field experience.

At Corinth, the first-year students engage in teaching practice in the first term for one half-day each week and this is arranged so that there is opportunity for joint preparation with, and observation of, peers. In the second term, trainees are teamed in pairs to prepare units, and for teaching practice. There is no teaching practice in Term 3. Terms 4 and 6 are arranged in block practices as at Valsayn. Thus, the 12-week period of practice is computed differently at the two colleges.

2.2.1. Overall structure

The overall structure of the programme and the implied inter-connectedness among the various parts are shown in Figure 1, which was produced by a college lecturer.

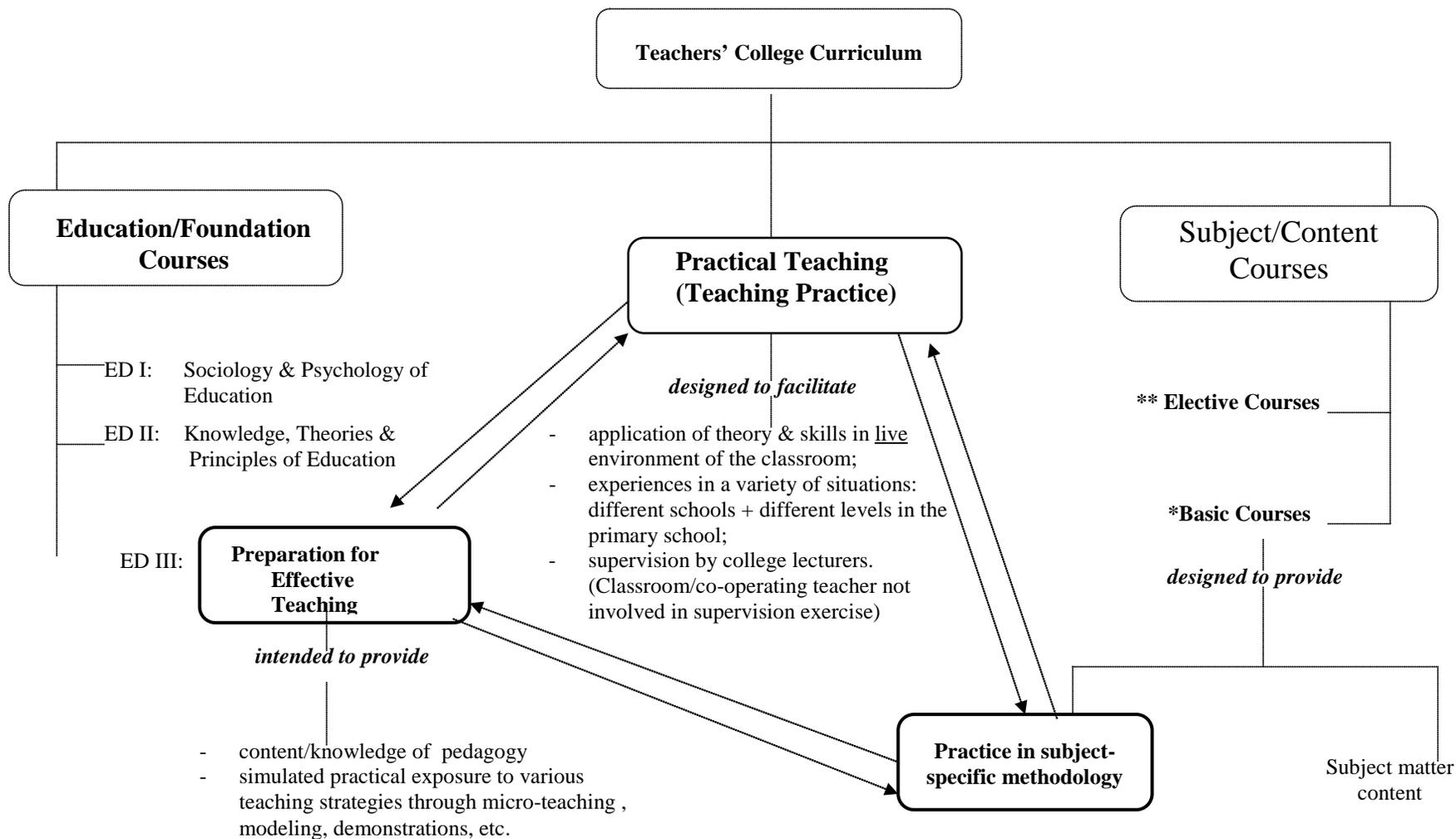
2.3. Detailed Analysis of the Core Courses

2.3.1. Education: The documented curriculum

The three courses Education I, Education II, and Education III are designed to provide trainees with the basic foundation work in education. These three courses are run concurrently, from the very beginning of the training programme, and are supposed to reinforce each other. Part of the rationale provided for these courses, presented in the form of a question, probably sums up the orientation for these courses. It asks: "Will the classroom teacher be able to analyse real situations in concrete terms, determine its key components, identify problems/constraints/possibilities and propose solutions appropriate to the environment and characteristics of learners?" (Trinidad and Tobago. Board of Teacher Education, undated, p. 33).

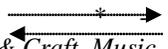
The **aims** of these three courses, taken together, seem to suggest that the route to the development of teaching competence by trainees involves: (a) an appropriate introduction to the theories and principles of teaching and learning; (b) exposure to the techniques of planning for instruction, drawing on theories and principles learnt; and (c) practice of these techniques in an in-college setting.

Figure 1. A suggested interplay of curriculum components based on an interpretation of current documentation of the teachers' college curriculum.



Key:

Key



Math., Lang. Studies, Science, Social Studies, Music, P.E., Art & Craft, Agri. Sc., Family Life Ed.

** - *Art & Craft, Music, Home Ec., Science, National Heritage, Geog., Agri. Sc., Math., Psych., Special Ed., P.E., Meas. & Eval., Early Child Ed.*

Interplay that should occur among the different components of practical teaching

Generally, the **objectives** identified for the various units in each course match the aims. In Education I, the verbs used in the outcome objectives are written mainly at the lower levels (“state,” “identify,” “explain,” “discuss,” etc.), although there are a few that specify skills at a slightly higher level (e.g., “compare/contrast”). The objectives for Education II and Education III follow a similar pattern although, towards the end of these courses, more performance objectives are specified.

The **content** of Education I is based on aspects of the sociology and psychology of education. These two foundation area strands are presented as separate disciplines. The sociology component includes: An Introduction to the Sociology of Education; The Family; The Socio-Economic Context of Education in Trinidad & Tobago; and Gender and Education. The psychology component includes: Psychology of Education; Theories of Human Development; Cognitive Development; Knowing and Understanding all the Complex Facets of the Young Learners' Personality; Behavioural and Social Learning Theories of Development; Motivating Students to Learn; and Providing for Individual Differences among Students. Education I is timetabled for 120 hours.

Education II starts with a consideration of the local context in which teaching takes place. It then locates the teacher within that system and continues by considering specific aspects of teaching. The units in this course are: The Education System of Trinidad and Tobago; The Teacher and the Education System; Curriculum and Instruction; Teaching Students with Exceptionalities; and Measurement and Evaluation. Education II is timetabled for 120 hours.

Education III is designed specifically to develop good pedagogical skills and professional attitudes in trainees. The units in this module are: Teaching and Learning; Instructional Planning; Lesson Planning; The Classroom Environment; Methods of Teaching; and Use of Learning Resources. Education III is timetabled for 120 hours and 12 weeks of teaching practice.

The **methodology** prescribed for the presentation of these courses spans a wide range, including lectures/talks; panel/symposium/debates; group work; demonstration/skits/role-play; and field trips.

Several **assessment procedures** are suggested for these three courses. These are presented under five headings:

- Written work (module papers, reports, assignments, group work)
- Oral work (class discussions, class debates, oral presentations, quiz)
- Paper and pencil tests and examinations (objective type, short answers, essays)
- Performance test
- Projects (case study)

These represent a wide range of assessment procedures that, theoretically, could be used for testing the outcomes as prescribed in the various units.

2.3.2. Education: The espoused curriculum

In-depth interviews were conducted with two Education lecturers at Valsayn (including the Head of Department) and the Head of Department at Corinth. In addition, in interviews with other college lecturers, their views were sought on how the in-college courses prepared students for teaching practice. The discussion that follows is an amalgam of the views expressed on the Education component by all of these lecturers.

The general view is that, whether directly or indirectly, the Education courses to which students are exposed at the colleges are designed to develop trainees into competent practitioners. Education lecturers at both colleges displayed sensitivity to the need to change the curriculum as the teaching/learning context changed. So, for example, one of the Education lecturers at Valsayn outlined that, in the Education I course, units on social development and social stratification replaced those on the family and the socio-economic context of education respectively.

Education lecturers described certain conditions that facilitate the development of competence in teaching in the trainee. These include:

- a thorough knowledge of theories in the psychology and sociology of education, and the ability to apply this knowledge to planning for teaching and the teaching act itself;
- exposure to various teaching strategies through teaching/learning formats such as lectures, small group work, and oral presentations, and the use of media such as overhead projectors, video cassettes, and so on;
- modelling of desired teaching behaviours;
- practice in a school environment that is conducive to learning (appropriate space, low noise level, good overall school management);
- an awareness by the trainees of who they are and what their role is, as well as an understanding of the nature of the children in their charge.

These lecturers also outlined factors that hinder the development of teaching competence. These include:

- the difficulty of transferring knowledge about educational theories into actual practice;
- the unavailability of proper audio-visual equipment and materials for in-college preparation of trainees;
- insufficient time for practising teaching skills;
- lack of clarity about the relative roles of the subject specialists and the lecturers in Education in preparing trainees for teaching practice in the various subject areas;
- the poor attitudes of some trainees;
- arrangements with cooperating teachers that are sometimes less than ideal, for example, untrained teachers acting as cooperating teachers.

One of the major issues arising out of this analysis is the dilemma faced by Education lecturers who believe that a firm grounding in the theoretical foundations is necessary, for example:

Education. . . provides the students with the theoretical foundation which will inform their practice. It is not only a question of being able to do it or know how it is done, but also why it is done. So if you (the trainee) behave in a particular way, you have some kind of grounding which has informed your behaviour.

However, they also realize that there are sometimes problems in negotiating this theory/practice interface, for example:

We are not putting into practice what we teach. . . . That transfer is not very easy with them because I think they are not mature enough really to do that. I mean, we (lecturers) study it and sometimes it is very difficult for us to make that transfer and apply it, and they just come in with their minimum qualifications.

The examples given by the Education lecturers of how they try to integrate theory with practice seemed to draw most heavily on the psychology of education. For example, one Education lecturer made the link between Piaget's stages of development and the type of teaching/learning materials appropriate for each stage. Another referred to making use of knowledge about the learner in lesson planning:

When we get into lesson planning, we go back to the characteristics of the learner. So, given the characteristics of the junior school child--talkative, gregarious, loves to manipulate objects, interested in lots of things in the environment. . . . How are we going to use these characteristics in planning?

Other types of examples of how theory is used to inform practice were not forthcoming. Education lecturers expected trainees to become proficient in various teaching methodologies. Terms such as "student-centred teaching," "inductive approach," "questioning strategies," "lesson introduction," and so on, were used frequently. There seemed to be the belief that "general skills" should be taught in the Education courses, but that there are subject-specific skills that must be taught by the subject specialists. However, there doesn't seem to be a high level of coordination between preparation in the Education courses and preparation by subject specialists. One Education lecturer indicated that there was some degree of overlap in the exposure provided by these two groups, while another suggested that it was difficult for the subject specialists to pace their presentations so that they could synchronize with what was being done in the Education courses.

All of the lecturers emphasized the pivotal role that resources play in the teaching/learning enterprise. They were of the view that trainees should be able to make effective use of resources (preferably low-cost resources) in their teaching. They were themselves unhappy with the provision of resources for their own teaching in the college (Each college has an overhead projector and little else by way of AV equipment.).

There were no overt references made to helping trainees to *reflect in action* (Schon, 1983). The concept of *reflecting on action* is embedded in the system of supervised practice with post-conference sessions, which is the organizing base for teaching practice at both colleges. Even so, there were no overt references to what trainees would be expected to reflect on in the post-conference sessions.

Lecturers identified drawbacks to the documented curriculum. A major concern was the inadequacy of the time allocated to the programme, if trainees were to receive adequate instruction in all the areas identified as essential. Lecturers indicated that students needed more time to cover the content that was important at each stage. They felt, for example, that unit and lesson planning were not adequately dealt with and internalized before trainees went out into the field. In addition, there were areas that the programme claimed to include in its goals that were never adequately dealt with, because of the rush to cover basic knowledge that students needed to have. Lecturers pointed, for example, to the fact that the notion of teaching the primary school curriculum in a holistic manner was never adequately addressed.

In summary, with respect to the Education courses, a reasonable level of congruence was found between the documented Education curriculum and the espoused curriculum. Nonetheless, areas of unease were identified. These included the role of the subject specialist vis-à-vis the role of the Education lecturers in preparing the trainees to teach; the insufficiency of time available for activities considered to be crucial (such as unit and lesson planning); and the problems in negotiating the practice/theory interface. In addition, lecturers seemed anxious to effect some changes to the documented curriculum (and had in fact begun to do so) in the light of perceived needs in the local context.

2.3.3. Language Arts: The documented curriculum

The **rationale** for this syllabus states that the main function of the course is to “cater to the professional and personal needs of student teachers who must be developed both as teachers and users of language.” The document also states that the syllabus is intended to introduce teachers to the philosophy of whole language, with the intention of enabling them to create diversified approaches to the teaching of language in the primary school curriculum. Another important intention of the syllabus, identified in the document, is to develop in student teachers a level of competence in Internationally Acceptable English (IAE), which would be adequate to allow them to help their own students to become confident and competent in IAE.

The stated **goals** of the programme include: developing language awareness; familiarizing students with current issues in language and linguistics relevant to the teaching of Language Arts in Trinidad and Tobago; developing teachers’ competence in IAE; equipping teachers to adopt a personal philosophy of language teaching that will inform their implementation of the Language Arts curriculum; and training teachers to assess the language needs of their students, and to design, implement, and evaluate an integrated Language Arts curriculum. The goals as defined seem congruent with the approach outlined in the rationale.

The **content** of the programme as identified in this document is organized around three units: The Nature of Language, Methods and Principles of Teaching English, and The Nature and Organisation of Practice Teaching.

Each of the units within the Language Education syllabus is further subdivided into topics, which the syllabus describes as “courses,” each with its own content and objectives, which are intended to fulfill the goals of the syllabus.

Unit I, “The Nature of Language and the Language Situation in Trinidad and Tobago,” introduces trainees, in the 24 hours allocated, to major concepts and theories about: (a) the language environment in Trinidad and Tobago and contexts of use; (b) the nature and functions of language; (c) language acquisition and explorations in how students use language; and (d) teaching English as a second/foreign language/second dialect.

While the syllabus states that Unit I is partly intended to develop student teachers’ own communicative repertoires, “with emphasis on building their competence in Internationally Acceptable English,” the stated objectives of the course seem to place greater emphasis on their propositional knowledge of facts and theories about language, and about the different language systems existing in Trinidad and Tobago, than on their using it in different contexts so as to increase their competence in the language.

Unit II, “Methods and Principles of Teaching English,” demonstrates a somewhat eclectic mixture of philosophies and content. Topics taught within the 30 hours allocated for this unit include: (a) the language processes: speaking, listening, reading, thinking, and writing; (b) methods appropriate for Language Arts; (c) grammar content and mechanics of language; (d) language across the curriculum and understanding the Language Arts syllabus; (e) study skills; (f) resources in language teaching; (g) testing and evaluation; and h) incorporating drama and the arts.

While the syllabus rationale suggests the importance of a whole language approach to language teaching, the documented contents of different topics within the unit seem to emphasize a less integrated, and a more rule- and skill-based approach. The syllabus notes, for instance, that “the mechanical stands side by side with the processual and creative elements of language teaching,” where whole language approaches generally tend to subordinate mechanical concerns, to a greater or lesser extent, to issues of process and meaning-making. The stated objectives of the topic “grammar” also seem to focus more on making student teachers aware of different syntactic structures and rules within English Creole and English systems, which must be used when communicating (usage), than on awareness of the integral relationship between structures and communicative contexts. Yet, the overview of course content refers to “the importance of grammar in communication,” which suggests a somewhat broader interpretation.

Unit III focuses on the nature and organization of practice teaching. A total of 47 hours is allocated for this unit, and the document notes that topics are drawn from the entire language education programme. The unit includes courses on planning integrated

Language Arts units for different levels of the school; lesson delivery in various language “skills,” and student teachers’ reflection on their own teaching practice.

A separate document deals with the "Teaching of Reading," which is taught and assessed separately. The reading education curriculum document conceptualizes reading both as a process, which includes meta-cognitive, perceptual, and affective elements, and as a product, which the curriculum document defines as comprehension.

Among the stated **aims** of the reading curriculum are: to help student teachers develop a personal philosophy based on an understanding of the complexities of the reading process; to alert them to the factors that promote and hinder reading success; and to equip them with the necessary skills and strategies to help students at all levels of the primary school to develop the ability and willingness to read.

The **content** component of the reading course is allocated a total of 105 1/2 hours, and includes units in: the nature of the reading process; determinants of reading; the relationship between reading and other language skills; developmental reading instruction; major basic approaches to reading; diagnosis of reading problems and evaluation of reading competence; skills of planning and organising for reading instruction; and creating lifelong interest in reading.

A wide range of **methods** and **media** is proposed for delivery of the Language Education curriculum. These include lectures, large and small group approaches, role-play, and various kinds of mediated instruction, including the use of computer technologies.

The assessment procedures for Language Education combine both internal and external assessments. The course work on Reading, as described in that syllabus document, has its own procedures for assessment. This contributes 25% to the students’ overall mark on the programme.

The internal **assessment** counts for a possible 50% of the final mark in Language Education. The assessment of this part of the programme entails both coursework and student performance on internal examinations. Both traditional and alternative assessment approaches like projects and portfolios are used, and peer- and self-evaluation are included. The final examination is weighted at 50%.

2.3.4. Language Arts: The espoused curriculum

Unfortunately, only the coordinator of the Language Arts programme from one of the colleges was interviewed.

The coordinator indicated that the lecturers use the syllabus as a guide, but that they make their own plan of how they would teach the course. Each lecturer is free to plan for his/her delivery of the Language Arts curriculum in his/her own way.

Although the coordinator indicated that the syllabus is very comprehensive, some ambiguous feelings about the syllabus seemed to emerge in the discussion concerning the whole language or integrated approach to language versus the traditional approach of breaking up the teaching into parts, for example, grammar, spelling, and so on. All of these aspects are touched on in the syllabus, but there seems to be some uncertainty as to how to incorporate these contrasting approaches, and how to get this across to the student teachers.

The coordinator noted that there was a mismatch between the primary school syllabus and the teachers' college syllabus. In her view, the teachers' college syllabus had evolved whereas the primary school syllabus had not. It should be noted, though, that there is a new thrust toward using a more integrated approach to language teaching in the primary schools, motivated largely by a new Primary Language Arts curriculum which was recently developed, and which is now being implemented.

The old concern about time arose as the coordinator indicated that there is a great deal of detail in the syllabus and major limits in the time allotted to the subject.

Commentary on the language arts curriculum

The question of how to deal with the tensions between two opposing philosophies of language teaching appears not to have been reconciled, either in the Language Education document or in the minds of college lecturers. This is an issue that remains unresolved at all levels of the academic community. Part of the problem lies in the different understandings that exist about the nature of the special opportunities and challenges that learning English presents to speakers of English Lexicon Creoles. This may account, in part, for the uncertainty experienced by lecturers in deciding how to organize the content of the college curriculum for delivery.

2.3.5. Science: The documented curriculum

The **rationale** for the science syllabus is to adequately prepare trainees to introduce science at the primary school level. Science is described as the study of the "phenomena of the material universe and their laws," and is concerned with a body of accumulated knowledge as well as "trustworthy methods for discovery of new truth." Trainees are expected to achieve competencies in the processes and skills of science, and to master the teaching/learning strategies that would enable them to develop these same competencies in their pupils.

The **aim** of the course is "to prepare teachers to provide pupils with education in science adequate for everyday living and to equip these pupils to undertake science at the secondary level."

The **objectives** of the course articulate with the rationale as stated. They focus on the competencies and attitudes that trainees need to develop not only as science teachers, but also as lifelong learners.

The **content** is presented in two sections. The general objectives that relate to methodology and philosophy in science education are set out in Section A. Trainees are required to examine the nature of science, its relevance in the curriculum, its role in society, and its relationship with technology. The process approach in the teaching of science is highlighted. Trainees are expected to develop competencies in using this approach, as well as in the various assessment strategies for evaluating pupils' learning. Trainees are also expected to draw on the work of modern philosophers and psychologists as they relate to teaching, learning, and other aspects of pedagogy, and to be proficient in all aspects of the planning and delivery of science lessons.

A general outline of the content of the course is presented in Section B. The central concern is that trainees develop positive attitudes to science. The content is based on science that is relevant; that is typical of existing knowledge; that best illustrates the ways that scientists work; and that will promote an appreciation of nature. The content is organized around four areas, namely, matter, energy, organisms and ecosystems, and environment and technology. Each topic area is presented as a module with specific behavioural objectives. Some examples of the specific objectives are as follows:

Students should be able to:

- Discuss the kinetic theory of gases
- Differentiate between vectors and scalars
- Predict the effect of forces upon objects
- Formulate hypotheses to explain observed changes that occur in an aquarium
- Discuss measures that can be taken to minimise the ill effects of waste from internal combustion engines on life and the environment.

A range of **teaching methodologies** is suggested for the science course at the college, ranging from lectures and hands-on activities to projects and research reports.

The **assessment** procedure is similar to what obtains in the other courses. It combines internal and external assessments, with each component carrying equal weightings. The internal assessments consist of coursework and internal examinations. Part of the coursework includes an assessment of laboratory skills, and trainees are required to keep a practical notebook. The external assessment consists of two papers. Paper 1 consists of multiple choice items while Paper 2 is divided into three parts: Part A examines methodology; Part B, process/content knowledge; and Part C, enquiry skills. A candidate must meet certain minimum requirements in each of the areas to be awarded a pass.

The course is delivered over two academic years and comprises 105 contact hours.

2.3.6. Science: The espoused curriculum

Two science educators were interviewed, one from each college.

One of these science educators indicated that it was not possible to complete the syllabus in the time allocated. By mutual agreement among science educators at this college, the science content had been adjusted to a more manageable size. Topics were treated in sufficient detail to give trainees the solid content base required for teaching the concepts, as well as the confidence to handle students' questions in the classroom. She felt that greater emphasis should be placed on "mastering the techniques of teaching science."

Although content and methodology were taught separately, there was some overlap since teaching of pedagogic skills had to be done in some context, and she indicated that she was able to merge the two areas when she worked with her students in developing unit and lesson plans. She did not see any conflict in terms of orientation of the college science syllabus and the primary school science syllabus, since she felt that the primary school syllabus did not truly reflect a process approach. Her own philosophical orientation was towards constructivism and she tried to reflect this in her teaching.

The other teacher educator bemoaned the fact that there wasn't enough time to adequately address the methodology of science teaching. She contended that an inordinate amount of time had to be spent in covering the science content included in the syllabus. She was of the view that the syllabus was overloaded with science content, particularly in the area of physics.

This teacher educator had serious misgivings about the use of the process approach that is highlighted both in the primary school science syllabus and the teachers' college science syllabus. She argued that, in the primary schools, science concepts are "marginalized" in the process approach, since the primary syllabus is built around the processes and there is no logical order to the concepts that are taught. She was, therefore, caught in a dilemma between the conceptual approach to the teaching of science and the process approach in her own teaching at the college. This was so because, while, philosophically, she maintained that the conceptual approach was sounder, she realised that the trainees had to be prepared to deal with the reality of the primary school syllabus and the teachers' college examinations that stress the process approach. It should be noted that a new teachers' college science syllabus has been drafted by a team comprising the teachers' college science educators and the Curriculum Officer of the Ministry of Education. The main aim has been to cut down on the amount of science content in the syllabus. To date, however, this new syllabus has not been given official status.

Commentary on the science curriculum

Both lecturers felt that there were issues in methodology that needed to be addressed. However, there was no consensus on how this should be done. There were also concerns about *what content areas*, and *how much content* should be covered in the syllabus. One college has found a temporary solution to the latter problem through an internal agreement. Until the new syllabus is officially introduced, the single factor that constrains how much science is actually taught is time.

2.3.7. Mathematics: The documented curriculum

The **rationale** for the mathematics syllabus states that the main function of the course is to equip trainees to deliver the primary school mathematics curriculum effectively. Mathematics is described as being a discipline that involves “ideas, processes and reasoning,” as well as being a language, a science, a tool, and an art. In the teaching of mathematics, trainees are to help their pupils to construct knowledge, to be creative problem solvers, and to appreciate the relevance of mathematics in society.

The **aim** of the course is: “to train teachers to provide pupils at the primary level with a sound mathematics education adequate for everyday living and future development.”

The stated **objectives** for the course match the philosophical orientation to mathematics presented in the rationale. They focus on the mathematics needs of the trainee as well as the primary school child. Thus, the objectives focus on developing competencies and attitudes in the trainee, and preparing the trainee to do the same for the primary school child.

The course **content** is presented as a list of topics that commonly appear in mathematics syllabi, namely, Number theory; Computation; Consumer arithmetic; Measurement; Geometry; Graphical relationships, Statistics and probability; Algebra; Coordinate geometry; Trigonometry; and the Teaching of mathematics.

Each of these 10 topics is presented in a module that consists of general and specific objectives. Most of the objectives are written as performance objectives indicating that the trainee is expected to learn the skill through the actual performance of tasks, for example:

- Student teachers will use transformation geometry to develop the properties of simple polygons and to make patterns and shapes
- Student teachers will develop and use formulae for volume and surface area of solids.

Module 10 is different from the others in that it does not deal with content but, rather, it deals with the nature of the discipline and pedagogical issues. The first part of the module deals with the role and nature of mathematics. This sub-component requires that trainees explore how mathematics serves mankind in various areas of life. It also highlights mathematics as a language. The second part of the module deals with the psychological principles involved in the teaching/learning of mathematics. It requires that trainees draw on the work of cognitive and behavioural psychologists; be proficient in presenting mathematics in a variety of lesson formats; and be competent in using various assessment strategies to evaluate student learning.

A wide range of **teaching methodologies** is suggested for the presentation of the teachers’ college mathematics course.

The **assessment** procedure combines both internal and external assessments in equal proportions. The internal assessment consists of coursework and internal examinations. The external assessment consists of two papers--one on methodology and one on content.

Several **resources** are prescribed for the teaching of this course. They include a camcorder, television set, video cassette recorder, computers and software, as well as several manipulatives specific to the field of mathematics.

The course is timetabled for 150 hours over two years.

2.3.8. Mathematics: The espoused curriculum

Interviews were conducted with five mathematics educators--three at Corinth (focus group setting) and two at Valsayn.

Lecturers from both colleges agreed that the teaching of the mathematics course at the teachers' college was hindered by the weak mathematics background of trainees, and the insufficiency of time allocated to the teaching of the syllabus. It was suggested that although all trainees had secured at least a Grade 2 in CXC mathematics, such performances may have been the result of rote learning and drill and not of deep learning. The lecturers all saw the need to do remedial work in mathematics content, but lamented the fact that it was becoming increasingly difficult to do this because of the overloaded college curriculum, and also because many students do not have extra time because of home and family commitments. They agreed, too, that the upshot of all of this is that trainees have a negative attitude towards mathematics.

At one college, the strategy of teaching content through the methodology was advocated and was, in fact, being tried, but it was acknowledged that trainees sometimes have a mental block and expect to be taught content and methodology separately. The lecturers were all of the view that more time should be spent dealing with methodology issues. This was not being done because of the time constraints alluded to earlier.

There were differences in views among the lecturers from the two colleges about whether or not the syllabus is overloaded with mathematics content. Lecturers from one college were of the view that trainees should cover mathematics content that is well beyond that covered on the primary school syllabus. On the other hand, lecturers from the other college felt that a thorough understanding of basic mathematics content was all that is necessary. Lecturers indicated that they try to maintain a match with the primary school mathematics syllabus.

Commentary on the mathematics curriculum

The question, "How much mathematics content is necessary to teach primary mathematics?" is one that has not been settled among the mathematics educators. This apart, they seem to be comfortable with the teachers' college syllabus. However, they have some other concerns. The weak mathematics background and the poor attitude

towards mathematics of many trainees are burning issues for them, and they seem to be suggesting that the task of teaching mathematics to the trainees is an uphill struggle.

2.4. Assessment Procedures

Data on assessment and certification procedures were obtained through interviews with college lecturers and the (external) Chief Examiner for the teachers' colleges.

2.4.1. Assessment of in-college courses

Assessments are weighted so that 50% is allocated to the course mark, and 50% to the examination. Students must get 50% on each section overall to be considered to have passed most subjects, but for the teaching practice, a student must have scored 60% to be considered to have passed. For some electives, too, the required passing mark is 60%.

The assessment is in two parts and is conducted in two phases. At the end of the first year, there is the assessment of trainees' performances in the one-year courses such as art and craft. It is mandatory that trainees complete this requirement before receiving their diplomas, but it is not necessary that they should pass these courses before moving on to the second year of the programme. Students who have not passed any of these courses at the end of the two-year period are required to write supplemental examinations in them, after they have been assigned to schools at the end of the teachers' college programme.

At the end of the second year, students are assessed on their performance on the two-year courses. Again, this is based on coursework and the final examination. Final examinations are externally assessed. The external examiners are drawn from the education system. They are expected to collaborate with college lecturers, and to meet with students to determine what content was taught during the course of the programme before preparing items for the examination. However, this is not always done, given the constraints of the conditions under which external examiners must work--they are part-time staff such as Curriculum Officers, who have full-time jobs elsewhere.

External examiners set the examination papers, develop the mark scheme, and are expected to supervise the college lecturers who act as assistant examiners in the marking process during the five to six-day marking session. The external examiners standardize the marking. The college course mark is combined with the final written examination mark to arrive at an overall final mark. Examinations are usually in the form of multiple choice and essay-type questions, and questions are based on content and methodology.

2.4.2. Limitations of the assessment process

There are limitations, arising out of the conditions under which external examiners work, that create constraints on the rigour with which the external assessment of students is conducted. The poor remuneration; the fact that external examiners carry out these activities as a part-time occupation; and the high turnover rate mean that it is somewhat difficult to get enough persons who have the necessary competence to carry out the

marking exercise efficiently, and that, at times, the measures necessary to ensure the rigour of the exercise are not carefully observed.

For example, examination papers may be handed in too late to permit scrutiny of the papers in order to ensure that the examinations are of a high quality. Also, some external examiners may not go through the necessary process of collaborating with lecturers and students before setting the examination, or may not sit with the lecturers for the entire five-six days over which the marking of final examination scripts is conducted, so as to ensure that the marking process is effectively standardized and moderated.

The absence of a General Supervisor of examination scripts has meant, on occasion, that there have been allegations that some irregularities may exist in the distribution of the scripts. As a result, it is possible that student anonymity may not always be preserved, and lecturers from one college may be marking the scripts of students from that same college with whom they may be familiar.

2.5. Summary of Curriculum Issues

The documented curriculum for the teachers' colleges in Trinidad and Tobago, while it consists of interrelated aims, objectives, content, and assessment strategies, is deficient in that it does not contain an overarching philosophy for teacher education in Trinidad and Tobago. Yet, it is this document that dictates much of what happens in the teachers' colleges in Trinidad and Tobago.

While lecturers are very familiar with the official syllabus document, they nearly all tend to talk about it with constant reference to the real-life context in which it is implemented. Thus, there is some concern about: (a) whether the process approach in science is suitable for trainees who may have a weak conceptual base in science; (b) the amount of mathematics needed to teach primary mathematics by trainees who have a negative attitude toward mathematics; and (c) the suitability of the whole language approach, as opposed to a direct approach, in the teaching of language arts. Because of these tensions, lecturers sometimes try to do work to cover the extreme situations (e.g., extensive mathematics content), or to cater for both ends of a dipole (e.g., extensive science content and process skills), with the result that the courses taught might end up being somewhat lengthy.

In these interviews with lecturers, some dilemmas surfaced. The dilemma of matching the syllabus to the characteristics of the trainees was discussed earlier. Related to this is the dilemma of what are appropriate methodological approaches in the different subject areas, and what constitutes an appropriate mix of content and methodology in the training programme. The apparent overload of the curriculum and difficulties with assessment procedures also surfaced. These dilemmas signal that the teacher education environment is a turbulent one.

This curriculum document is currently under review by staff of the Ministry of Education and the teachers' colleges. It is to be hoped that some of the concerns of the teachers' college staff would be seriously addressed in this process.

CHAPTER 3

Trainees' In-College Learning Experiences

3.1. Introduction

In the attempt to more fully understand the nature of the interactions among college lecturers' espoused views on the curriculum, their actual delivery of the curriculum, trainees' experience of the curriculum, and other contextual factors, four researchers (independently) observed teaching/learning episodes at the teachers' colleges. In each case, the researcher had secured permission to attend the session from the lecturer beforehand. The researchers functioned simply as observers, taking detailed notes of the events and interactions during the session.

The following, accounts of lessons in the areas of literary studies, science, and mathematics are presented in an effort to portray the enacted and the experienced curriculum. These accounts serve to present some "snapshots" of in-college learning experiences of trainees. Five such snapshots are presented.

3.2. Literary Studies (I)

I say, if you have to teach this. . . you're not just going to leave it in the world of Shakespeare. You're going to bring it home! Bring it relevant! Find a similar situation to which they are going to relate. And then you are likely to get. . . interactions, the interactions you want in terms of their own responses.

Mr. M. (not his real name) has been a lecturer in Literary Studies since 1993. He has indicated that he feels the main challenges of teaching Literary Studies to the trainees lie in the range of abilities and previous experience they bring to the subject, and the limited cultural experiences they bring to their teaching generally. He has also noted the difficulties of establishing an adequate level of interaction with these students, given the large groups with which he must deal, and the limits of time within the crowded curriculum. At the same time, he expressed the belief that literature is pivotal to any curriculum, and certainly to the teachers' college curriculum, which, he believes, must prepare the trainees for the complexities of their dealings with the students in the school. He says that he must try to impart to the trainees both the academic content and the human dimension of teaching. "It is no point if you are trying to interact with people's minds," he says, "if you are going to ignore their emotions."

He is also concerned because, he says, the college curriculum doesn't do enough to promote the holistic development of the teachers. But to get them to profit from the literature experience, he feels that he must get them to "embrace the literature." He must

get them to see it as relevant to their own lives. It is all these understandings that he says he brings to the teaching of literature.

The course in Literary Studies, as Mr. M. describes it, is divided among three lecturers. One lecturer deals mainly with the methodology for teaching literature. The other two focus on the texts. Mr. M. 's responsibility is to teach the Shakespearian and West Indian texts.

Given his understanding of the challenges of his job, it is not surprising that Mr. M.'s main emphasis in teaching literature is on making the content of the subject relevant to the real-life circumstances of the trainees, and on maintaining interaction and personal contact with them. Yet, his own lectures are conducted in the College Hall to dauntingly large classes. Nearly 200 students were present at the session which was observed.

He describes teaching at the college as being in many ways "primitive." For instance, the sound system in the Hall had only recently been installed. Mr. M., however, did not rely on the microphone during this session, choosing instead to leave the podium at intervals and to go down into the middle of the Hall, among the students, at different points in the lecture.

The session observed starts at mid-morning, and the large group of students takes about 15 minutes to filter into the Hall. Some carry their breakfast with them, and sit eating throughout the start of the lecture. Before the start of the class, the lecturer maintains an informal bantering with the students, coaxing some of them to move chairs that were left on the stage from a ceremony which took place some time before. There is some good-natured grumbling, but the students move the chairs willingly enough.

When the lesson actually begins, the topic is a short story by a West Indian writer. Throughout the entire lecture, Mr. M. continues to make links between the world of the text and the students' own lives, tapping their personal experiences with the society to help them understand the story. He does this partly by interspersing his analyses with personal narratives. When he looks, for instance, at how the author describes a judgmental person in the story, he speaks of his own experience in a church, with people staring at other members of the congregation and making judgments about their private lives. He is very dramatic during these narratives, taking on a variety of voices to illustrate tone, register, and attitude. As he uses these examples, the trainees begin to respond with narratives of their own. Mr. M. uses probing questions to get them to move from narrative to analysis of what the incidents they are narrating reflect about the nature of the society, and how this is pertinent to the issues raised in the story.

As individual students volunteer answers, he goes down into the middle of the Hall, continually minimizing the space between himself and the student who is speaking. At the same time, however, this has the effect of excluding persons seated out of reach of the range of their voices from the discussion. He compensates for this limitation at intervals, by repeating students' observations aloud.

His style of delivery is quite idiosyncratic. Theoretical issues are concretized by him through personal narratives, some of them based on his experiences in the wider community, some based on his interactions with trainees at the college itself. Thus, students are able to respond and, even though the class is quite large, there is some level of interaction between individual members of the group and the lecturer. Also, because a number of the narratives relate to events which they know about, even students who are not speaking to the lecturer can be seen nodding and showing other signs of their involvement in the discussion.

For a significant proportion of the time, however, the lesson is conducted not only as a straight lecture, but with a large measure of extremely transmission-oriented techniques. Some students apparently do not have their texts. Others were absent from the previous lecture. Mr. M.'s way of dealing with this situation, and with his understanding of their limited background in literature, is to call notes. He also has students repeat the notes he has called, verbatim. "Let us read that note together," he says, as he refers to a note given at the previous session. After the students read it, he insists that they read it again. Finally he signals the reason why he is insisting that they repeat the note. "I shall ask you again to read it, TOGETHER," he says, for yet another time, and after the third reading, he comments, "You will recognize that I am a little concerned for the people who were not here for that lecture, and to get the notes."

He also instructs them as to what parts of the text to commit to memory: "'Roseanna was a lowdown news agent.' And I'd like you to learn that quotation, to tell you about language for the communication of ideas about characters."

At other times, he explicitly models how to conduct literary analysis. After one discussion on how the author uses language, for example, he says, "Let's move to the last paragraph, because you are learning **how** to critique the short story, how to read it, and discover it as more than a story." When he elicits comments from some students about another character, he stops and says, "I am inserting that in your notes--your own comments. So those of you who read the story and say that you don't know what to say, you are learning commentary."

Thus, the lecture proceeds as a mix of shared exploration of the text and of direct and explicit instruction in what to do, what to note, and how to think in responding to literature. The students seem quite content with this approach, reading aloud together when he asks them to do so, or scribbling notes frantically as he calls them. In spite of this, however, there are some students in the back of the hall who clearly have no text, and who sit staring into space, or whispering to each other sporadically.

There is only one explicit reference during this class as to how literature may be applied to their own teaching. Within the story, there is a reference to a situation where social class differences are shown to influence how characters treat one another. Mr. M. guides the discussion towards the issue of how this attitude is manifest in the trainees' own communities, and in the wider society. He questions, "Is somebody bad because they don't live according to your philosophy?" The group takes this up, and begins to relate

examples of discrimination that they have seen, which appear to be based on social or religious differences. At the end of the discussion, he reminds them that, “this is where the literature content will affect our methodology. It should lead us to an examination of our perceptions. How do we feel about the small, smelly child? Are there people who teachers teach more feverishly than others?” It is one of the last issues raised during the session.

At the end of the class, the researcher comments to a student who has appeared engrossed throughout the entire lecture that she seemed quite interested. She says, “He’s always like that.” As the researcher leaves the Hall, Mr. M. is sitting in the middle of the Hall, talking to a group of Tobagonian students whom he supervised during the previous teaching practice. Some are teasing him, and one is confiding her problems with her landlady. Mr. M. listens, and makes sympathetic comments. As he has said, describing his own theory of what it is to be a teacher, it is no point interacting with their minds if you are going to ignore their emotions.

3.3. Literary Studies (II)

The lecturer, Ms. S. (not her real name) holds a master’s degree in Literature and is currently pursuing a master’s degree in Education. She feels that her exposure to a master’s degree in Literature has given her a wider view of the field than she would normally have had. On the other hand, she relates that she felt the need for professional training when she took up the job as a college lecturer, hence her current enrolment in the M.Ed. Programme.

Ms. S. sees her position as a lecturer in Literary Studies as a challenging one. The biggest challenge for her is to present literature in such a way that it impacts positively on trainees’ classroom practice. As she explains:

You can analyse it [the literary work], you can summarize it. You can do whatever, but how you use that. . . how you really find ways and means and structures. . . and ideas to make a difference in what they do in the classroom every day. . . how they enrich students’ lives. . . I am saying that I do not know whether or not I succeed in that area.

In her attempts to reach this goal, Ms. S. advocates an experiential approach to areas like poetry as part and parcel of the learning process. Thus, she says:

Students come and tell me, ‘Miss, I am teaching character. Miss I am teaching rhyme and rhythm.’ I will say, ‘No.’ Students have to experience poetry and from the encounter, they have to experience rhyme, experience rhythm. You don’t go and teach that. . . . In order to teach character, have children listen, read. Have them imagine what it would be like to be in the place of that character.

The lesson observed was a literature lesson on character, and Ms. S’s main objective was that trainees would “understand the strategies for the reading and studying of literature.” The class consisted of about 80 second-year students.

She begins the class by distributing some reading material on “Becky,” and allows the trainees to study the handout for about five minutes. Following this, she engages the students in a very free and open interactive session in which she uses probing questions to elicit responses on the context, the historical and cultural background, the beliefs and feelings coming through, and the writer’s style and impact on readers. As points emerge and reference to literary terms is made, Ms. S. summarizes these on the blackboard. This section lasts for about 15 minutes.

She then leads the trainees to consider the character of “Becky.” This 15-minute portion of the lesson is more speculative and is not as grounded in the material at hand. Ms. S. dominates at this stage, introducing other issues into the discussion. This mode of classroom delivery is in keeping with her description of her teaching style: “I deal with a whole lot which is not written down, and sometimes can’t be written down, because I deal with spur-of-the-moment kinds of issues that come up.”

Together, the lecturer and trainees then dissect the piece on “Becky,” paragraph by paragraph. Trainees seem to be less enthusiastic about this strategy than they were in the beginning. In the final 7-8 minutes, Ms. S. tries, through discussion, to compare “Becky” with other characters studied in the literature course.

Ms. S. has an engaging personality. She has a strong voice and is very enthusiastic about her work. It is clear that she has a commanding knowledge of the subject. The continuing task, as she herself describes it, is to help trainees to convert this “new” way of looking at literature into meaningful experiences for pupils in the classroom.

3.4. Science

Ms. J. (not her real name) has taught at both teachers’ colleges. She first taught Psychology and Principles of Education, and this experience, to a large extent, has influenced her approaches to the teaching of science. She explains that the trainees come to her with different experiences in science, and some of them lack the necessary content knowledge on which she could adequately build. She claims that they come to her with “lots of misconceptions in the physical sciences” as a result of exposure to what she refers to as “Trini teaching. . . basically teaching from a book.” She uses everyday materials in her teaching, and tries to provide situations that will allow the trainees to come to some understandings of science. She feels that she is well positioned to do this since she intuitively understands how her trainees are thinking. She herself has had to clarify a number of her own misconceptions. She also feels that there is an “empowerment component” in teaching, since “how we teach is just as important as what we teach. . . can give more meaning to content.”

Classes are held in a large science laboratory. Trainees’ projects were displayed on counters around the room, and there were charts and teaching aids displayed on the walls. One of the lessons observed was on the topic “Matter,” and it was taught to a class of 44 trainees, of whom 15 were male.

Ms. J. begins the lesson by eliciting her trainees' prior knowledge of the topic and having them, in groups of two or three, look for five examples in the room. This introduction takes about eight minutes. She then questions them on the components of matter and how matter is classified. She continues to build on their responses by having them read selected areas from the text. There is further discussion about the nature of the substances identified in the text.

Ms. J. then moves into a group activity, where the trainees, in groups of seven or eight, put substances into the three groups--solids, liquids, and gases. Ms. J. moves from group to group, asking probing questions to have the trainees determine the basis for their classifications. Group responses are then summarized in tabular form on the blackboard. This activity, which lasts for about 15 minutes, is very interactive and generates lively discussion.

Ms. J. continues to develop the concept through the use of concrete examples and questioning strategies. Together, they explore gas/volume relationships (opening a bottle of perfume), make links to atomic structure, and then use marbles in a glass to illustrate the patterns of arrangement of solids, liquids, and gases. Ms. J. makes use of probing questions, such as "In which case are the molecules closest? In which case are they vibrating?" to come to some conclusions on proximity of molecules, amount of movement, amount of energy, and attractive forces in each of the groups.

The concept is then reinforced with a fun activity. Trainees are asked to form three large groups and role-play to demonstrate their understandings of the properties of matter. This activity, which lasts for about 20 minutes, allows for some relaxation in the 90-minute lesson. In the first group (solid), the trainees are packed closely together making subtle movements with their shoulders and hips to illustrate a regular pattern, vibrations, and low kinetic energy. In the second group (liquid), the trainees are not as close, moving about but still touching, to illustrate a shape that is not constant and with higher kinetic energy. Trainees in the third group (gas) run around the room, bouncing each other and eventually all run out of the room (much laughter), to illustrate high kinetic energy, some collision, and low forces of attraction. The class settles after this activity. Trainees are congratulated and the lesson continues.

Ms. J. continues by building further on the concepts already developed. She uses questioning again to elicit trainees' responses on effect of temperature on matter. For example, she asks: "Does physical property change?" This discussion continues for about 8 minutes, and the trainees then move into another group activity. They are required to identify six changes that occur to solids, liquids, and gases due to changes in temperature. They are given clear instructions. Explanations of changes of state must be at the molecular level, and they must also explain each change using the kinetic theory. Ms. J. again moves around to each group, asking open-ended questions, answering trainees' questions, and attempting to clarify issues. There is much discussion among trainees themselves and between Ms. J. and the trainees. There is also some disagreement on how the kinetic theory can be used to explain changes of state. Trainees work in their groups

for about 15 minutes, and then present their results. The results from each group are summarized and recorded on the blackboard. Some issues are unresolved and will need to be clarified. The session has come to an end, and the main points of the lesson are summarized.

Trainees seemed to be highly motivated. The pace of the lesson allowed trainees sufficient time to internalize the concepts. At the end of each teaching point, the trainees were given some activity that allowed for further clarification of issues through student/student as well as teacher/student interaction. The strategy of summarizing at intervals during the lesson helped trainees to process small amounts of information at a time. The role-play also introduced an element of fun and gave trainees an opportunity to relax during the long session. The frequent switch in strategies also prevented boredom; trainees were engaged throughout the entire lesson and were in fact reluctant to leave since there were still some unresolved issues. They obviously needed more time for the last activity which, for the majority of them, seemed to be the most challenging part of the lesson.

3.5. Mathematics (I)

The lesson observed was held in a large classroom, with excellent furniture. A storage area at the back of the classroom was used for storing resource material. Ms. A. (not her real name) had built up a very impressive resource collection during her tenure at the college. She indicated that she did not favour the didactic approach that was the norm at the college. She used a variety of teaching methods and, as far as possible, tried to model the teaching strategies that she expected her students to use. She used hands-on activities whenever possible, as she indicated that she found that this helped to facilitate conceptual understanding.

The lesson is on the topic “Ratio,” and 35 students are present. Ms. A. begins the lesson by asking the students to make comparative statements between two strips on the blackboard. She then asks the students to categorize their statements into two types of comparison. She elicits their ideas on how best this can be done, and “quantity” and “quality” are suggested. Students then give examples of statements and these are written on the blackboard. Ms. A. then introduces the concepts “quantitative” and “qualitative” by explaining that numbers are assigned to attributes in mathematics, and that some things cannot be quantified. She holds up a single rod for comparative statements, and elicits from students that they must have two objects or entities to make a comparison.

Students are given a task to write quantitative statements on two sets of objects (circle cut-outs) placed on the board. On completion of the task, Ms. A. asks the students to write quantitative statements about two sets of objects held in her hand. These statements are more complex, as students now write statements like “set B has three times as many as set A” or “set A is one third of set B,” and so on. Students now recognize that there is an operation involved and correctly name the operation as “multiplication.” Ms. A. builds on this knowledge by drawing a simple flow chart to illustrate that “quantitative” can be

“multiplicative” or “additive.” She gives examples of statements using the two operations and the students give reverse statements.

Ms. A. continues to build on the concept, indicating to the students that comparisons must have a base or standard, and that the unit of comparison must be the same. She introduces the concept of ratio, and examines how it relates to multiplication. She gives examples of ratio that are related to the students’ experiences, and the students are given simple problems to determine ratio. Ms. A. moves around the classroom assisting as required. Students share ideas with those nearest to them. Concepts developed are summarized as (a) statements and (b) flowcharts.

Ms. A. now engages the students in a discussion on differences between ratio and fractions, and students’ responses are summarized and written as simple statements on the blackboard.

Students now work in pairs on an activity to assess their understandings of the concepts taught. Ms. A. walks around as the students engage in the task, clarifying misconceptions, and giving guidelines about steps to follow. A general discussion follows.

Ms. A. now asks the students to categorize the lesson, identify its objectives, and identify the strategies used. They categorize the lesson as “concept development” and attempt to answer the other questions. Ms. A. does not follow through. Instead she refers the students to a previous handout on differences between concept teaching and algorithms. The lesson ends with an evaluation task on solving problems with ratio.

This lesson used the learning cycle approach to concept development--exploration, introduction, and application of the concept. The lesson seemed to be appropriately paced, summaries were done on two occasions to pull important ideas together, and the discussion sessions were held to help students to clarify concepts. A number of strategies were used--whole group, individual, and small groups (pairs), and the transitions from one activity to the other were smooth. The lesson also introduced trainees to some aspects of pedagogy. They were able to categorize the lesson, identify some of the strategies used, but still needed to work on identifying lesson outcomes.

3.6. Mathematics (II)

This class was held in a lecture theatre room with about 60 students. As the trainees filter in, there are some light-hearted exchanges between trainees and the lecturer, Mr. P., who is standing behind a large desk at the front of the room.

The lesson is a continuation of work done previously on capacity and volume. Mr. P. begins by putting out several different coloured shapes on his desk. He then asks for a pack of cards from a student and proceeds, through questioning, to develop the concept that one card has area but “no” thickness, but that several cards stacked one on top of the other have measurable thickness. From this point, he proceeds to develop the concept that the volume of the pack of cards would be the area of the base multiplied by the

height/thickness, and that a more general formula for volume would be cross-sectional area \times height.

Mr. P. then applies this formula to different solids, demonstrating its applicability. In the case of cubes, he builds up a table on the blackboard to show how the formula applies, by using multiple cubes of the same size. He also introduces a few solids to which the formula could not readily apply and terms these “trouble.”

At this point, Mr. P. makes suggestions about how the concept of the volume of these regular shapes could be presented to pupils in the primary school classroom. He encourages trainees to let their pupils use the apparatus to work out the volume of increasing numbers of cubes, then to challenge them to use the pattern in the results to work out the volume *without* the blocks.

Another mathematics lecturer, Mr. Y., walks into the room at this point and, after the exchange of some pleasantries, is allowed to take over the lesson for about 10 minutes. The students seem unperturbed by this and continue to be attentive. Mr. Y. deals with the relationship between the volume of a cone and the volume of a cylinder with a similar base. Again, through questioning, he gets students to infer the relationship between the volume of the cone and the volume of the cylinder, leading to the generation of the formula for the volume of a cone. Again, reference is made to the primary school pupil, and trainees are encouraged to conduct the experiments with pupils using different sizes of cones and cylinders.

Using similar techniques, Mr. Y. establishes the relationship between the volume of a pyramid and the volume of a prism. The presentation here is more rapid and not as detailed as that for the cone and the cylinder.

Mr. P. takes over, and draws trainees’ attention to the everyday experience of cutting a pyramid (wedge) from a watermelon. He links the pyramid to a sphere and establishes the volume of a sphere. Again, the presentation here is fast-paced and not as detailed as the earlier presentations with the cube. He advises trainees that this type of work should only be used in the higher primary school classes and/or for enrichment.

In the final stages of the class, Mr. P. refers to a framework that had been developed in a previous class. There is no expansion on this and the matter is left hanging. Mr. P. then shows the class a bag full of manipulatives/resource materials (matches, pallet sticks, aerosol can covers, etc.) that can be used to make the teaching of mathematics more interactive.

This was a lively presentation by Mr. P. and his colleague, Mr. Y., in which interactive techniques were used. Mr. Y. later lamented the fact that it was necessary to teach the lessons through demonstrations instead of through active hands-on activities performed by the trainees themselves, because of the lack of suitable facilities and equipment.

Throughout the presentation, trainees were generally attentive. Both lecturers interspersed their presentations with teacher-initiated questions. Trainees responded willingly but the responses were nearly always short phrases or sentences. There was only one instance of a trainee-initiated question to which Mr. P. responded by directing the trainee to the relevant portion of the text. Most trainees were observed taking notes throughout and, in a few instances, the lecturer would pause to facilitate note taking.

The inductive reasoning in the earlier part of the lesson was presented at a slower pace, and in more detail, than in the latter parts of the lesson. Trainees with a weak mathematics background might have experienced no difficulty with the earlier parts of the lesson, but might have found the concept load and the more rapid rate towards the end difficult to handle.

3.7. Summary

The descriptions of these six lessons provide some snapshots of what happens in the college classroom. It is to be noted that the researchers were only able to act as observers in the classes of lecturers who volunteered to be a part of the research project. This means, therefore, that one cannot generalize based on the snapshots obtained. However, there are a few features of these snapshots that provide information on some of the experiences of trainees.

It is noteworthy that none of these teaching/learning sessions involved a “straight” lecture. Mr. M.’s class was closest to this delivery format but, in many ways, was quite different to what one would expect in a normal lecture. His engagement with the discipline and with his students and their real-life experiences was quite striking.

In two of the five classes described above (one science class and one mathematics class), some form of group work was used. Both of these lecturers were able to put together enough equipment and materials to permit direct hands-on activities by trainees. These two lecturers embrace the philosophy that the subject should be taught to the trainee in a manner congruent with the way in which the trainee would teach his/her pupils. In other classes, lecturers simply made reference to how the subject might be taught to the primary school pupil in their presentations. These two different styles of dealing with the theory/practice interface might yield differing results when trainees are placed in the actual classroom situation.

A significant proportion of class time involved trainees in higher-order thinking activities. However, there were no instances where trainees were able to pursue problems that they had thought of--all of the sessions had fixed and finite goals.

One lecturer alluded to the fact that a fair amount of “straight” lecturing occurs in the college. This project was not able to determine how widespread this practice is.

CHAPTER 4

Summary and Discussion

4.1. The Research Questions

The research questions that guided the investigation are used as the basis of the presentation of the following summary of the findings of the study.

- **What are the stated philosophies underpinning the teachers' college curriculum?**

There is no stated philosophy underpinning the teachers' college curriculum in Trinidad and Tobago. This is of concern to college administrators and staff, since the teachers' college curriculum document dictates, to a large extent, what happens in the colleges. Proposals regarding policy issues have been submitted by the colleges to the Board of Teacher Training for consideration.

- **What is the nature of the teachers' college curriculum?**
- **How is the delivery of the teachers' college curriculum organized?**

The teachers' college curriculum is differentiated into academic studies and teaching practice. The academic studies component comprises a basic compulsory core, a basic optional core, and an elective core. Education or professional courses and subject specialities make up the basic compulsory core. The basic optional core is made up of courses in the fine arts, while the elective core is made up of courses in the various subject specialities, from which student teachers may choose to specialize.

The programme is of two years duration. All courses are delivered at the colleges except for the teaching practice that takes place in cooperating schools throughout Trinidad. The teaching practice allows the student teachers to engage in blocks of teaching practice in primary schools for a total of 12 weeks.

All courses are subject to continuous assessment and are also assessed by a final examination. Course outlines generally consist of a rationale, aims, objectives, and content as well as pedagogy and assessment procedures. Generally, there was coherence among these areas except for language arts, where different, strongly contrasting theories of language learning seemed to have created some lack of congruence in the sub-components of the course outline.

- **What do teacher educators (lecturers) claim are their intentions with respect to the content, method of delivery, assessment, and outcomes of their teacher training efforts?**

With respect to most of the courses, there was a reasonable level of congruence between the documented curriculum and the curriculum as espoused by the lecturers. However, there were some areas of unease for these lecturers. There were concerns about establishing the appropriate amount of content that needed to be taught, the time frame for delivery, and the relevance of the material presented. Special challenges were highlighted such as the problem of negotiating the theory/practice interface; the lack of coordination of roles among lecturers in different departments; and the task of trying to make curricular decisions that would adequately meet the needs of students, while simultaneously trying to reconcile opposing philosophies in the field of study.

Lecturers acknowledged that trainees come to them with differences in abilities and previous knowledge. They claimed that they try to consider these differences and also the (sometimes large) class size and peculiarities of the various subjects when planning for delivery of the curriculum. In addition, lecturers stressed the importance of making the curriculum relevant to the trainees' lives. They held personal philosophies about the nature of their subjects and how these should be taught, and they seemed to have a clear vision of the type of teachers they wanted to produce. Generally, there was the view that the graduates from the teachers' college programme should be able to plan classes to meet the specific needs of the pupils in their charge; present interesting and innovative lessons that are mainly student-centred, and which make adequate use of teaching resources; manage their class well; and administer appropriate evaluation tasks.

- **How well do the stated intentions of teacher educators mesh with what is revealed in the curriculum in action?**

The stated intentions of the teacher educators did articulate to a large extent with the enacted curriculum. Teacher educators used a range of teaching strategies, both direct and indirect. Even when the direct lecture method was the dominant strategy used, there was significant interaction between lecturer and trainees through the use of questioning techniques that tapped trainees' personal experiences, or enabled them to explore/analyze issues from broader perspectives. Attempts were made to make topics relevant to trainees' experiences and, where appropriate, familiar materials/scenarios were used to concretize lessons. Links were often made to primary school teaching but, at times, these links were somewhat oblique, and this is probably one area that is in need of further attention.

4.2. Discussion

The above findings must be examined in the overall context of the present educational landscape of Trinidad and Tobago. The education system is undergoing some restructuring with the introduction of programmes such as the *Continuous Assessment Programme* (CAP) at the primary level; the *Secondary Entrance Assessment* (SEA),

which is a new form of the examination at the primary/secondary interface that consists only of supply-type items; and the *Secondary Education Modernization Programme* (SEMP), which is aimed at a complete overhaul of the secondary school sector. The teachers' college curriculum must, therefore, be one that can respond readily and in meaningful ways to changes in the system.

This study revealed that there are several curriculum issues that occupy the minds of lecturers at the teachers' colleges. In spite of the fact that there have been some meetings with Ministry of Education officials on these issues, the machinery for effecting change and dealing with needs, problems, and changes in the system seems to be very slow. The coming together of key players at the two state colleges to discuss important issues is heartening, but there remains the serious problem with respect to official consideration and implementation of new plans.

The lack of an appropriate mechanism is even more apparent when one considers that the School of Education at UWI offers further education programmes for teachers at the primary level, with a Teacher's Certificate from a teachers' college being a matriculation requirement. However, there are no official links between the teachers' colleges and the School of Education. There is an urgent need for a Joint Board of Teacher Education, with representation from all institutes involved in teacher education, to determine policy with respect to the preparation and professional development of teachers, as well as teacher education curriculum development. This will ensure that there is articulation and coordination among the teacher education programmes, and that there are appropriate opportunities for the ongoing professional development of teachers. In fact, this was one of the recommendations in the *Education Policy Paper* (Trinidad and Tobago. National Task Force on Education, 1994). It is also imperative that such a Board table mechanisms for decision making, for implementation of decisions, and for collaboration among the various stakeholders, including the cooperating schools.

One aspect of the lack of coordination in the system that is in need of urgent attention is the relationship (or lack thereof) between the OJT programme and the teachers' college programme. It seems to be a colossal waste of resources to have a pre-training programme that is not linked in any official way to the teachers' college programme. One of the outcomes of this is that trainees enter the teachers' colleges with varying backgrounds in the area of pedagogy, depending on whether or not they had been participants on the OJT programme. In addition, trainees also come with varying backgrounds in the academic areas since some are CXC/O Level graduates while others are A Level graduates. The common basic programme that is pursued by all trainees does not take cognizance of these differences in entry characteristics. The streamlining of the college curriculum to take these differences into account is critical. A few lecturers have suggested that the curriculum can be re-engineered in the form of modules, with trainees gaining exemptions from modules on the basis of their background experiences and qualifications. This approach would necessarily mean that the more advanced modules would have to be structured to make adequate use of trainees' prior knowledge and experiences in the teaching/learning process.

The present documented curriculum of the teachers' colleges, with the absence of an overarching philosophy that could guide direction, places great value on assessment. In fact, this strong value component has shaped the orientation of the programme, so that trainees are outward looking (toward the product of their training experiences, i.e., the award of a certificate), rather than inward looking (at the processes of becoming, i.e., their growth and development). The slant towards a *technical rationality model* that is highly managerial, and which looks at the application of educational knowledge for the purpose of attaining given ends, also tends to shift the focus of teacher education to the product, rather than the process.

The way in which the curriculum is organized and delivered represents a heavy load for both students and staff. Students are timetabled for almost all the periods per week, yet it is still impossible to devote the number of hours for each subject that the documents suggest (Lewin & Keller, 2000). Though the organization of teaching differs between colleges, students are taught mostly in large groups (between 60-200), except for the elective subjects where numbers can be much smaller. Both the lengthy syllabus and the large class size make it difficult for the tutors to model interactive, participatory styles of teaching unless they are particularly resourceful, committed, and creative. Teaching loads work out, on average, to be less than 50% of the total number of periods per week, but this hides a wide variety. In addition, during much of the year, lecturers are visiting schools to supervise students on teaching practice at the same time as running their courses in college. This raises questions of whether the curriculum time for both staff and students could be organized in more effective ways. (See Lewin & Keller, 2000 for further discussion of this issue.)

The role of the lecturer/teacher educator is also critical. There is the need for more carefully defined and developed structures for training and re-training of teacher educators, more so in the context of the current educational reform initiatives. It should also be noted that the teacher educators who were involved in this project represent just about 20% of the total staff at the colleges. These teacher educators were willing to be a part of the project, but there were others who were not willing to be so involved. It is therefore unclear whether the types of teaching strategies observed in the college classrooms, and the nature of the teaching practice supervision witnessed, are common across the full range of teacher educators. It is, therefore, difficult to specify the extent of re-training that might be needed.

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