**Association for the Development of Education in Africa**

**ADEA Biennial Meeting 2003**
**(Grand Baie, Mauritius, December 3-6, 2003)**

## Country Case Study - NAMIBIA

# Practising Critical Reflection in Teacher Education: Case Study of three Namibian Teacher Development Programmes

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The National Institute for Educational Development (NIED): Namibia

**Working Document**
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**ABBREVIATIONS**

| | | |
|---|---|---|
| AR | - | Action Research |
| BES | - | Basic Education Support |
| BETD | - | Basic Education Teachers Diploma |
| CA | - | Continuous Assessment |
| CCG | - | Curriculum Coordinating Group |
| CPI | - | Critical Practitioner Inquiry |
| CST | - | Circuit Support Team |
| DNEA | - | Directorate of National Examinations and Assessment |
| ETP | - | Educational Theory and Practice |
| HIGCSE | - | Higher International General Certificate of Secondary Education |
| IGCSE | - | International General Certificate of Secondary Education |
| INSET | - | In-service |
| JSC | - | Junior Secondary Education |
| LCE | - | Learner-centred education |
| LPE | - | Lower Primary Education |
| M&E | - | Monitoring and Evaluation |
| MBESC | - | Ministry of Basic Education, Sport and Culture |
| MHETEC | - | Ministry of Higher Education, Training & Employment Creation |
| MEC | - | Ministry of Education and Culture |
| NAD | - | Namibian Dollar |
| NERA | - | Namibia Educational Research Association |
| NIED | - | National Institute for Educational Development |
| PBI | - | Practice-based Inquiry |
| PRESET | - | Pre-service |
| SAS | - | Self assessment System |
| SBS | - | School-based studies |
| SIP | - | School Improvement Program |
| SSG | - | Support Study Groups |
| TERP | - | Teacher Education Reform Programme |
| UNAM | - | University of Namibia |
| USAID | - | United States Agency for International Development |

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**ACKNOWLEDGEMENTS**

The Research Unit at the National Institute for Educational Development in Namibia has pleasure to acknowledge the contributions of ADEA in initiating and sponsoring this research.

Thanks to all the contributors: DK LeCzel, Muhammed Liman, Hertha Pomuti and Patti Swarts, who wrote and completed the research for different parts of this case study. It has been a very rewarding experience to work with an innovative and committed group like them.

We also want to acknowledge the technical support; timely and relevant feedback from our theme coordinator Martial Dembele.

I personally appreciate the parts that my colleague from NIED played in this research. Miriam Hamunyela, in conducting part of the data gathering and analysis and Marie van der Merwe in doing the book-keeping and finances.

Lastly, we want to acknowledge the professional staff and student teachers of the Rundu and Ongwediwa Colleges of Education, as well as the BETD graduates in Rundu for their willingness to participate in this research and their openness during the focus group discussions. Hopefully the outcomes of this research would benefit the BETD programme and participants.

**Mariana van Graan**

## EXECUTIVE SUMMARY


### The Research

In this research three sub-studies are described which form part of the Namibian case study on how critical practitioner inquiry was adopted and adapted in three teacher education projects. The implications of the findings and the recommendations for ***a way ahead*** in teacher education are proposed.

The studies reported in chapters 3 and 4 of this study are part of ongoing assessment on the pre-service and in-service Basic Education Teacher Diploma (BETD PRESET and INSET). In chapter 3, the challenges and successes of implementing a critical practitioner inquiry approach through action research in the BETD PRESET programme is investigated. In chapter 4, the impact of a practice-based inquiry model in the BETD INSET programme is determined. In chapter 5 of this study, a USAID initiative of a school and teacher self assessment system, as part of a school improvement programme in four education regions in northern Namibia, is described.

In their work they have found that teachers are able to reflect critically on their own practice and that these self assessments become in line with their real performance on indicators as observed by outside observers. This happens gradually, as they progress through the process applied in the SAS/SIP model.

The primary data of this case study was gathered through a literature research. Each of the first two sub-studies studies followed its own methodology, which is clearly described in the various chapters.

### The main findings

Although teacher educators report that they value critical reflection as a strategy for solving problems and changing practice, there is evidence that many have a shallow and poor understanding of critical practitioner inquiry in that it operates on the 'technical' rather than the 'critical' level. They therefore do not provide adequate support to students, which result in less than satisfactory action research projects of students.
There is evidence that critical practitioner inquiry has influenced the classroom practice of some BETD graduates and provided them with skills which they apply in their teaching.

The main findings from the sub-study on the impact of the practice-based inquiry model on BETD INSET are:
It was found that only 23% of sample teachers demonstrated adequate teaching according to desired teaching approaches. Generally it was felt that teachers are aware of the necessity to incorporate learner-centred principles in their teaching, but that they lack the skills to do it.
While the model assumes that teachers will relate theory to practice or practice to theory, the findings indicates that teachers have difficulties in making a connection between theory (readings in the support material) and practice (inquiry activities).

In their work with the School Improvement Programme/Teacher and School Self Assessment it was found that teachers and schools are able to reflect critically on their own practice and that there is a positive relationship between the self assessment scores and the outside observers' scores on selected indicators. However, this happens gradually, as they progress through the process of self assessment applied in this model.

**The main recommendations**

1. It is strongly recommended that we revisit the recommendations of earlier consultancies on teacher education[1], especially those recommendations to do with policy formulation, coordination and quality assurance. It was found in this case study that there are constrains to implement critical practitioner inquiry and other innovative initiatives without a clearly stated and agreed policy framework which firmly guides and defines the parameters within which to plan continuous professional development for educators.
2. A substantial staff development program for teacher educators are urgently needed to support further implementation of critical practitioner inquiry in the in-service and pre-service teacher education models in Namibia.
3. A strong professional support network should be developed to give continuous support for practising teachers graduating from BETD PRESET and INSET. Continuation of critical practitioner inquiry requires support structures so that teachers can benefit from ongoing school-based support from peers and other professionals.
4. The model on School Improvement Program/Self Assessment System to be considered as a starting point for systematic inquiry on a wider level than the present. A consideration in adopting this model is that it is labour-intensive and relatively expensive in terms of unit cost (see chapter 5). Careful planning will have to be done to, at first, base the model in schools and circuits that have the capacity to sustain it.

[1] See the 'Ten-Year Plan for Educator Development and Support in Namibia', as well as the 'Presidential Commission on Education, Culture and Training'

# INTRODUCTION

## HISTORICAL BACKGROUND LEADING TO EDUCATION REFORM

The history of Namibia leading to education reform is well documented, but could not be conceptualised and described better than in the words of the present Minister of Higher Education, Training and Employment Creation (MHETEC), Nahas Angula:

*On March 21, 1990, Namibia emerged as an independent and free nation after more than a hundred years of colonial domination and apartheid oppression. More important, Independence was a result of protracted struggles by the people of Namibia. In the imperialist scramble for African territory, Namibia became a German colony. After World War I, however, Namibia became a mandated territory under the administration of South Africa, which imposed racial policies of apartheid that had a devastating impact on the political, social, cultural and economic life of the Namibian people* (1999: 8).

Thus, at Independence, Namibia inherited a society segregated along ethnic and racial lines which ensured privilege of the white minority, in order to strengthen and maintain their political authority and economic power. The apartheid ideology and policies led to dramatic inequalities and disparities in the quality of education services rendered to the various ethnic groups, as education played a major role in entrenching the privileges of the white minority. Education became part of the politics of exclusion and oppression of the majority of Namibians.

After Independence, the new government entered into a social transformation process to equalise society. According to Swarts (1998: 33) a re-evaluation and reconstruction of the educational system was central to this process. The entire education system had to be transformed and reformed in line with the major post-Independence goals of *access, equity, quality* (pedagogical effectiveness and internal efficiency) and *democratic participation.* These goals necessitated a paradigm shift from a content-based education system for a few to a learner-centred system for all. This required fundamental changes in the way teachers had to be prepared for their task – in terms of teacher attitudes and teacher competence – and called for fundamental changes in the content and processes of teacher education as well. Indeed, in the light of the socio-political context described above and the adoption of learner-centredness, critical practitioner inquiry and reflective practice were adopted and became key concepts orientating teacher education. These concepts permeate the pre-service (PRESET) and in-service (INSET) Basic Education Teacher Development (BETD) programmes that the National Institute for Educational Development (NIED) was mandated to design and develop.

### *ABOUT THE SUB-STUDIES*

The studies reported in chapters 3 and 4 are part of ongoing assessment on the above programmes. In chapter 3, Van Graan examines the challenges and successes of implementing a critical practitioner inquiry approach in the BETD PRESET programme. The main findings on NIED's research in two colleges of education are that:

Teacher educators and student teachers report that they value critical reflection as a strategy for solving problems and changing practice.

Teacher educators have a shallow and poor understanding of critical practitioner inquiry (CPI) processes and therefore do not provide adequate support to students. This eventually results in poor action research projects of students. (CPI is clarified in Chapter 2).

There is evidence that both teacher educators' and student teachers' perceptions of CPI operate at the 'technical' rather than 'critical' level.

Teacher educators admit their limited understanding of the key concepts around reflective teaching. They express a desire for more professional development in order to implement critical practitioner inquiry successfully.

There is evidence that CPI has influenced the classroom practice of some BETD graduates and provided them with skills which they apply in their teaching.

In chapter 4 Pomuti assesses the impact of Practice Based Inquiry (PBI) INSET model (described in chapter 4) on teachers' classroom practice, pedagogical understanding and reflective skills. The main findings from this sub-study are:
It was found that only 23% of sample teachers demonstrated adequate teaching according to desired teaching approaches. Generally it was felt that teachers are aware of the necessity to incorporate learner-centred principles (e.g. promoting collaborative learning, accommodating individual differences and incorporating an integrated approach to learning and teaching) in their teaching, but that they lack the skills to do it.
None of the teachers in the sample of her study demonstrated a link between understanding and teaching skills at an adequate level of accomplishment. Only three teachers demonstrated 'adequate' understanding. The study also reveals that teachers did not reach high levels of reflection.

While the model assumes that teachers will relate theory to practice or practice to theory, the findings indicates that teachers have difficulties in making a connection between theory (readings in the support material) and practice (inquiry activities). They seemed to have read the support material without reflecting on the inquiry activities. She concludes that teachers are not likely to relate theory to practice if there is no mediation and they have limited analytical tools.

In chapter 5, LeCzel and Liman report on a USAID initiative of a teacher self assessment system (SAS) as part of a school improvement programme (SIP) in four education regions in northern Namibia. In their work they have found that teachers are able to reflect critically on their own practice and that these self assessments become in line with their real performance on indicators as observed by outside observers.[2] This happens gradually, as they progress through the process applied in the SAS/SIP model.

Together the three sub-studies reported in chapters 3, 4 and 5 illuminate how critical reflection is adopted and adapted in teacher education in Namibia. Chapters 1 and 2 provide the background against which the contexts in these studies need to be understood. In chapter 6, we reflect on the implications of the findings of the three sub-studies and the recommendations for the way ahead in teacher education.

[2] In a separate study conducted by NIED in 2002 it was found that Lower Primary teachers' assessment of their own practice do not correlate positively with the assessment of the outside observers on chosen indicators of learner-centredness and application of continuous assessment. It was found that both trained and untrained teachers rated their own performance on these indicators significantly higher than the observers.

## CHAPTER 1

## BASIC EDUCATION REFORM AND CURRICULUM RENEWAL

Patti Swarts and Mariana van Graan

### *BASIC EDUCATION REFORM*

In Namibia, education is regarded as the keystone of development. This is reflected in the proportion of government revenue that is spent on education. Around 25%, it is one of the highest in the world and the Ministry of Basic Education is, similar to other parts of the world, the country's largest employer with over 20 000 employees, 18 000 of whom are teachers.

The expansion of the education system since Independence has been dramatic with an estimated enrolment rate in primary education now of around 93%, and mechanisms have been developed to reach out to marginalised groups of children, like the indigenous, nomadic San and OvaHimba.

In practical terms, the implementation of the education reform meant that the national education reform goals of *access, democracy, equity* and *quality* needed to be reached. Besides the change of official language and gradual change of medium of instruction, changes in classroom practice are also expected from Namibian teachers. This realized through a huge training effort on both national, regional and cluster levels to familiarise teachers with more appropriate learner-centred approaches and teaching methods.

One of the core concepts in curriculum and pedagogical renewal in post-Independence Namibia is Learner-centred education. It is important to have some conceptual understanding of the LCE as it is integrated in curriculum and teacher education renewal.

#### *What Is Learner-Centred Education?*

Learner-centred education (LCE) has a central position in the reform. Approaches to teaching and learning in Namibia should be learner-centred and this concept relates to attaining the educational goals of access, equity, quality and democracy.

In Toward Education for All, MEC defines LCE as follows:

- *the starting point is the learners' existing knowledge, skills, interests and understandings, derived from previous experience in and out of school;*
- *the natural curiosity and eagerness of all young people to learn, to investigate and to make sense of a widening world must be nourished and encouraged by challenging and meaningful tasks;*
- *the learners' perspective needs to be appreciated and considered in the work of the school;*
- *learners should be empowered to think and take responsibility not only for their own, but also for one another's learning and total development; and*
- *learners should be involved as partners in, rather than receivers of, educational growth* (MEC 1993: 60).

Pomuti describes the key elements of Learner-centred education as interlinked and sometimes overlapping:

*Learning as a contextual- and transformative process…*
*Understanding as a socially constructed and reflective process…*
*Education as an interactive, participatory, collective and negotiated process…*

*Learning and socialization as a reconstructive process towards a democratic society…* (1998: 14-15).

The view of the learner, teacher and learning as described in Namibian based policy documents and papers fall within the parameters of constructivism, leaning strongly towards social constructivism, with the discourse around LCE drawing on the work of Dewey, Vygotski and Bruner, among others.

## *CURRICULUM RENEWAL AS A RESULT OF THE EDUCATION REFORM*

As this case study describes innovations and initiatives that will affect the quality of teaching and learning in Basic Education (Grades 1-10) it is important to take note of some of the major changes in the Basic Education curriculum. Following is a summary of the curriculum renewal initiatives in these phases of schooling, which inevitably affect teacher education in the pre-service and in-service sectors.

### Curriculum Goals

The general philosophy behind the Namibian intended curriculum is clearly laid out in the policy documents Towards Education for All (MEC, 1993) and The Pilot Curriculum Guide for Formal Basic Education (MBESC 1996). In addition to mastery and application of knowledge and understanding and acquiring of skills and values, these documents refer to a preparation for the responsibilities and challenges of adult life and also to mastery of functional literacy, numeracy and scientific skills. This strong emphasis on preparation for life as well as subject understanding runs throughout the objectives of the syllabuses.

### Major Curriculum Changes in Recent Years

Immediately following Independence, the curriculum was localised and after a number of minor revisions of the detail in the mid-nineties, has remained largely unchanged since. Success, in terms of learner outcome, is measured in whether learners have successfully mastered the basic competencies prescribed in the subject area syllabuses. These competencies are described in terms of knowledge, skills and values.

A major curriculum review covering all grades is now well under way and the target date for implementing the revised curriculum, including a fully localised senior secondary examination system, is January 2006. One of the objectives of this curriculum review is to ensure that the curriculum is streamline and cost-effective and the pre-vocational and vocational subjects will receive attention in this regard. Furthermore, emerging issues like HIV/AIDS, Environmental Education, Gender Sensitivity and Human Rights & Democracy would be integrated more aggressively than is the case at present. This would be implemented in all phases and subjects where appropriate.[3]

[3] In the Lower Primary phase there is currently a pilot project underway to write stories around gender sensitivity and HIV/AIDS. These stories will be written by final year PRESET BETD teachers during August-October 2003, published in the Namibian languages and used as readers to raise awareness and improve access to literature.

**Renewal of Evaluation Policies and Practices**
After Independence Namibia moved from a norm-referenced assessment and evaluation system, driven by tests and examinations, to criterion referencing in assessment and evaluation practices, characterised by a combination of formative, continuous and summative assessment. This move has not been smooth and problems are still being experienced with the actual implementation of alternative forms of assessment after more than 10 years of reform.

Continuous Assessment and examinations are mostly school-based, except in the case of the Gr. 7, Gr. 10 and Gr. 12 national and international examinations. The purpose of the Grade 7 examination is to take stock of whether learners have mastered the competencies of the Senior Primary curriculum. Entrance to Junior Secondary education is not determined by performance in the Grade 7 national examination, but after this examination there is usually a significant dropout of learners.

The Junior Secondary Certificate (JSC), taken at the end of Grade 10, is a national, external examination managed within Namibia by the Directorate of National Examinations and Assessment (DNEA). This examination is used as a selection instrument for admission to Grades 11 and 12 and thus the International General Certificate of Secondary Education (IGCSE) and higher level of the same examination (HIGCSE), which are prerequisites for entry to tertiary education.

It is significant to know that the returns on primary and secondary education are extremely low, to entirely non-existent in terms of access to the formal labour market. However, returns on tertiary education, in Namibia, are very high. The result of this trend is that a large majority of youth are without jobs in the formal sector, while a small percentage who gained access to tertiary education all have opportunities to get jobs in the formal labour market.

## *FACTORS CHALLENGING THE SUCCESSFUL IMPLEMENTATION OF THE EDUCATION REFORM*

Among the challenging factors to the attaining of the goals of equal, quality and democratic education for all, three will be discussed in this study, namely the level of English Proficiency of teachers and learners, the Socio-economic realities and the potential effect of HIV/AIDS on providing quality education.

**Language and its Impact on the Quality of Education**
Namibia has a multicultural population in which thirteen languages are recognised for educational purposes. The language of instruction from Grade 4 upwards is English, which is the first language of only a tiny minority of the population and not a language that is often heard in wider and everyday communication. Learners therefore learn in their second, third or fourth language.

The low proficiency in English, especially in the northern education regions and among specific groups of teachers like Lower Primary and untrained teachers, is widely regarded a considerable impediment to educational progress. It is recognised that it is a learner problem mainly because it is a teacher problem. In a survey[4] conducted on a national level to determine the English proficiency level of Namibian teachers it was established that especially large numbers of Lower Primary and untrained teachers' English proficiency is not at a level where they should teach through the medium of English.

Teachers teaching in at least three of the four northern education regions also scored significantly lower in the Vocabulary, Reading and Usage tests and their use of English in the classroom was in

[4] See: MBESC February 2000 ***English Language Proficiency of Namibian Teachers***: Report on Research into English Language Proficiency of Teachers and Student Teachers

many cases found to be reason for concern.[5] In a learner-centred approach the fluent use of the language is regarded as crucial, because teachers are expected not to lecture exclusively. They ask open questions, redirect and rephrase them, elicit information, provide multiple examples, explain complex concepts in different ways, give clear instructions, prompt for answers and responses and praise and encourage learners. These speech acts often happen at the spur of the moment, as the way learner-centred teaching and learning progress are not as predictable as in the case of lecturing. However, anecdotal evidence from many working in the field, suggests that considerable improvements have been made since 1990.

**Socio-Economic Realities of a Post-Independent Namibia and Their Potential Impact on the Quality of Education**

Namibia is classified as a member of the lower-middle income group of countries and in many indicators, it is above the average of the group. Table 1 below gives a number of relevant economic indicators. A cause for concern is the Gini coefficient, which is one of the highest in the world.[6] Typical European Gini coefficients are less than 0.4 but 0.6 - 0.7 are not uncommon in Africa. The high Gini coefficient means that there is a large pool of low to very low-income families.

**Table 1 Some National Socio-economic Indicators**

| Indicator | Value | Year | Source |
|---|---|---|---|
| Population | 1.82m | 2001 | Provisional 2001 census results |
| % Population under 15 | 43 | 2001 | Provisional 2001 census results |
| Approx % Population in urban centres | <30% | | Provisional 2001 census results |
| GDP/capita | USD 2060* | 2000 | World Bank, 2001 |
| GDP growth rate | 4.1% | 1993-2000 | National accounts |
| Annual inflation rate | 9.3% | 2001 | Windhoek Consumer Price Index |
| Annual Government expenditure on education | mNAD1863 | 1998/9 | Presidential Commission on Education, Culture and Training |
| Education expenditure as a percentage of Government expenditure | 25% | 1998/9 | Presidential Commission on Education, Culture and Training |
| Budget deficit | 5.3% | 2001/2 | World Bank 2001 |
| Gini coefficient | 0.7 | 2002 | National household income and expenditure survey, 1995 |
| Unemployment rate as a proportion of economically active youth | 35% | 1997 | Labour force survey |
| Estimated adult HIV infection rate | 19.5% | 1999 | UNAIDS June 2000 |
| Life expectancy at birth | 52 years | 1997 | UN 1999 |
| Literacy rate (% age 15+) | 18% | 2000 | World bank, 2001 |
| Net primary enrolment | 93% (91% m 96% f) | 1998 | Presidential Commission on Education, Culture and Training |
| Net secondary enrolment | 38% | 1998 | Presidential Commission on Education, Culture and Training |

Based on the 2001 exchange rate of NAD 8 to 1 USD
Sources, www.ippr.org.na, www.worldbank.org/data

This economic inequality has always been reflected in the education sector before Namibia's Independence. Angula outlines the pre-Independence situation as follows:

[5] At present, materials in English for Teaching Purposes are being developed at the elementary level for those teachers who are identified to need support at this level. These materials and accompanying contact courses would be trailed during September 2003 in the Rundu Education region.

[6] This is a measure of income inequality, zero representing a situation where everyone has the same income and 1 the condition where all the income is in the hands of a very small section of the population.

*This inequality was also reflected in the area of education and training, with children of European descent being allocated approximately NAD 1 537[7] per year per head, whereas African children were allocated NAD 486 per head* (1999: 9).

At present, this situation has largely been equalized. The average projected expenditure per learner, reported in 2004 would be NAD 2950. This figure is based on the new staff norms and will be implemented during 2003, to be fully operational in 2004. However, this average figure does not reflect the persistent inequalities of distribution among education regions, as well as among schools within a region. Within the present budget allocation to Basic Education it is difficult to address previous inequalities, as it only makes provision for the efficient and effective implementation of the Ministry of Basic Education's current strategic plan (Clegg & Van Graan, June 2002).

The unequal distribution of resources is a major challenge to the Ministry of Basic Education, Sport and Culture (MBESC) and to individual schools to deliver quality education with a serious lack of resources in many education regions and schools. Many teachers express that they feel seriously challenged by this situation, especially in the previously disadvantaged northern education regions of Namibia, where professional development opportunities are few and teachers are challenged to deliver quality education in an unequal society.[8] These are also the regions where the majority of teachers in this case study, teach.

**HIV/AIDS and its Impact on Quality Education**

A stark reality that Namibian society is facing at the moment is the consequences of the HIV/AIDS endemic. Anecdotal reporting shows that teachers are absent more regularly and are dying at an increasing rate of late. Recent projections have suggested that every 1 in 5 or 1 in 7 adults are infected (depending on which model is used in the projections). Accumulated increased death rates among teachers and absenteeism will undoubtedly affect the quality of education in the near future.

Less obvious impacts that have been reported in a recent survey carried out in the MBESC are delayed and declining enrolment of learners; erratic attendance before or after household deaths; indiscipline; hidden discrimination and stigmatisation; and psychological impact on families who have been directly touched by the endemic. A further concern is the number of AIDS orphans, a number that is projected to rise steeply over the next few years and questions are being raised about the capacity of the system to respond to orphaned and vulnerable children *(ibid).*

Considering the above-mentioned social and economic factors and the inevitable negative impact that they have on the quality of educational delivery in Namibian classrooms, our teaching force is required to be critical inquirers and innovative problem solvers. Both are crucial qualities and skills needed to maintain the level of quality ***education for all*** that we have already achieved over the past decade.

[7] At the time of conducting this study the exchange rate was NAD 8 to US$ 1. The South African Rand (to which the Namibian dollar is tied) dropped against international currencies by almost 40% in 12 months, April 2001 to March 2002, but has since begun a slow recovery

[8] Data used from research being conducted at present under the auspices of the Spencer Foundation.

## CHAPTER 2

## TEACHER EDUCATION REFORM: AN AVENUE TO ACCOMPLISHING QUALITY EDUCATION FOR ALL

Patti Swarts and Mariana van Graan

Teacher education was considered one of the most important areas of reform at Independence, because of teachers' strategic role in the reform efforts. Within the new paradigm of education, teachers were seen to be 'both agents and implementers of change', and thus had to be adequately prepared for the task.

In teacher education a reflective pedagogy was encouraged through both the pre-service and in-service BETD, with the PRESET programme starting in 1993 at four Colleges of Education, producing its first cohort of teachers in 1995. Swarts describes the ethos of the BETD programme as follows, quoting from the Broad Curriculum for the Basic Education Teacher Diploma:

*The goal of the BETD is to provide a national and common teacher preparation related to the needs of basic education, the educational community, and the nation at large. It strives to foster understanding and respect for cultural values and beliefs, "social responsibility," "gender awareness and equity." It also strives to instil an awareness of how to "develop a reflective attitude and creative, analytical and critical thinking; understanding of learning as an interactive, shared and productive process; and enabling the teacher to meet the needs and abilities of the individual learning"* (1999: 39).

Therefore, to meet the new expectations and demands of the reforming basic education system after Independence, a mere re-organisation and integration of elements of the pre-Independence teacher training programmes were neither politically acceptable, nor practically feasible (Swarts 1998: 46). Bernstein (1971) argues that for educational change to have any social significance, it has to restructure the way knowledge is organised. Salter and Tapper (1981: 21) elaborate further on this notion in stating that

*The key to change, therefore, is to effect a reorganization of those social forces that determine the authority patterns and the structure of knowledge.*

It was recognised that teacher educators hold the position of authority and control the structure of knowledge to a certain extent, and therefore it was crucial to work with them on changing their beliefs, attitudes and practices. The role of the teacher had to be examined very closely in relation to the stated goals and policies and had to be redefined to align them. According to Swarts (1998: 46) the design of the new teacher education programme rested on the premise that deliberate and conscious interventions were to be made through the teacher educators and the teacher education programme to meet the demands of the basic education system. The Ministry of Education and Culture (MEC) in its policy document, Toward Education for All (MEC, 1993: 37) expresses itself thus on this issue:

*Perhaps the most important challenge in improving the equity of our education system is to ensure that our teachers are well prepared for the major responsibilities they carry. More than anything else, it is the teacher who structures the learning environment.*

*It is essential therefore, that we help our teachers develop the expertise and skills that will enable them to stimulate learning. Their professional education must begin before they enter the classroom and continue during the course of their professional careers.*

Holly and McLoughlin's (1989: 22) views are supported by the MEC in that it recognised the necessity of providing clear policy statements (as indicated above) in guiding the transformation of the education system, including the reform of teacher education. They assert in this respect

*Since teacher education, whether pre-service or in-service, is the deliberate and conscious effort to intervene in the personal and professional development of an individual or groups of individuals, both ethical and practical considerations require some policy statement to guide practice. Indeed, it is a fundamental professional assumption that effective education programs rest upon a teaching-learning process that is rooted to a consciously developed plan, and that effective education programs in turn rest upon well-developed education policies.*

Within the new paradigm of education, teacher education, particularly pre-service teacher education, was seen as an initial step in an ongoing process of professional growth and development as a result of the rapidly increasing and changing state of knowledge, and the new and more complex demands which are made on the role and functions of the teacher, especially in a post-independent Namibia haunted by the legacies of the apartheid regime. In the view of Swarts (2000: 13) teacher education reform in Namibia has since Independence been used as a spearhead in the efforts to transform the Namibian society within its social 'contract' to contribute to a new and different society. Freire (1971) argues in his liberatory pedagogy that education must help students/learners develop an increasingly critical view of their reality in order for them to be able to change that reality. This provides opportunity for the notion of pedagogy for empowerment and development to contribute towards promoting equality, social justice, and the reconstruction of the understanding of the concept of democracy within the framework of quality education. In Dahlström's (2002: 118) view, teacher education before Independence was part and parcel of the political agenda of separation to maintain social injustices.

It was within the context as described above, and based on the goals of education and the philosophy of Education for All, that the BETD was designed and developed.

## *THE BETD PROGRAMMES: CONCEPTUAL ORIENTATIONS*

The first realities to be taken into account in designing the BETD programmes were LCE and the ongoing process of socio-political construction. Critical Practitioner Inquiry, Reflective Practice and Action Research were adopted as means to this end.

### *Implications of LCE for teacher education*

LCE assumes a role for the teacher as well as the learner. NIED borrowed from the Broad Curriculum for the BETD the following:

*Learner-centred education presupposes that teachers have a holistic view of the learner, valuing the learner's life experience as the starting point for their studies. Teachers should be able to select content and methods on the basis of a shared analysis of the learner's needs, use local and natural resources as an alternative or supplement to ready-made study materials, and thus develop their own and the learner's creativity … A learner-centred approach demands a high degree of learner participation, contribution and production … (it) is based on a democratic pedagogy; a methodology which promotes learning through understanding, and practice directed towards empowerment to shape the conditions of one's own life* (NIED 2003: 7).

### *What Is Critical Practitioner Inquiry?*

Critical Practitioner Inquiry (CPI), a term used in Namibia since 1995, is an umbrella concept used in teacher education and professional development courses for teacher educators. Through CPI

educators attempt to address the issues of access, equity, quality and democratic participation, and to effectively implement the reform of the education system. One of the major thrusts of the reformed teacher education has been the development of reflectiveness and reflection among teacher educators, student teachers and serving teachers through critical inquiry. The BETD paradigm therefore includes the notion of the teacher as a researcher. This reflects an awareness of the importance of teachers' questions in the making of pedagogical theory. In this paradigm it is necessary for student teachers to view their questions and the challenges they come up against as avenues and opportunities leading to new insights and understandings. Critical inquiry recognises that practice takes place in contexts and that the teacher as researcher must make these contexts clear and respond to them in appropriate ways.

The critical inquiry orientation to teacher education was favoured primarily by the Namibian policy makers, because it supports the post-independence goals and philosophy of education. It emphasises the role of schools in promoting democratic values and reducing social inequalities, and therefore aims at enabling prospective teachers to become aware of the social context of schools and of the social consequences of their own actions as teachers. Little (1993: 129) argues that the most promising forms of professional development engage teachers in the pursuit of genuine problems, questions, and curiosities, over time, and in ways that leave a mark on perspectives, policy, and practice. They communicate a view of teachers not only as classroom experts, but also as productive and responsible members of a broader professional community. In this regard Calderhead and Shorrock (1997: 18) contend that teaching, and the processes of learning to teach, are highly complex and place heavy demands, of a cognitive, affective and performance nature, upon the student teacher … Learning to teach involves the development of technical skills, as well as an appreciation of moral issues involved in education, an ability to negotiate and develop one's practice within the culture of the school, the development of personal qualities and an ability to reflect and evaluate both in and on one's actions.

Van Manen (1994: 20) identified three levels in progressing to critical thinking. The first level is concerned with the effective application of skills and technical knowledge for the attainment of specified goals. This level is associated with the student teachers' engagement within the classroom and school, during the course of which they are exposed to and begin to build up a repertoire of skills. While engaged at this level, student teachers are required through the BETD programme to observe and record the social and learning processes in the school and the classroom. These skills of observation are in preparation for the activities in the next level. The second level involves reflection about the assumptions underlying specific classroom practice, as well as about the consequences of particular strategies and actions. In this regard they are assisted by their observations through diary writing and journals. The third level, sometimes called critical reflection, entails the questioning of moral, ethical and normative criteria directly and indirectly related to the classroom. At this level students are required to theorise their experiences and to make judgements and decisions.

Since teaching is so complex and demanding and takes place in a fast-changing environment, Dalin and Rust (1996: 153) argue that if teachers are to help others to learn, they themselves must continuously be engaged in learning. Education reform in Namibia has the principle of lifelong learning as one of its important pillars to support change, innovation and renewal. One of the strategies through which this can be attained, is through the engagement of reflective teachers in critical practitioner inquiry and action research activities that lead to new insights in and understanding of their own practice and educational disciplines, and contribute to the development of a codified education knowledge base. Through reflection and critical practitioner inquiry teachers learn to describe and analyse the structural features of an educational situation, issue or problem, gather and evaluate information to establish the possible sources of the dilemma under consideration in order to generate a number of alternative solutions, and learn to integrate all of the information into a considered conclusion about or solution for the problem identified. In this way they will gain a deeper understanding of their contexts and their practices, and will bring this understanding to bear on the improvement of their own teaching. Through these activities they

would also become aware of the social conditions of their practice in order to foster equity and social justice. The primary outcome is a new comprehension and a new perspective whereby they will acquire the perspective of learning as construction, and teaching as a facilitating process for optimal learning (Swarts, 1998: 142).

### *What Is Reflective Practice?*

The notion of reflective practice is defined and interpreted in many different ways in the literature on teacher education. However, Swarts (1998) points out that regardless of how the concept is defined and interpreted, reflection is generally considered by Namibia's educators to be 'a desirable attitude and practice'. According to Calderhead and Gates (1993) at a time when teachers tend to be portrayed more and more in educational policy as technicians and/or deliverers of the curriculum, reflective teaching offers an alternative that recognises the thoughtful and professional aspects of teachers' work. Bennett (1995) supports their view and maintains that the work of education cannot simply be reduced to mere technical concerns, but that teachers must engage in moral issues and reflect on their activities.

The literature on reflection suggests that teachers engage in reflective thinking and practice when they 'can describe what they do, explain the meaning of what they do, understand how they came to be like they are, and identify what they might do differently' (Smyth quoted in Etheridge, 1989: 311) in order to improve the quality of education. Reflection is thus the process through which teachers can find meaning in what they do and can understand why they do it. Zeichner (1994: 10 – 11) argues that teachers can and should play active roles in formulating the 'purposes and end of their work' and that teaching and educational reform should be put in the hands of teachers.

A key tenet for fostering and developing reflective practice in the BETD programme has been the school-based studies (SBS) component. According to Swarts (1999: 42 - 43)

*It seeks to represent essential features of practice to be learned, while enabling student teachers to experiment at low risk, to vary the pace and focus of the work, and to go back and do things over when necessary. The role of teacher educators in this respect is a crucial element in the success of a reflective practicum. A reflective practicum can involve high interpersonal intensity. The learning situation, the student teacher's vulnerability, and the behavioural worlds created by teacher educators and student teachers can critically influence learning outcomes. In coherent professional development, a reflective practicum is a bridge between the worlds of the academy (college or university) and the classroom.*

To what extent the BETD programme has been able to provide that 'bridge' and to develop reflective practitioners, is part of this investigation. Thus, the research reported in the next two chapters are an attempt to gain an understanding of the extent to which reflective practice realises in the PRESET and INSET BETD programmes.

### *What Is Action Research?*

Mayumbelo and Nyambe describe action research as an 'Avenue for Promoting Inquiry and Reflection in the BETD' (1999: 69). While focusing their critical inquiry on their own practice, student teachers critically inquire into their own practice, change and improve their practice to align it with the philosophy of learner centred education. For this process they use the action research method.

Mayumbelo and Nyambe adhere to the definition of action research provided by Howard (1999) in which action research is described as not only solving one's own problems. She writes:

*Action research is not simply research on how to solve one's problem because we come more and more to believe that this approach runs the risk of developing into a traditional research approach*

*and our evolving definition of action research cannot accept that teachers can fit into imposed structures of educational research. Our action research focuses on question posing. Practitioners pose questions appropriate to their educational environments and then explore them within the whole context through dialogue with various others for Namibia's appropriate answers (ibid).*

The advantage seen in this definition is that it does not limit pre-service teachers to only pose questions about their own classroom practice, but also explore those questions in the light of their given socio-educational contexts and that is what needs to be encouraged in teacher education in Namibia.

### *BETD pre-service programme*

The National Institute for Educational Development (NIED), established in 1991, was mandated by the MEC to guide and coordinate the design, development, and implementation of the BETD programme. Before the programme was developed, an in-depth desk study was done of the then existing teacher-training programmes to ascertain their strengths and weaknesses. A small team of Curriculum Coordinating Group (CCG) members visited teacher education institutions and educational policy units in Botswana, Zimbabwe, Lesotho and South Africa to familiarise themselves with the teacher education programmes in the sub-region, and to link in to trends concerning educational development in the sub-region. The information and data gathered through these efforts, as well as from contemporary literature on teacher development, guided the design and development of the programme.

The BETD programme places a stronger emphasis on the professional aspects of teacher education than the pre-Independence programmes, i.e. the pedagogical and social aspects of teaching have a much larger portion in the school-based component of the programme of study. It emphasises learner-centred, reflective, analytical and productive methods and approaches. It attempts to integrate various types of exposure to classroom situations so that theory and practice can be integrated meaningfully for the benefit of the student teacher. Swarts (1999: 39) contends that

*It provides a constructivist perspective on learning and student teachers are expected to experience the types of learning processes that they will have to facilitate and create for their learners. It employs critical inquiry (including action research) as a way to take the change process into the classrooms at colleges and schools and to create a new official knowledge base for education. The key questions which guided the design and development of the BETD programme were, How do student teachers learn best? What do they need to learn?*

Since most of the teachers and teacher educators at Independence were educated and trained according to the pre-Independence paradigm of education, it was necessary to orient all teachers and teacher educators toward the new paradigm, and to incorporate notions such as reflective practice, critical practitioner inquiry, and learner-centred education into both the pre-service and in-service programmes.

Tables 2 to 3 (see appendix 1) illustrate the balance of the different components of BETD offered in Colleges of Education in Namibia for teachers who would be teaching in Basic Education (Grades 1-10). They can also major in a phase specialisation, like Lower Primary. (See Table 4 below for options on specialisation). Once student teachers have selected a field of study, the subject methodologies of related school subjects become part of the course. Table 5 illustrates which subject methodologies are offered for the Mathematics & Integrated Natural Science field of study.

*BETD in-service programme*

The BETD INSET programme follow an adapted Broad Curriculum[9] and the subject options are also adapted for an INSET mode of teaching, e.g. not all the practical subjects like Physical Education and the Pre-vocational Skill subjects are offered. The INSET programme also has an adapted School-based studies, which is called School-based activities. These activities are carried out in the school where the INSET teachers are teaching and they are supervised and monitored by the school principal. The main concept used in the BETD INSET Programme is Practice-based inquiry.

*What Is Practice-Based Inquiry?*

Practice-based inquiry refers to a cycle of inquiry involving a spiral of identifying issues or areas of interest that can be improved or changed through planning, acting, observing, reflecting and evaluating the changes or improvements effected by the action (Pomuti & Howard, 1999). The notion of critical reflection is at the centre of practice-based inquiry and in this context the following two definitions inform the practice-based inquiry INSET model 'a systematic inquiry into one's own practice to improve that practice and to deepen one's understanding' (McIntyre, 1993, Cook, 1998); and 'a vehicle for bridging the gap between theoretical and practical thought' (Doll, 1993), in Pomuti (2000).

PBI is thus regarded as a tool for mediating between theory and practice. This approach provides teachers in Namibia, who are enrolled in the INSET BETD programme, to reflect critically on their own practice, while they engage with the programme materials. A more idealistic view of PBI is the one held by Elliott & Ebbutt, who describe PBI in the Namibian context as follows:

*What we have called PBI in the Namibian context emphasises the importance of teachers becoming self-aware of their "tacit theories" by researching the practices in which they are imbedded, reflecting about them in the light of the pedagogical aims and values they espouse, analysing the factors in the social context of schooling which reinforce these ideas, and then reconstructing them in ways which are more consistent with their aims and values, through a series of innovative experiments in their classrooms and school* (2000: 42-43).

[9] See MHETEC & BETD INSET (July, 2002) *Broad Curriculum* NIED, Okahandja

*APPENDIX 1 Structure of the BETD PRESET Programme*

**Table 2. BETD - Areas of learning, Credits, and Percentages of study time for Year 1**

| Area of learning | Subject | % Study time for whole year | Time focus within the year | Total credit points for the year |
|---|---|---|---|---|
| Educational | Education Theory and Practice | 20% | Throughout the year (Terms 1, 2 and 3) | 8 |
| Aesthetic and Creative | Arts and Culture | 5% | Throughout the year | 2 |
| Physical | Human Movement Education | 5% | Throughout the year (Terms 1, 2 and 3) | 2 |
| Educational and Literacy | Basic Information Science | 5% | Throughout the year (Terms 1, 2 and 3) | 2 |
| Linguistic/Academic<br><br>Social/Professional | English Communication | 10% | Throughout the year (Terms 1, 2 and 3) | 4 |
| Mathematical | Mathematics Education | 10% | Terms 1 and 2 | 4 |
| Natural Scientific | Integrated Natural Science Education | 10% | Terms 1 and 2 | 4 |
| Social and Economic | Social Science Education | 10% | Terms 1 and 2 | 4 |
| Linguistic and Literacy | Language Education | 10% | Terms 1 and 2 | 4 |
| Lower Primary Education | Lower Primary Education | 15%<br>Or | Term 3 only | 6 |
| Linguistic and Literacy | Language Education | 15%<br>Or | Term 3 only | 6 |
| Social and Economic | Social Science Education | 15%<br>Or | Term 3 | 6 |
| Mathematical and Natural Scientific | Mathematics and Integrated Natural Science | 15%<br>Or | Term 3 only | 6 |
| Technology | Pre-Vocational Subjects | 15%<br>Or | Term 3 only | 6 |
| Aesthetic | Arts | 15% | Term 3 only | 6 |
| Total | | 100% | | 40 |

**Table 3. BETD - Areas of learning, Credits, and Percentages of study time for Years 2 and 3**

| Area of learning | Subject | % Study time for whole year | Time focus within the year | Total credit points for year |
|---|---|---|---|---|
| Educational | Education Theory and Practice | 27.5% | Throughout the year | 11 |
| Aesthetic and Creative | Arts in Culture | 5% | Throughout the year focused on phase | 2 |
| Physical | Human Movement education | 5% | Throughout the year focused on phase | 2 |
| Technological | Handwork and Technology | 5% | Throughout the year focused on phase | 2 |
| Linguistic, Academic, Social and Professional | English Communication Skills | 5% | Throughout the year focused on phase | 2 |
| Major option | Teaching subject area | 35% | Throughout the year | 14 |
| Minor option | Teaching subject area | 17.5% | Throughout the year | 7 |
| Total | | 100% | | 40 |

**Table 4. Major and minor options for specialisation in the BETD years 2 and 3 indicating percentage of study time and credit points**[10]

| **BETD teacher Certified 1-7** | **Major option 35% 14 credit points per year** | **Minor option 17,5% 7 credit points per year** |
|---|---|---|
| Specialisation 1-4 | Lower Primary Education (1-4) | English, Namibian Language, Mathematics, Integrated Natural Science, Home Ecology, Agriculture, Human Movement Education, or Social Sciences (5-7) |
| Specialisation 5-7 | Languages, Social Sciences, Mathematics and Integrated Natural Science. Home Ecology, Agriculture, Human Movement Education, or Social sciences (5-7) | Lower Primary Education (1-4) |
| **BETD teacher Certified Grades 5-10 Specialisation 8-10** | **Major option grades 8-10** | Minor option grades 5-7 |
| | Languages | Mathematics, Integrated Natural Science. Home Ecology, Agriculture, or Human Movement Education |
| | Social Sciences | English, Namibian Language, Mathematics, Integrated Natural Science, Home Ecology, Human Movement Education, or Agriculture |
| | Mathematics Education and Integrated Natural Science | English, Namibian Language, Social Sciences, Home Ecology, Human Movement Education, or Agriculture |
| | Agriculture and Life Science | English, Namibian Language, Mathematics, Social Sciences, or Integrated Natural Science |
| | Commerce or Technical | English, Namibian Language, Mathematics, Social Sciences, or Integrated Natural Science |
| | Home Ecology | English, Namibian Language, Mathematics, Social Sciences, or Integrated Natural Science |

Table 5. BETD - Relationship between the Mathematics and Integrated Natural Science option and the subject methodologies that will be taken within Basic Education

| **Major options** | **Basic education subjects (methods)** |
|---|---|
| Mathematics and Integrated Natural Science 5-7 | Mathematics, Natural Science and Health Education |
| Agriculture 5-7 | Agriculture |
| Mathematics and Integrated Natural Science 8-10 | Mathematics, Life Science, Physical Science |
| Agriculture and Life Science 8-10 | Agriculture, Life Science |

[10] No College of Education offers all the options or combinations indicated in Table 4. Each college selects its programme from the curriculum offering as a whole, according to national and regional needs.

## CHAPTER 3

# REFLECTIVE PRACTICE AND CRITICAL PRACTITIONER INQUIRY IN THE BETD PRESET PROGRAMME: TAKING STOCK

Mariana van Graan
Research conducted by NIED

## *INTRODUCTION*

The study reported here assessed the impact of critical practitioner inquiry in the BETD PRESET programme. CPI is a concept developed in the education sector in Namibia to establish a new relationship between educational practice and inquiry. In this paradigm teachers are viewed as researchers who can reflect critically on their own practice and the contexts in which they teach, change their practice according to the outcomes of their inquiry, while growing professionally and changing social reality in the process. It supports 'the development of a theory *of* practice based on practitioner inquiry' (Dahlström 2002: 187) and the documentation and sharing of accounts.

Pomuti (2000) describes the assumptions underpinning CPI in the Namibian context as follows:
- Teachers should not be regarded as "technicians" who are required to apply theoretical knowledge to practical situations uncritically (Core & Zeichner, 1995).
- Teachers are active, independent learners and problem solvers rather than passive recipients of information.
- Teachers are assumed to have the required skills to critique the written knowledge (Zeichner & Liston, 1996).
- The process of understanding and improving one's own teaching should start from reflection on one's experience.
- The process of professional development is a dialectical one generating theory from practice and practice from theory (Elliot, 1985).
- Knowledge for teaching is constructed when teachers have the opportunity to reflect on their own practice, and use a process of inquiry into their own sites to learn more about effective teaching (Cobb, Wood & Yackel, 1990).
- Improved practice result from practitioners reflecting critically on their educational practices (Stevenson, 1991).

These assumptions form the basis of analysis in this study. This study focuses on the understanding of the concept in two colleges of education and how student teachers are prepared accordingly to apply critical practitioner inquiry through their action research projects.

## *THE RESEARCH*

The research was animated by the following broad research questions:
1. To what extent do teacher educators and student teachers understand the underlying philosophy of CPI?
2. To what extent does the BETD PRESET programme prepare student teachers to conduct CPI during School-based studies and afterwards during their teaching careers?
3. On what level do student teachers reflect when they are completing their action research projects?

*RESEARCH DESIGN*

To inquire about the outcomes of reflective practice and critical practitioner inquiry in the BETD PRESET, the following data sources and data gathering techniques were used:

-**Masters Degree dissertations:** Three Masters Degree dissertations completed by Namibian MA students (Hamunyela, 2000; Mbamanovandu, 2000 & Shipena, 2000) through the University of Umeå were analysed. They researched the implementation and impact of CPI on the BETD PRESET programme.

-**Focus group discussions with teacher educators:** Focus group discussions were conducted at two of the four colleges of education namely Rundu and Ongwediwa, both in the northern part of Namibia. These were four group discussions with 23 teacher educators, 13 from Ongwediwa College of Education and 10 from the Rundu College of Education. They were selected from various departments, exploring the same broad issues, but leaving enough scope in the interview structure to explore wider, if needed. These issues were:

1. Understanding of CPI.
2. Strengths and weaknesses of integrating CPI into the BETD PRESET.
3. Institutional support on different levels to implement and sustain CPI in the BETD PRESET and afterwards in their teaching careers.
4. The level of support that students receive to complete their action research projects according to the original vision stated in the Broad Curriculum. [11]

-**Action research workshops:** Three action research workshops with final year BETD student teachers also contributed to the data. Two of these workshops were conducted upon request from the Rundu and Ongwediwa Colleges of Educations, during June 2002, by the Namibian Educational Research Association (NERA). This happened while the students were at the start of their action research projects during school-based studies.

One was conducted in May 2003, again on request from the Rundu College of Education. The agreement with the college was that it would be used as a data-gathering workshop for ***this*** study, as well as a final preparation for final year Lower Primary BETD students, before they go on SBS in the new term.

During these workshops the focus fell on how to formulate good research questions. Notes were made of the students' main questions, issues, understandings, examples of questions and those were used as research notes later.

-**Focus group discussions with BETD graduates:** Six teachers who completed their BETD diploma (referred to as BETD graduates in the rest of the study) between 2-4 years ago were also interviewed in a focus group discussion. The purpose was to gather information on whether they still reflect critically when confronted with everyday problems in their school and lessons, as well as to find out how they do problem solving at their schools.

Furthermore, the researchers wanted to establish to what extent institutional support was provided to reflect on issues and to share knowledge, experiences and solutions to issues and problems that are produced through completing the projects. They were therefore asked to reflect in retrospect on their experiences during SBS, especially in connection with their action

[11] MHEVTST & MBESC (March 1998), page 15 (no. 7.3)
The action research project in Year 3 is one of the ways in which subject-oriented and professional knowledge and skills, and college-and school-based studies will be brought together. The action research will consist of a need, problem or issue, identified by the student in relation to their own teaching, a planned intervention to bring about change; monitoring of the extent of change; and an evaluation of the effect of the action.

research projects and the support they received from support teachers, as well as from their action research tutors during that period.

-**Final year BETD student teachers' action research studies:** Eight 'good' action research projects of final year BETD student teachers from the two sampled colleges of education were analised to determine what kinds of problems they identify and whether they illustrate that they went through the process of cyclical reflection and action to find a solution.

-**Validation by previous research studies:** Data from other research studies were used to validate the findings of the present study. These include the following studies, completed over the lifespan of the Teacher Education Reform Project (TERP): Namibian Educators Research Their Own Practice: Critical Practitioner Inquiry in Namibia (NIED, Namibia 2000) as well as Critical Inquiry and Action Research in the BETD: A Collection of Reports from BETD III Students 1997 (NIED & Colleges of Education in co-operation with TERP, Namibia, 1998).

*DATA ANALYSIS AND MAIN FINDINGS:*

In order to formulate the themes and discrete findings, the data was processed twice and general themes were identified. The conclusive findings, which emerged repeatedly from the data sets were then formulated and grouped under these broader themes.

The general themes and findings were processed three times and during these processes, themes changed names and findings and themes were validated with the second researchers' extensive notes. The findings were also discussed with two other professional staff members, one who is the writer of one of the chapters and who is responsible for the Professional Development subdivision of NIED. This was to add value to the findings and to attempt to formulate strategies of how to deal with the specific issues that emerge so prominently and that have obvious impact on the successful implementation of CPI in the future of the BETD PRESET programme.

From the data collected, the following themes emerged:
1. Valuing The BETD PRESET programme and CPI
2. Level of understanding of CPI
3. A system exists, enabling CPI in colleges of education
4. Clinical supervision to student teachers
5. The perceived meaning of 'being critical' in BETD PRESET
6. Impact of PBI on BETD graduates' practice

**1. Valuing The BETD PRESET programme and critical practitioner inquiry (CPI)**

- Teacher educators reported that they value CPI as a strategy for solving problems and changing practice.

The teacher educators at the Rundu College of Education agreed that they would like to change some aspects of the action research and School-based studies. They felt that the AR project is an important part of the School-based studies and 'contributed to the professional development of the students' (The limitations of SBS will not be discussed here, as it does not contribute to the action research).

- BETD graduates reported that they value the action research projects that they completed during the final year of the programme.

Some of them explained how they still use the skills that they acquired during the process of conducting action research.

- BETD graduates and teacher educators reported that completing the action research project gave the students confidence in their ability to change situations and solve problems.

A teacher educator reported in a private conversation that it is the feeling of 'getting it right' or 'solving a real-life problem', but also the skills acquired of gathering 'real' data from an actual situation, which she observed as empowering her student teachers.

- Unfortunately, the opposite is also true, in that over the years a number of student teachers' confidence in their ability to successfully complete the AR project is so low that they are reported to fake data, or copy from fellow students' or previous years' projects in the pressure to complete the project successfully - in other words to ***solve*** the identified problem or issue.

From the second college, the following has been extracted from Hamunyela's research notes after her analysis of the focus group discussions at the Ongwediwa College of Education where the Teacher Educator: Student Teacher ratio is higher than at the other colleges, placing a heavier load on AR tutors during SBS: "There is a lot of cheating among students and the teacher educators cannot control it because of overload. Teacher educators are overloaded with many students."

Anecdotal reporting from a third college indicates the same tendency among individual student teachers that are not carefully supervised by their assigned tutors during the process.

**2. Level of understanding of CPI**

- The main challenge that surfaced throughout the report/thesis of Mbamanovandu (2002) is teacher educators' inadequate support to students which is caused by teacher educators' shallow and poor understanding of CPI processes, it eventually resulting in poor projects of students.

Most of the reports that have been analysed, indicate that the vision of CPI, as was emphasised again in the forward to the first publication of reports from BETD student teachers (NIED & TERP, 1998, p .i)[12], does not fully come to its right, implying that the reports do not progress to 'critical' analysis of the environment at the school and classroom. (More specific findings on the 'critical' part of CPI can be found under theme 6 in this section).

- Many teacher educators at both colleges have a narrow and limited understanding of critical practitioner inquiry and its underlying assumptions. At one of the colleges in the sample, not one of the teacher educators attempted to explain their understanding of it during the focus group discussion and they admitted that they have 'lost the vision' of the start of the education reform.

This is especially true of the latest appointees, but also of some of the teacher educators from the pre-Independence dispensation, who have found the implementation of the education reform challenging up to now, because their own professional development has not kept track with new developments in educational thinking and practice.

- Thus, because of their limited understanding of CPI, teacher educators are not effective action research tutors to student teachers.

A number of the teacher educators at one college admit that they don't know the 'how' of teaching CPI and action research. This might be the reason why many of them, according to the student teachers and BETD graduates, revert to lecturing on research methodologies and data gathering tools.

[12] Students are expected to develop a critical practitioner inquiry perspective during their studies, which will equip them with the necessary critical, proactive and democratic professional skills, and an extended professional understanding needed by teachers in the future.

- It is evident from the focus group discussions and the way action research is implemented that there is not a common understanding of CPI among teacher educators.

The fact that there is not an existing professional development programme for teacher educators, or a structured 'induction' programme at the colleges for new staff, are mentioned as being the main causes for the lack of a common understanding among teacher educators of CPI and other important, related concepts.

At the Ongwediwa College of Education, however, there is evidence of support strategies to help colleagues, who are 'struggling with the concepts of CPI and action research' or who are 'not well informed.' At this college regular mini-workshops are conducted for new staff members. At all four colleges, staff members have also produced manuals to explain concepts and processes like CPI and action research.

**3. A system and structures exist, enabling CPI in colleges of education**

- Extended SBS during the three years of the BETD PRESET gives students the opportunity to complete smaller critical inquiry projects during academic Years 1 and 2 and a whole cycle of action research in Year 3 of their programme.[13] The small-scale projects and data that are collected during SBS in Years 1 and 2 form the basis of their action research projects during Year 3.

- The system of using specific SBS support schools has the potential to give the colleges the opportunity to strengthen the practical implications of critical inquiry in these schools.

Especially at the start of the education reform, while the Teacher Education Reform Project (TERP) still supported the colleges of education, the support schools were strengthened with the purpose of supporting student teachers in their teaching practice and the critical inquiry projects that they completed. "The pulling out of TERP resulted also in inadequate support from colleges to support schools, which put more pressure on tutors."[14]

- Where there are mature teachers and experienced BETD graduates who act as guardian teachers to the students, the students and BETD graduates benefit through this co-operation between colleges and support schools.

However, the student teachers' presence is reported as being threatening to some teachers who are not well trained and/or confident, and therefore student teachers are often left alone in classes to continue with the teaching programme.

- Teacher educators realise the potential support that support schools and teachers can provide to students during SBS and they recommended in the group discussions that these be strengthened by the colleges.

**4. Clinical supervision to student teachers' action research projects**

- There are three main areas where student teachers need support while completing their action research projects:

Identifying and formulating a focussed research problem, idea or issue.
Developing mechanisms to collect data and analyse data before and after their interventions.
Writing up their research through a process writing approach.

[13] Year 1 has three weeks of SBS in term 3, a six week period in term 2 and/or term 3 of Year 2 and a 13-week period of teaching practice and completion of action research in term 2 of Year 3.

[14] From research notes of the one researcher, Miriam Hamunyela, who is also a head of department in the Educational Theory and Practice department at Ongwediwa College of Education.

Identifying Research Questions

- Student teachers seem to have a problem to identify research questions and areas, “which are worth exploring” (Comment from a teacher educator).

The observations of the researcher during the action research workshops were that student teachers often select problems which are not focussed enough or in which they would not be able to intervene in only 13 weeks. Examples of such questions are:
*How can I improve learners’ Mathematics performance?*
*How do I get boys interested in Home Economics?*
*How can I solve the discipline problems in my class?*
*How can I improve the learners’ English?*

The areas and questions, which they choose to explore, are often repeated from one year to the next. A reason for this tendency seems to be that there are problem areas that crop up in most inexperienced teachers’ classes. Some teacher educators in the Rundu region took that as a negative tendency, in that solutions to these problems are not found from year to year.

Another teacher educator sees this trend in another light, ‘Because of the paradigm shift in teaching approaches, interpreting what learner-centred education means in the context of a classroom, managing learner-centred teaching, as well as moving from a test and exam system to continuous assessment, cause the same problems for teachers over and over again…’(Written comments).

Gathering and analysing data

- Student teachers' data gathering instruments do not always produce data that are useful in the action research process. Teacher educators and BETD graduates reported how some students' data have to be discarded because they do not obtain the information expected from the instruments.

In some reports analysis and interpretation of the data are not sufficient to complete the research process successfully, in other words, the student teachers are not able to illustrate through the data that they have 'solved the research problem' with their interventions. (Comments from a teacher educator).

- BETD graduates and student teachers at one of the sample colleges of education viewed the support they received from action research tutors during the process as insufficient.

In a case where the action research tutor observes that student teachers are not on the right track, they are supposed to guide students as they meet for tutorials during SBS. This is made possible because students always return to their base college in the afternoons to make this level of support available.

- Student teachers from the workshop held in May 2003, felt that they needed more practice in gathering data and working with actual data, as they often get 'lectured' on these aspects of the study, or receive 'pamphlets' on them.

At that stage, two weeks before they had to go on SBS with no lecturing time left, the group of students in the workshop felt unsure about how they will approach the data gathering and analysis. These technical details seem to dominate their concerns, rather than identifying an area which they wished to explore.

**5. The perceived meaning of 'being critical' in BETD PRESET**

- Mbamavandu (2002) indicates that both teacher educators and student teachers' perceptions of CPI operate at the 'technical' rather than 'critical' level. He describes their views "of seeing CPI as an activity focussed on one's ability to investigate own work, reflect upon the findings and be able to change or improve own classroom practices based upon those reflections" (p.37). He further argued that their views of CPI relate to issues pertaining to the attainment of research skills, which leads to the immediate resolution of classroom problems only.

Dahlström acknowledges Meyer (2000) who confirmed the potential of critical inquiry in her research on action research in one college of education in Namibia. However, she highlights the conservative influences in the development of critical inquiry.

*She pointed to the tendency to limit the third year projects to a king of hypothesis testing exercise of narrow classroom improvement through problem solving based on a tendency of problem identification through a deficiency perspective on learners. Very little critical thought about the student teachers' own assumptions were noted. This is all confirmed by the collection of reports published by NIED and Colleges of Education referred to…and needs to be thought about in the future, otherwise Critical Inquiry will be reduced to its technicalities* (2002: 191).

The topics of all eight action research reports, analysed for this study, focussed on limitations within the student teachers' classroom practice.

Teacher educators report that the majority of action research projects over the years, focus on learners' low proficiency level in the language of instruction, discipline problems, insufficient participation in class, individual learners with behavioural problems, under-resourced classrooms, getting learners, girls in particular, to participate in group and class discussions, managing group work and difficulties of conducting continuous assessment in overfull classrooms.

This in itself is considered to be valuable, but there is the expectation in the programme that third year students will be able to identify areas in classroom- and school policies, the school community or their own attitudes and practices which hamper reaching the national educational goals or their own personal educational goals. Teacher educators at both the Rundu and Ongwediwa Colleges of Education realise that their own limited experience and level of understanding of CPI contribute to the perceived poor quality of student teachers' action research projects.

Some teacher educators find it very challenging teaching critical thinking. They have critical questions: "Can one really teach somebody to be critical? Is it possible? Are we critical enough to be able to teach someone to become critical? Are we teaching through modelling?" They feel it is really a challenge to change somebody to become critical.[15]

**6. Impact of CPI on graduates' practice**

- The BETD graduates felt that critical inquiry and reflection only solve problems to a certain level, but that it does not solve their problems of too few textbooks and other resources, dated curriculum documents or content related problems.

On the other hand, at least two of the six graduates mentioned how they solved the problem of no Mathematics teaching aids and lack of readers in their respective classes, through reflecting on and trying different ways to deal with their problems.

- One BETD graduate reported instances where he could intervene and successfully change the behaviour of a learner who disturbed the class to such an extent that especially the girls didn't have the opportunity to learn successfully.

The teacher explained how he facilitated in changing the behaviour of this 'bully' through trying out different strategies and eventually succeeding. He reported that he completed his action research project during his final year at the Rundu College of Education on discipline problems in the class and he felt that that experience equipped him with skills which he uses in his teaching.

- In a study conducted at another college of education it was reported that it was evident from the data collected that as a result of critical inquiry, student teachers not only gained a clearer understanding of what reflective teaching entailed but also an enhanced self-perception as reflective professionals.[16]

- Hamunyela (2000) reports on BETD graduates who emphasised the benefit of personal professional growth and empowerment through reflection.

She mentions examples of the BETD graduates sampled in her study, who changed their practice through critical reflection.
A further theme emerging from her research is that teachers' knowledge of reflective teaching manifested itself when they experienced problems that could not be resolved before investigations were conducted. "Teachers took actions, which demonstrated logical reflection…" Following are some of the evidence:

- In one class the researcher found out how a teacher, through consultations developed comprehension of, and made improvement regarding an event that has been interfering with her teaching success.

[15] Hamunyela's analysis of the focussed group discussions at the Ongwediwa College of Education.
[16] From research completed by two teacher educators at the time at the Caprivi College of Education, Chuma Mayumbelo and John Nyambe

- In another class the researcher observed a teacher who did not count on a learner's stubbornness, but by investigating and learning more of the behaviour, she developed instead a changed conceptual perspective, demonstrated patience and assisted the learner.
- A teacher who brought a tape recorder to the class for recording her teaching. Then she would listen to the recording after class for self-evaluation. In this way this teacher engaged in reflection about her classroom situation.
- It was also observed that BETD teachers abandoned the narrow confines of textbooks, using instead their specialised knowledge and experience to enlarge the learners' conceptual understanding of certain issues and content.[17]

However, in many settings in Namibia teachers are not generally encouraged to achieve new understandings which result from making changes in their teaching, as the belief still exists that new and improved knowledge is gained from external sources and from 'experts', rather than from personal experience, and by listening, rather than by acting. Richert (1995: 2) states that learning, for all teachers must be centrally aligned to teaching. She believes that learning is continuous for reflective practitioners since they engage in the work of thinking and doing in classrooms.

## *COST IMPLICATIONS OF THE BETD PRESET*

The costing of BETD PRESET students is fully funded by Government (MHETEC), except for NAD 500.00 college fees per year, which are not paid back to Government, but become part of the internal college fund.

For the purpose of this study total expenditure for all four colleges will be presented.

| | | |
|---|---|---|
| Total expenditure in 4 colleges (Salaries, administrative): | NAD | 16,396776.00 |
| Total number of students in 4 colleges: | 1983 | |
| Days in academic year: | 188 | |
| Unit cost/student/academic year: | NAD | 33,074.70 |
| **Unit cost/student/day** | **NAD** | **176.00** |

| | | |
|---|---|---|
| Total expenditure in all 4 colleges (accommodation, food, | | |
| Salaries of hostel staff): | NAD | 638,603.00 |
| Total number of borders: | 1,705 | |
| Hostel days | 265 | |
| Unit cost/student/academic year | NAD | 4, 480.12 |
| **Unit cost/student/day:** | **NAD** | **16.90** |

In these calculations, only total expenditure and number of students were used to do the calculations, but if these expenditures are broken down to college level, inequities are still found in the allocation of resources.

Unit costs per student per day at the Windhoek College of Education, a previously advantaged and established institution, is NAD 332.00, whereas the unit cost per day for a student at Ongwediwa College of Education is only NAD 120.00. The same trend is seen on the spending of Government on hostels. This is mainly due to the fact that Windhoek College of Education inherited a structure with professional and administrative staff much more bloated than the structures that were approved for the other colleges of education. On the other hand, it can also be reasoned that Windhoek College is then in a position to admit more than its 441 students for the 2001/2002 academic year.

[17] From a summary of Hamunyela's main findings of her research on the impact of CPI on BETD graduates' teaching.

This inequitable funding would inevitably influence the quality of delivery of educational services. That would result in regions that are already historically disadvantaged, receiving BETD graduates from a 'disadvantaged' college in their region, which potentially perpetuate this inequity.

## *LESSONS LEARNT FROM THE CPI MODEL USED IN BETD PRESET*

1. 'Being critical' and critical reflection do not happen automatically, although all educators interviewed reason that it is good practice and realise the need for it to happen more continuously.
2. A CPI model cannot be adopted if teacher educators feel unsure of the model. To get more confidence in the model is to have at least a thorough understanding of the theoretical underpinnings of critical theory and constructivism that inform this model.
3. Critical reflection is not going to happen overnight, but it would depend on all of us not to lose sight of the importance of critical practitioner inquiry and to keep that vision alive.
4. However, this can only happen within a clearly defined policy framework for Educator Development and Support.

## CHAPTER 4

# PRACTICE-BASED INQUIRY AS AN APPROACH TO IN-SERVICE TEACHER EDUCATION IN NAMIBIA

### *INTRODUCTION*

The study reported here assessed the impact of the practice-based inquiry (PBI) in-service training model on teachers' classroom practice, pedagogical understanding and reflective skills. The PBI INSET model was introduced in Namibia after Independence in 1990. The core assumptions underpinning the PBI INSET model are based on the conception of a dialectical relationship between theory and practice. The model assumes that improvement in teachers' pedagogical and theoretical understanding of their practice leads to improvement in classroom practice. The model also assumes that improved pedagogical understanding and classroom practice result from teachers reflecting critically on what they do.

### *BACKGROUND*

The situation at Namibian independence in 1990 was that 16 percent of the nation's 13 000 teachers had no professional training. This posed a major challenge for the newly established Ministry of Education and Culture (MEC). The MEC with its introduction of a learner-centred pedagogy has put in-service teacher education at the top of its priority list because of the large proportion of unqualified and under-qualified teachers. In-service teacher training for both unqualified and under-qualified teachers is regarded as one of key strategies to ensure equitable access to education and training and redress the past unjust educational practices.

The Ministry of Education and Culture embarked on several educational initiatives, (such as the UNSECO Mission Report (1990) and the 1991 Five Year Plan) which led to the birth of the Basic Education Teacher Diploma in-service programme (BETD INSET) in 1994.

The BETD INSET programme is a distance-learning programme, which targets unqualified and partly qualified teachers in Basic Education. It is a programme based on the philosophy and principles of the Reform as expressed through the four national educational goals of access, equity, quality and democracy, which are to be realised through the educational principles of learner-centred education. It aims to strike a balance between theory and practice in that professional studies are both a separate component throughout the programme and integrated in different subject areas.

The BETD INSET programme was introduced in 1994 as a one-year pilot project, co-coordinated by UNESCO. It has both face-to-face and distance modes of delivery. The face-to-face mode provides assistance and support to teachers through contact sessions that are held three times a year. The contact sessions are held during the school holidays at the six BETD INSET centres throughout the country. Each contact session lasts for five days. The program has recruited part-time tutors who assist teachers on how to study the module guides as well as give teachers feedback on their assessment tasks. The distance mode is conducted through distance teaching materials including a series of instructional module guides. The production of some module guides was done during the pilot phase, and much of the production of the module guides was done during the period of 1996 to 1998.

In 1995, the co-ordination of the BETD INSET program became the responsibility of the Ministry of Basic Education and Culture. The pilot project phased out at the end of 1994. In 1995, the

curriculum for the BETD INSET program was revised and developed to a five-year program and later to a four-year program until now. The curriculum for the BETD INSET program consists of four subjects. Each subject has twelve module guides. The content of the module guides focuses on subject content knowledge as well as subject methodology. Teachers are required to study three module guides per year.

The period between 1996 and 1998 was characterised by a major revision of the BETD INSET syllabuses. It was felt that the instructional module guides should reflect a closer link with the daily work of the INSET teachers. A shift in pedagogical approaches was required in order to link the courses to the experiences of the INSET teachers and to assist them in transforming their pedagogical practices to be consistent with the national educational goals. The Ministry chose a reflective approach because it stresses the acknowledgement of teachers' existing knowledge and understanding as a basis for teaching and learning (Swarts, 1999). The instructional module guides of the two courses Education Theory and Practice (ETP) and Lower Primary Education (LPE) were the first BETD INSET guides revised based on reflective practice approaches. The module guides were redesigned based on the 'practice-based inquiry' model. The practice-based inquiry approach is regarded as a 'process through which educational ideas get translated into forms of practice within particular historical and social contexts' (Elliot, 1997: 1). In other words, PBI is a process whereby teachers are engaged in inquiries of their classroom practice with the aim of understanding it and bring improvement. In the BETD INSET program, teachers are encouraged to engage in practice-based inquiry activities in order to find out and understand better what is going on in their classroom as they try to realise the major goals of education by establishing their classroom learning environments to be more learner-centred.

The modular material was developed in its revised form, based on the view that teaching is not an instrumental and mechanical process, but a process of active inquiry about practice (Modiba, 1997). It was assumed that teachers would develop their knowledge, skills and understandings by engaging in inquiry activities that relate theory to practice (MEC, 1997). The modular material consists of an activity booklet, which follows a practice-based inquiry methodology and a support material booklet to which relevant theoretical reading is attached.

## *RATIONALE FOR THE STUDY*

Since the design and implementation of the inquiry-based in-service courses based on the PBI model, little evaluation has been carried out to determine the effectiveness of the PBI model in the Namibian context. This study aims to contribute to the knowledge base on school improvement, by examining the impact of the inquiry-based in-service teacher education model, on teachers' classroom practice, pedagogical understanding and reflective skills in a developing country.

## *PURPOSE AND RESEARCH QUESTIONS*

The purpose of this study is to assess the impact of the PBI INSET model on teachers' classroom practice, pedagogical understanding and reflective skills. The study also sought to establish whether (a) the relationship between pedagogical understanding and classroom practice occurs as the PBI model predicts it will occur, and (b) the extent to which teachers reflect critically on their education theory and practice.
The research questions were:
1. To what extent do teachers teach according to the ETP and LPE principles? Do teachers do noticeably different things in their classrooms?
2. What changes have occurred in teachers' pedagogical understanding as a result of engaging in practice-based inquiry activities?
3. To what extent can teachers reflect critically on their educational theory and practice?

*METHODOLOGY*

The Participants

A sample of 30 practising teachers (16% of the 1997 Lower Primary intake) was selected for this study from a population of 187 teachers who enrolled in the BETD INSET programme in 1997 for the Lower Primary specialization. The teachers were the first cohort to be introduced to the PBI model. At the time of the study, they had covered six modules out of twelve based on this model. The 30 sample teachers were drawn from the 1997 Lower Primary intake of the Windhoek INSET Unit and the Ongwediwa INSET Unit, whose schools fall within a radius of 30 km of Windhoek, Ondangwa and Oshakati respectively.

Educational Background of Sample Teachers

Teachers selected for the sample are based in a total of 23 schools. Six schools are urban and 17 are rural schools. The tables below provide the details of the teachers in the sample:

**Table 1: Sample Teachers: Existing Qualifications**

| **No professional qualification** | **Less than Grade 10 + 2 years' Teacher Certificate** | **Grade 12 + 1 year Teacher Certificate** | **Grade 12 + 2 years' Teacher Certificate** |
|---|---|---|---|
| 6 | 20 | 2 | 2 |

**Table 2: Sample Teachers: Number of Years of Teaching Experiences**

| Years of Teaching experience | 0 - 9 | 10 - 15 | 16 - 20 | 21 - 30 |
|---|---|---|---|---|
| Number of teachers | 9 | 12 | 7 | 2 |

The majority of teachers in the sample were therefore experienced, but under-qualified.

Development of categories and criteria for assessing practice, understanding and reflection

The research design involved an analysis of the objectives of the ETP and LPE courses in order to identify what should have been learnt, and to operationalise measures which would make it possible to construct instruments for assessing the extent of that learning. Based on the analysis of the joint objectives of the two courses, five categories were developed. The categories were: (a) acknowledging learners' prior learning, (b) adopting an integrated approach to teaching and learning, (c) accommodating individual differences, (d) assisting learners to develop competencies/skills for active learning, (e) and promoting collaborative learning among learners.

*Fourteen criteria* have been formulated to assess the kind of impact of the inquiry-based courses on teachers' pedagogical understanding and classroom practice. The criteria have been formulated in the form of skills and/or knowledge-based questions (Reeves, 1997).

*Ten criteria* are based on the conceptual categories, derived from the joint objectives of the two inquiry-based courses and *four* categories were adapted from the reflective- assessment framework for the ETP and LPE courses.

The following *five criteria* have been designed to assess the impact of two inquiry-based courses on teachers' pedagogical understanding:

To what extent does the teacher understand what is meant by linking learners' prior learning to new learning?
To what extent does the teacher understand what is meant by adopting an integrated approach to teaching and learning?
To what extent does the teacher understand what is meant by accommodating learners with individual differences?
To what extent does the teacher understand what is meant by assisting learners to develop competencies/skills for active learning?

To what extent does the teacher understand what is meant by collaborative learning?

The following *five criteria* have been designed to assess the impact of the inquiry-based two courses on teachers' teaching practice:

To what extent does the teacher's teaching practice show recognition of acknowledging learners' previous knowledge by linking learners' prior learning to new learning?
To what extent does the teacher's teaching practice show recognition of adopting an integrated approach to teaching and learning?
To what extent does the teacher's teaching practice show recognition of accommodating individual differences?
To what extent does the teacher's teaching practice show recognition of assisting learners develop competencies/skills for active learning?
To what extent does the teacher's teaching practice show recognition of promoting collaborative learning among learners?

The following *four criteria* have been designed to assess the impact of the two courses on teachers' reflective skills in terms of the PBI model:

To what extent does the teacher's description show a systematic observation of the inquiry activities/process?
To what extent does the teacher analyse the information gathered from the inquiry activities?
To what extent does the teacher evaluate the information gathered from the inquiry activities?
To what extent does the teacher construct action strategies for incorporation into action plans?

In order to assess the degree of impact of the model on teachers' understanding, teaching practice and teacher reflection for each criterion, three indicators for each criterion have been formulated, so that the degree of teacher competence in terms of each of the criteria can be measured (Reeves, 1997). (See appendices A-C).

Data gathering instruments
Three instruments were used to gather data, including (1) a classroom observation schedule, (2) Teacher understanding assessment schedule, and (3) Teacher reflection assessment schedule. The classroom observation schedule was designed to record teachers' classroom behaviour. The Teacher understanding assessment schedule was designed to capture the categories during individual interviews with the teachers. The reflection assessment schedule was designed to assess the practice of the model in terms of reflective skills.

All three schedules consist of criteria plus indicators. The latter are organised on a continuum from top (1) to bottom (3). Top of the instrument represent the level of teaching practice, understanding and reflection that the model aims to foster (Revees, 1998). Indicators in the middle of the continuum indicate that teachers are at the developing stage. Indicators at the bottom indicate a low level of understanding, teaching practice and reflection in terms of the model. A six-point scale consisting of a rating for each of the indicators is included on the instruments so that the teacher's classroom practices, reflection and understanding can be rated according to each criterion. Ratings ranged from **6**, indicating a ***high*** level of understanding, teaching practice and reflection to **1**, indicating the ***lowest*** level.

Observation schedule
The classroom observation schedule was designed to record teachers' classroom behaviour. It consists of the criteria plus indicators (see appendix A). The three indicators formulated for each criterion were in order to measure the degree of teachers' teaching competencies in terms of each criterion. The three indicators on the observation schedule have been organised on a continuum from top to bottom. Indicators on top of the instrument represent classroom practices that the PBI model aims to foster (Reeves, 1997). Indicators in the middle of the continuum on the instrument

indicate that teachers are at the developing stage. Indicators on the bottom indicate a low level of teaching competence.

Understanding assessment schedule

The teacher understanding assessment schedule was designed to be used with the *vignettes* to capture the categories during the interviews with teachers. Six vignettes were constructed for use in interviews with teachers. The vignettes were constructed based on the categories derived from the joint objectives of ETP and LPE courses, and were matched to more than one category. Two of the six vignettes represent best practices, the next two represent good practices and the last two represent poor practices in terms of the PBI model (see Appendix D).

The interview questions were formulated as open-ended in order to allow for probing and clarification:

Explain the approach used by the teacher in this lesson.
What were the strengths of the lesson?
What were the weaknesses of the lesson?
Do you think the lesson was successful (Yes/No)?
Why? (If the answer is no) Can you think of another way you might have taught this lesson?

Like the classroom observation schedule, the teacher understanding assessment schedule consists of criteria plus indicators (see Appendix B). Three indicators on the teacher understanding assessment schedule have been organised on a continuum from top to bottom. Indicators on top of the instrument indicate a high level of pedagogical understanding. Indicators in the middle of the continuum on the instrument indicate that teachers are at the developing stage. Indicators on the bottom indicate a low level of pedagogical understanding.

Reflection assessment schedule

The teacher reflective assessment schedule was designed to assess the impact of the model on teachers' reflective skills. It also consists of criteria plus indicators (see Appendix C). Three indicators on the teacher reflective assessment schedule have been organised on a continuum from top to bottom. Indicators on top of the instrument indicate a high level of reflection in terms of the model. Indicators in the middle of the continuum on the instrument indicate that teachers are at the developing stage. Indicators on the bottom indicate a low level of reflection in terms of the model.

## *DATA COLLECTION*

Classroom Observation

A co-observer accompanied the researcher during school visits. Data on the impact of the PBI model on teachers' teaching practice was collected using the observation schedule. All 30 teachers were observed three times. Observers recorded the teachers' classroom behaviour against a particular criterion and indicator by entering a cross (×) in the space provided. They also made notes in the 'comments section' of the instrument.

Initially, three lessons (one lesson lasts for 30 minutes) were supposed to be in one of the following lower primary subjects: Mathematics, Environmental Studies and Science. Due to communication problems, especially with teachers in remote areas, some teachers were observed teaching other lower primary subjects.

Interviews

Face-to-face interviews using the vignettes and teacher understanding assessment schedules were conducted with each sample teacher after that teacher had been observed teaching. Each vignette was read twice to the respondent by the researcher. Teachers were asked the same questions, in the same order after each vignette had been read (see interview questions under teacher understanding assessment schedule above). Responses were probed and followed up until clarity was reached. Interviews took approximately 30-40 minutes. All interviews were tape recorded and the co-observer took detailed notes.

Review of modules and Teachers' Portfolios

In order to collect data on the practice of the model in terms of teachers' reflective skills, a sample of teacher reflections from each teacher's ETP and LPE portfolios was collected. The researcher studied the modules selected prior to reading of the teachers' reflections in order to become familiar with the purposes and possible outcomes of inquiry activities. She then wrote down key ideas from each inquiry activity. The assessment of teacher's reflective skills using the reflection assessment schedule was done after interviews were conducted.

## *DATA ANALYSIS*

Analysis of the impact of the PBI INSET model on teachers' pedagogical understanding, classroom practice and reflective skills involved first awarding each teacher a rating or score based on the continuum of indicators for each criterion on the research instruments. The ratings from lesson observations, teachers' responses to the questions from teachers' understanding assessment schedule about the vignettes, and from teachers' reflections were grouped and entered on three separate summary sheets.

With regard to classroom practice, the ratings from lesson observations were used to examine the extent to which the PBI INSET model impacted on teachers' teaching practice. A rating (score) of 5 or 6 indicates that the impact of the model on teachers' classroom practice, in terms of a particular criterion is adequate. A rating (score) of 3 or 4 indicates that the impact of the model on teachers' classroom practice, in terms of a particular criterion is barely adequate. A rating (score) of 1 or 2 indicates that the impact of the model on teacher's classroom practice in terms of a particular criterion is inadequate.

To analyse the impact of the PBI model on teachers' pedagogical understanding, the ratings on teachers' responses to the questions from teachers' understanding assessment schedule about the vignettes were used to examine the extent to which the PBI model impacted on teachers' pedagogical understanding. A rating (score) of 5 or 6 indicates that the impact of the model on teachers' pedagogical understanding, in terms of a particular criterion is adequate. A rating (score) of 3 or 4 indicates that the impact of the model on teachers' pedagogical understanding in terms of

a particular criterion is barely adequate. A rating (score) of 1 or 2 indicates that the impact of the model on teachers' pedagogical understanding in terms of a particular criterion is inadequate.

To analyse the impact of the PBI INSET model on teachers' reflective skills the ratings from teachers' reflections were used to examine the extent to which the PBI model impacted on teachers' reflective skills.

The statistical analysis of the relationship between teachers' understanding, classroom practice and reflection was done using, a Spearman rank-order correlation test. The total ratings for each teacher on teacher's pedagogical understanding, reflection and classroom practice were used to calculate the Spearman rank-order correlation coefficient between teachers' total scores of pedagogical understanding and classroom practice, teachers' pedagogical understanding and reflection, and classroom practice and reflection. A coefficient value of 0.52 was obtained between teachers' pedagogical understanding and classroom practice, a coefficient value of 0.33 between teachers' understanding and reflection scores, and the coefficient value of 0.25 between classroom practice and reflection scores.

## *FINDINGS*

The Impact of the PBI INSET Model on Teachers' Classroom Practice

According to the pedagogical principles of the LPE and ETP courses, good teaching practices are underpinned by the following teaching principles: (a) acknowledging learners' prior knowledge by linking learners' previous learning to new learning, (b) promoting collaborative learning among learners, (c) assisting learners to develop competencies/ skills for active learning, (d) adopting an integrated approach to teaching and learning, and (e) accommodating individual differences.

These principles (see above) form the criteria on the instruments to measure the impact of the PBI model on teachers' classroom practice in teachers' teaching of lower primary subjects. In order to assess the impact of the PBI model on teachers' teaching practice, the criteria used measure whether teachers' teaching practices incorporate each of the approaches (see above).

**Table 3 illustrates the extent to which the PBI model impact on teachers' classroom practice.**

| CRITERION | Score of 5-6 Adequate | Score of 3-4 Barely adequate | Score of 1-2 Inadequate |
|---|---|---|---|
| Linking learners' prior learning to new learning | 17% | 73% | 10% |
| Promoting collaborative learning among learners | 3% | 67% | 30% |
| Assisting learners to develop competencies/skills for active learning | 3% | 60% | 37% |
| Adopting an integrated approach to teaching and learning | None | 37% | 63% |
| Accommodating individual differences | None | 60% | 40% |

Table 3: Teacher Classroom Performance

According to Table 3, only 23% of sample teachers demonstrated adequate teaching of approaches in terms of the model (see above). 60% to 70% of the sample teachers demonstrated barely adequate teaching on the criterion of 'accommodating individual differences' (60%), 'assisting learners to develop competencies/skills for active learning' (60%), promoting collaborative learning among learners,' (67%) and linking learner's prior learning to new learning' (73%). None of the sample teachers demonstrated adequate teaching in 'accommodating individual differences', and 'adopting an integrated approach to teaching and learning'. 63% of the sample teachers demonstrated inadequate teaching on the criterion of 'adopting integrated approach to teaching and learning'.

Generally, teachers were aware of the need to incorporate the LPE and ETP principles in their teaching, but it seems that they did not have the skills. 73% of teachers observed tried to invite ideas from learners, but did not build on what the learners had suggested. In most of the lessons observed, 60% of teachers did not seem to have skills to assist learners apply or interpret information or help learners accomplish tasks collaboratively.

60% of the teachers did not engage learners in challenging activities nor provided instructions in critical thinking. Where they tried to engage learners in problem-solving activities, teachers directed learning most of the time. In most of the lessons observed, 60% of teachers tended to concentrate only on high achievers or on the whole group, while leaving out individual low achievers. In most cases teachers observed, presented information in isolation without making any cross-curricular links with other subjects. Those that did involve learners in some cross-curricular activities did not assist learners in understanding why such activities were carried out.

The Impact of the PBI INSET Model on Teachers' Pedagogical Understanding

Teachers' responses to questions about the vignettes were used to infer the impact of the two inquiry-based courses on teachers' pedagogical understanding of teaching principles informed by the PBI model. Table 4 below illustrates the extent to which the PBI model impacted on teachers' pedagogical understanding.

| CRITERION | Score of 5-6 Adequate | Score of 3-4 Barely adequate | Score of 1-2 Inadequate |
|---|---|---|---|
| Linking learners' prior learning to new learning | 40% | 40% | 20% |
| Promoting collaborative learning among learners | 17% | 34% | 49% |
| Assisting learners to develop competencies/skills for active learning | 10% | 50% | 40% |
| Adopting an integrated approach to teaching and learning | 3% | 24% | 73% |
| Accommodating individual differences | 20% | 50% | 30% |

Table 4: Teachers' Understanding

According to Table 4, 40% of the sample teachers demonstrated an adequate understanding on the criterion 'linking learners' prior learning to new learning'. 40% to 50% of the sample teachers demonstrated barely adequate understanding on the criterion of 'linking learners' prior learning to new learning' (40%), 'assisting learners develop competencies/skills for active learning' (50%), and 'accommodating individual differences' (50%). 73% of the sample teachers had an inadequate understanding of what is meant by adopting an integrated approach to teaching and learning.

A reasonable percentage of teachers in the sample demonstrated barely adequate understanding of the model in relation to most of the criteria, except the criterion: adopting an integrated approach to teaching and learning, in which 73% of teachers in the sample demonstrated an inadequate understanding.

The analysis and interpretation of teachers' responses to the questions about the vignettes was constrained by the fact that teachers were interviewed in English and responded in English. Teachers had difficulty in understanding the descriptions and expressing themselves well in English. In most cases, teachers did not use their own words in responding to questions about vignettes, but just cited phrases as they occurred in the vignettes.

The following are extracts from teachers' responses, which show their understanding of some ETP and LPE principles.

<u>Examples of responses which show adequate understanding (These are direct quotes):</u>
Linking learners' prior learning to new learning:
*'Teachers uses learners' previous knowledge and building on what already know'.*
*'Teacher find out learners' previous knowledge. Moving from what the learners known to unknown'.*
(Selma, BETD INSET Teacher, Ondangwa Region)

The excerpts above illustrate adequate understanding of the principle 'linking learners' prior learning to new learning', because the teacher demonstrated an understanding of the need to appreciate learners' prior knowledge and recognised the need to link learners' prior learning to new learning.

Adopting an integrated approach to teaching and learning:
*'Teacher integrates the skills of speaking, writing and counting. In one lesson you can develop different skills. In every subject you develop learners' skills and integrates the curriculum. You integrate the curriculum, you develop learners' knowledge'*. (Tuuliki, BETD INSET Teacher, Ondangwa Region)

The excerpt above illustrates adequate understanding of the principle 'adopting an integrated approach' because the teacher recognised the need of using cross-curricular activities to develop learners' understanding of the relationships between things.

Examples of responses which show barely adequate understanding:
Linking learners' prior learning to new learning:

*'When the teacher ask learners about villages...because learners learn first from home'*
(Helena, BETD INSET Teacher, Windhoek Region)

The excerpt above illustrates barely adequate understanding of the principle 'linking learners' prior learning to new learning', because the teacher demonstrated an understanding of appreciating knowledge and experience that learners bring to the situation, but shows little recognition of the need to connect the learners' prior knowledge to new learning.
Adopting an integrated approach to teaching and learning:
*'Teacher sings a song, it makes the learners to remember the numbers easier'* (Irmgard, BETD INSET Teacher, Windhoek Region)

The excerpt above illustrates barely adequate understanding of the principle 'adopting an integrated approach to teaching and learning'. Here, she demonstrated an understanding of what is meant by recognising the need to encourage learners to engage in cross-curricular activities, but shows little recognition of the need to develop learners' understanding of the relationship between things.

Examples of responses, which show inadequate understanding
Linking learners' prior learning to new learning:
*'It is good to ask learners what they do in their community, then you know what they know'*
(Amutenya, BETD INSET Teacher, Ondangwa Region)

The excerpt above illustrates inadequate understanding of the principle: 'linking learners' prior learning to new learning'. The teacher demonstrated very little understanding of what is meant by acknowledging learners' prior knowledge or the need to connect learners' previous knowledge, experience and understanding to new learning.

Adopting an integrated approach to teaching and learning:
*'Teacher teaches drawing and counting at the same time. It is good to do so'* (Martha, BETD INSET Teacher, Windhoek Region).

The excerpt above illustrates inadequate understanding of the principle: 'adopting an integrated approach to teaching and learning'. Here the teacher demonstrates very little understanding of what is meant by using an integrated approach by showing no recognition of the relationship of concepts/ideas in different learning areas.

Correlating Teachers' Understanding and Classroom practice
An assumption of the PBI model is that teachers who demonstrate adequate understanding of the model should also demonstrate an equivalent level of teaching skills. The Spearman rho correlation between teachers' understanding and classroom practice was statistically significant (Spearman rho=0.53, p=0.01). In order to determine the significance of this coefficient with *n* of 30, the obtained value of rho was compared with the critical values of rho at the 0.01 level, df = 28

(*n*-2). Correlations ranging from 0.35 to 0. 65 are statistically significant beyond the 1 per cent level (Cohen & Manion, 1994: 139). It may be therefore concluded that teachers' understanding and their classroom practice indeed are correlated, even though the level of correlation is relatively low.

### *TEACHERS' REFLECTIVE SKILLS*

The learning principles and processes of the LPE and ETP courses follow a spiral of inquiry based on a "plan-act/observe-reflect-&evaluate" pattern. This pattern forms criteria on the instruments to assess the extent to which teachers: (a) engaged in systematic observation of practice-based inquiry activities (b) critically analysed information from inquiry activities, (c) evaluated information gathered from practice-based inquiry activities, (d) constructed action strategies for incorporation into action plans. Analysis of teachers' reflections based on the criteria and its indicators on the measuring instrument were used to infer the impact of LPE and ETP on teachers' reflective skills. Table 5 illustrates teachers' reflective skills in terms of the model.

| **CRITERION** | **Score of 5–6 Adequate** | **Score of 3–4 Barely adequate** | **Score of 1–2 Inadequate** |
|---|---|---|---|
| Engaging in systematic observation of the inquiry activities | None | 44% | 56% |
| Critical analysis of information from inquiry activities | None | 37% | 73% |
| Evaluating information gathered from inquiry activities | None | 20% | 80% |
| Constructing action strategies for incorporating into action plans | None | 17% | 83% |

Table 5: Teachers Reflective Skills

According to table 5, none of the sample teachers demonstrated adequate reflective skills in terms of the model. A high percentage of teachers demonstrated inadequate reflection in terms of the model on all the criteria (see above).

A high percentage of sample teachers' reflections show low levels of reflection (see above). Teachers here did not yet display reflections, which involve critical thinking. Teachers' reflections show evidence of teachers having difficulty in following instructions and/or understanding them. A high percentage of teachers in the sample did not recognise the cyclical nature of the inquiry activities. They did not present holistic descriptions of inquiry activities. Instead, they focused on one activity or presented a list of activities that did not have any connection between them. Most teachers reported only about common issues and personal experiences with little or no discussion on new understandings and discoveries developed from inquiry activities or without linking their experience to theory (that is, to readings in the support material booklet). Teachers are not yet familiar with technical ways of 'research-based writing'. They are also not yet familiar with some technical words such as 'data', 'action plan', 'analysis' and 'evidence'.

The following are some examples of extracts of teachers' reflections from their portfolios on some PBI reflective skills.

Examples of extracts which show ***Barely Adequate*** reflection:

Engaging in systematic observation of inquiry activities:
*'I made a formative reading assessment in my classroom. I use the information to find out where my learners are now. I used the following information the background data about the learner, e.g. name, grade, age, mother tongue and what the learners are reading. I found out that some learners read very well and some of them didn't know how to read it. The evidence of my finding are record the miscues, interpret record sheet and miscue analyses'*

Evaluating information from inquiry activities:
*'I learned that learners had opportunity to participate in activities. When I read Support Sheet 1, I realized that I would like to be like teacher in the second story, supportive, friendly learner-centred and basing his teaching on the national educational goals'.*

Examples of extracts which show inadequate reflection:
Engaging in systematic observation of inquiry activities:
'*Recall on assessment, homework, I thought about different ways that I was reporting about my learners to parents. What I found out there were certain good method. Others method I would not use'.*

Evaluating information from inquiry activities:
*'I learned many things in this activities and it encourages me to give freely chance among learners to work with ones he want'.*

Correlating the Data on Teachers' Understanding, Classroom practice and Reflection.
The PBI INSET model assumes that teachers' improved pedagogical/theoretical understanding and classroom practice result from teachers reflecting critically on their educational theory and practice. Spearman rho correlations between teachers' understanding and reflection, and between teachers' classroom practice and reflection are weak, (Spearman rho=0.33, p = 001, and rho=0. 25, p = 001 respectively). In other words, a weak relationship exists between reflection and teachers' understanding, while no relationship exists between reflection and classroom practice.

## *THE IMPACT OF THE PBI INSET MODEL*

From the results of this study, none of the teachers in the sample demonstrated a link between understanding and teaching skills at an adequate level of accomplishment. Only three teachers demonstrated adequate understanding. The study also reveals that teachers did not reach high levels of reflection. While the model assumes that teachers will relate theory to practice or practice to theory, the study indicates that teachers have difficulties in making a connection between theory (readings in the support material) and practice (inquiry activities). Teachers interpreted the inquiry activities simply as exercises or questions to be answered. Consequently, teachers filled in the empty boxes in the activities booklet without relating the activities to the linked readings in the support materials. They seemed to have read the support material without reflecting back to the inquiry activities. Teachers are not likely to relate theory to practice if there is no mediation and they have no analytical tools. Gultig (1999) points out that strong and directed mediation is important in facilitating the integration between theory and practice. Engaging teachers in material that requires critical thinking is not likely to benefit teachers who were not exposed to critical thinking in the past. Gultig also emphasises the fact that putting theory and practice side by side does not solve the issue of the theory-practice divide, if the teachers do not have the tools to interrogate theory or practice.

The study indicates that, even though inquiry activities are designed to help teachers reflect in a systematic way, teachers could not reflect to the level required in the courses. Teachers' reflections indicate that they misinterpreted the focus of inquiry activities. In most cases, teachers reported on common issues instead of focusing on what is expected of them in the inquiry

activities. Teachers' writing up of their reflections is constrained by the fact that they are not familiar with research-based writing.

Even though teachers have been engaged in reflective inquiry activities, they are not likely to benefit much from the reflective activities if they lack thinking skills or are without ongoing support to help them develop advanced skills of reflection.

The findings of this study indicate that the ability to look back and learn from one's experiences within a classroom environment is extremely complex and difficult to acquire (Pultorack, 1993).

Teaching conditions, teachers' previous experience of schooling and limited professional support seem to be some of the additional barriers for teachers' performance in terms of classroom practice, pedagogical understanding and critical reflection in terms of the model. Only a few schools visited have a library and some have book boxes. Most classrooms are physically inadequate. Some classrooms did not have enough chairs for learners or some chairs are broken. Most of the lower primary classes are overcrowded; there are insufficient teaching and learning materials such as workbooks for learners, textbooks, crayons and pencils. In some classes visited, not all learners were able to do exercises and finish on time, having to wait for others to finish because they are sharing crayons and pencils. Teachers also could not provide much individual attention because classes are over-crowded and teaching time was limited.

Most teachers in the sample had poor academic and professional backgrounds (see table 1 and 2, page 4 of this report). They had been exposed to a school system that was mainly based on factual recall of information. Skills for active learning or critical thinking were largely absent from their school curriculum. Most teachers observed lacked creativity and skills to interpret subject matter in order to make it more meaningful for learners.

It may further be surmised that a strong professional support network is essential for success of in-service courses based on the model assessed in this study. From the researcher's experience and observations, many teachers are working in isolation. There is a lack of professional support provided by school management and peers. Some principals/heads of departments do not have enough skills to offer professional support to teachers. The PBI INSET model requires support structures so that teachers can benefit from the experiences/support from peers and other professionals. Even though the BETD INSET programme incorporates the system of support structures through the School-based Activities course and Support Study Groups (SSG), some teachers cannot get enough support from school management and their peers. Most teachers could not meet regularly in SSG because they live far from one another and there is not enough time to meet after school hours. The BETD INSET programme does not have permanent tutors to provide ongoing school-based support to teachers in the programme.

## *COST IMPLICATIONS OF THE BETD INSET PROGRAMME*

According to the figures which were received on the costing of the BETD INSET programme, the student fees cover the costs of tutoring, marking, subsistence allowance of tutors, transport and workshops. It also covers administrative costs like maintaining the database and printing of modules and other study materials.

Average student fees are NAD 2 000/year and there are at present 2 300 students enrolled in the programme. These fees are subtracted on a monthly basis from their salaries. Selected, unqualified teachers receive the opportunity to upgrade their qualifications in this way. They would usually do it for two reasons: One is that qualifications are connected to salary levels for Namibian teachers. Unqualified teachers could also not be permanently appointed and could potentially lose their position, but while they are enrolled in the BETD INSET they are confident to keep it.

The main expenditures can be summarised as follows:

Total expenditure (professional and administrative): NAD 5 177 999
Total income (student fees): NAD 5 200 000

The cost for Government in this programme is mainly in salaries of Government employees who need to administer this programme at the different centres over the country. Some of these staff members are employed at Teachers' Resource Centres, colleges of education and NIED and not all of them spend 100% of their time on this programme. Their salaries are calculated proportionately to the time that they spend managing and administering the programme. One of the limitations that was identified in the provision of Government funding is that it does not make provision for full time professional staff, who are urgently needed in subjects like Mathematics and Science. At the moment teacher educators at colleges of education, teachers and education officers tutor during contact sessions and provide feedback on assignments, but they are only available for limited periods of time:

**Expenditure for Government:**

| | |
|---|---|
| Proportionate salary allocations of 16 staff members: | NAD 1,327 000.00 |
| Telephones, communication etc.: | NAD 100 000.00 |
| Transport and travel: | NAD 150 000.00 |
| Total expenditure: | NAD 1,577 000.00 |
| **Unit cost/student/year:** | **NAD 686.00** |

## *LESSONS LEARNT FROM IMPLEMENTING THE PBI MODEL*

1. An inquiry-based model for in-service training such as **PBI** may not be the most appropriate intervention for both distance learning and teacher development in countries with limited human resources and use of information technology.
2. Teachers' academic and professional backgrounds are crucial in adapting a model such as practice-based inquiry for in-service training of teachers. Most teachers in the sample had poor academic and professional backgrounds. They had been exposed to a school system that was mainly based on factual information. Skills for active learning or critical thinking were largely absent from their school curriculum.
3. Planning in-service teacher education courses based on an inquiry-based model is demanding and therefore requires slow, small-scale inception and demands intense facilitation.
4. Engaging teachers in material that requires critical thinking does not benefit many teachers who were not exposed to critical thinking in both schooling system and teacher education programs.
5. Advanced reflective skills take time to be acquired. The study indicates that, even though inquiry activities were designed to help teachers reflect in a systematic way, teachers could not reflect to the level required in the courses.

## *CONCLUSION*

In the literature on teacher education, teachers' in-depth understanding of subject matter and pedagogical content knowledge are considered as critical pieces of the knowledge base for reflective teaching. In other words, as inquiry-based teacher education programme should increase teachers' in-depth understanding of both subject matter and pedagogical content knowledge.

*APPENDIX A: CLASSROOM OBSERVATION SCHEDULE*

DATE: _____TEACHER'S NAME: _____
SCHOOL: _____
NO. OF LEARNERS: _____ GRADE: _____
LOCATION: RURAL: _____ URBAN: _____

| CRITERION CODE | INDICATORS | RATING |
|---|---|---|
| **ALPL 1** | Teacher begins with what learners already know from home, community and school. Teacher assists learners to connect and apply their learning to what they already know. | |
| **ALPL 2** | Teacher invites ideas from learners, but does not link these ideas to new learning | |
| **ALPL 3** | Teaching is not linked to learners' prior learning | |
| | | |
| **CL 1** | Classroom arrangement/ learning task suitable for collaborative learning. Teacher provides opportunities for learners to work in small groups and /or in large groups. Learners interact with one another. Teacher monitors and supports learning. | |
| **CL 2** | Classroom arrangement suitable for collaborative learning. Less learner interaction. Poor monitoring of learner interaction. | |
| **CL 3** | Whole class teaching all the time-No learner interaction. | |
| | | |
| **IA 1** | Teacher uses cross-curricular themes/topics to draw several curricular ideas into common focus. | |
| **IA 2** | Teacher involves learners in activities across learning areas-No explanation is given for learners to understand the interrelatedness of one content area to another. | |
| **IA 3** | Teacher presents information or knowledge as fragmented facts | |
| | | |
| **AL 1** | Teacher involves learners in learning activities such as observing, classifying, communicating. Teacher assists learners through eliciting, probing, and clarifying. | |
| **AL 2** | Teacher involves learners in problem-solving activities, but s/he directs the learning process most of the time. | |
| **AL 3** | Teacher directs the learning process all the time - No attempt is made to encourage learners to work independently. | |
| | | |

| CRITERION CODE | INDICATORS | RATING |
|---|---|---|
| **AID 1** | Teacher adopts learning content to different individuals. Teacher assists those with learning difficulties. Teacher assists high achievers. | |
| **AID 2** | Teacher responds to learners who need additional assistance. | |
| **AID 3** | Teacher does not pay attention to individual differences. | |

**COMMENTS:**

**KEYS:**

| | |
|---|---|
| **Acknowledging learners' prior learning: ALPL 1** | 5/6 (Adequate practice) |
| **Acknowledging learners' prior learning: ALPL 2** | 3/4 (Barely adequate practice) |
| **Acknowledging learners' prior learning: ALPL 3** | 1/2 (Inadequate practice) |
| | |
| **Collaborative learning: CL 1** | 5/6 (Adequate practice) |
| **Collaborative learning: CL 2** | 3/4 (Barely adequate practice) |
| **Collaborative learning: CL 3** | 1/2 (Inadequate practice) |
| | |
| **Integrated Approach: IA 1** | 5/6 (Adequate practice) |
| **Integrated Approach: IA 2** | 3/4 (Barely adequate practice) |
| **Integrated Approach: IA 3** | 1/2 (Inadequate practice) |
| | |
| **Active learning: AL 1** | 5/6 (Adequate practice) |
| **Active learning: AL 2** | 3/4 (Barely adequate practice) |
| **Active learning: AL 3** | 1/2 (Inadequate practice) |
| | |
| **Accommodating individual differences: AID 1** | 5/6 (Adequate practice) |
| **Accommodating individual differences: AID 2** | 3/4 (Barely adequate practice) |
| **Accommodating individual differences: AID 3** | 1/2 (Inadequate practice) |

*APPENDIX B: TEACHERS' UNDERSTANDING ASSESSMENT SCHEDULE*

DATE: _____
TEACHER'S NAME: _____
SCHOOL: _____ NO. OF LEARNERS: _____
GRADE: _____
LOCATION: RURAL: _____ URBAN: _____

| CRITERION CODE | INDICATORS | RATING |
|---|---|---|
| **ALPL 1** | Teacher shows understanding of the need to appreciate learners' prior knowledge and recognises the need to link learners' prior learning to new learning. | |
| **ALPL 2** | Teacher shows some understanding of appreciating knowledge and experience that learners bring to the learning situation, but shows little/no recognition of the need to connect the learners' prior knowledge to new learning. | |
| **ALPL 3** | Teacher shows no/very little understanding of what is meant by acknowledging learners' prior knowledge or the need to connect learners' previous knowledge, experience and understanding to new learning. | |
| | | |
| **CL 1** | Teacher shows understanding of the need to promote collaborative learning among learners by recognising the need to encourage learners to communicate and assist one another. | |
| **CL 2** | Teacher shows some understanding of what is meant by collaborative learning, but shows little/no recognition of the need to encourage interaction among learners. | |
| **CL 3** | Teacher shows no/very little understanding of what is meant by collaborative learning. Teacher shows no/very little recognition of the need to encourage joint activities and interaction among learners. | |
| | | |
| **IA 1** | Teacher shows understanding of what is meant by using integrated approach by recognising the need of using cross-curricular activities to develop learners' understanding of the relationship between things. | |
| **IA 2** | Teacher shows some understanding of what is meant by using an integrated approach by recognising the need to encourage learners to engage in cross-curricular activities, but shows no/ little recognition of the need to develop learners' understanding of the relationship between things. | |

| CRITERION CODE | INDICATORS | RATING |
|---|---|---|
| **IA 3** | Teacher shows no/ very little understanding of what is meant by using an integrated approach by showing no recognition of relationship of concepts/ ideas in different learning areas. | |
| | | |
| **AL 1** | Teacher shows understanding of what is meant by teaching learners to develop thinking skills and processes for independent and active learning by recognising the need to develop learners' abilities to:<br>Observe, classify, and communicate. | |
| **AL 2** | Teacher shows some understanding of what is meant by motivating learners to learn with understanding, but shows no/little understanding of what is meant by actively involving learners in a lesson, and by assisting learners to learn processes/ skills for independent learning. | |
| **AL 3** | Teacher shows no/ very little understanding of the need to teach learners to think or learn with understanding and or skills/ processes necessary for active learning. | |
| | | |
| **AID1** | Teacher shows understanding of what is meant by varying learning according to individual differences and shows recognition of the need to create learning activities that accommodate learners with varied learning. | |
| **AID 2** | Teacher shows some understanding of what is meant by encouraging assisting learners with special needs, but shows little recognition of what is meant by accommodating learners with varied learning abilities. | |
| **AID 3** | Teacher shows no/ very little understanding of what is meant by accommodating learners with varied learning abilities. | |

**COMMENTS:**

**KEYS:**

| | |
|---|---|
| **Acknowledging learners' prior learning: ALPL 1** | 5/6 (Adequate understanding) |
| **Acknowledging learners' prior learning: ALPL 2** | 3/4(Barely adequate understanding) |
| **Acknowledging learners' prior learning: ALPL 3** | 1/2 (Inadequate understanding) |
| **Collaborative learning: CL 1** | 5/6 (Adequate understanding) |
| **Collaborative learning: CL 2** | 3/4 (Barely adequate understanding) |
| **Collaborative learning: CL 3** | 1/2 (Inadequate understanding) |
| **Integrated approach: IA 1** | 5/6 (Adequate understanding) |
| **Integrated approach: IA 2** | 3/4 (Barely adequate understanding) |
| **Integrated approach: IA 3** | 1/2 (Inadequate understanding) |
| **Active learning: AL 1** | 5/6 (Adequate understanding |
| **Active learning: AL 2** | 3/4 (Barely adequate understanding) |
| **Active learning: AL 3** | 1/2 (Inadequate understanding) |
| **Accommodating individual differences: AID 1** | 5/6 (Adequate understanding) |
| **Accommodating individual differences: AID 2** | 3/4 (Barely adequate understanding) |
| **Accommodating individual differences: AID 3** | 1/2 (Inadequate understanding) |

*APPENDIX C: TEACHERS' REFLECTIVE ASSESSMENT SCHEDULE*

DATE: _____
TEACHER'S NAME: _____
SCHOOL: _____ NO. OF LEARNERS: _____
GRADE: _____
LOCATION: RURAL: _____ URBAN: _____

| CRITERION CODE | INDICATORS | RATING |
|---|---|---|
| **OS 1** | Teacher presents a holistic description of the inquiry activities. Teacher's description shows evidence of systematic inquiry. The description is based on the focus of the inquiry activities. Teacher shows clearly the findings and evidence of the inquiry activities. | |
| **OS 2** | Teacher presents a list of activities being carried out. The description has connection with the focus of the inquiry activities. Teacher does not make connection between activities. Teacher presents findings of the activities, but there is little/no evidence of what has been found out. | |
| **OS 3** | Teacher's description shows little/no connection with the focus of the inquiry activities. | |
| | | |
| **AS 1** | Teacher presents a critical analysis of issues which emerge from inquiry activities, and state new understandings and discoveries from the inquiry activities. | |
| **AS 2** | Teacher presents a descriptive account of the activities, but there is little/no discussion on new understandings and discoveries. | |
| **AS 3** | Teacher's description is a surface description of activities being carried out. | |
| | | |
| **EVS 1** | Teacher draws on theory and evidence from the inquiry activities to support his/her own reflections and use it to develop his or her own thinking. | |
| **EVS 2** | Teacher makes some reference to theory and inquiry activities, but does not develop his or her own thinking. | |
| **EVS 3** | There is little/no evidence of use being made of theory and inquiry activities or of critical reflection. | |
| | | |
| **SS 1** | Teacher critically presents different action strategies and develops a plan suitable for bringing improvements to the situation. | |
| **SS 2** | Teacher produces an action plan and justifies it with reasons but there are little or no | |

| CRITERION CODE | INDICATORS | RATING |
|---|---|---|
| | discussions of action strategies. | |
| **SS 3** | There is little/no evidence of any action strategies to effect improvements. | |

**COMMENTS:**

**KEYS:**

| | |
|---|---|
| **Observation skills: OS 1** | 5/6 (Adequate reflection) |
| **Observation skills: OS 2** | 3/4 (Barely adequate reflection) |
| **Observation skills :OS 3** | 1/2 (Inadequate reflection) |
| | |
| **Evaluation skills: ES 1** | 5/6 (Adequate reflection) |
| **Evaluation skills: ES 2** | 3/4 (Barely adequate reflection) |
| **Evaluation skills: ES 3** | 1/2 (Inadequate reflection) |
| | |
| **Analytical skills: AS 1** | 5/6 (Adequate reflection) |
| **Analytical skills: AS 2** | 3/4 (Barely adequate reflection) |
| **Analytical skills: AS 3** | 1/2 (Inadequate reflection) |
| | |
| **Strategic skills: SS 1** | 5/6 (Adequate reflection) |
| **Strategic skills: SS 2** | 3/4 (Barely adequate reflection) |
| **Strategic skills: SS 3** | 1/2 (Inadequate reflection) |

*APPENDIX D: VIGNETTES (TEACHING SCENARIOS) FOR ASSESSING TEACHERS' UNDERSTANDING OF THE PBI INSET MODEL.*

**Preamble: The researcher reads the following teaching scenarios together with teachers and then ask questions on each of the descriptions**.

**A**

Mrs Shoombe is a grade 3 teacher. She asked her learners to collect different soils from home and school grounds for the science lesson on the following day. She plans her lesson to help learners to classify different types of soils. She divides the class into groups. She gives each group containers with different types of soils and empty jugs. She moves from one group to another, tell them how to classify different types of soils and ask one child in each group to do the task, while others are watching. At the end of the lesson, she summarises the main points of the lesson.

**B**

Mr Witbooi is a grade 2 teacher. He teaches learners to count and compare using the family tree. He begins his lesson by drawing his family tree. He draws his father on the left and his mother on the right hand side. He labels the picture, ordering the members of the family so that the first-born is on the left-hand side. He also draws himself as a member of the family.
He asks the children the following questions:
How many children in the family? How many boys? How many girls? Are there more boys than girls? He asks each child in the class to draw a picture of his own family tree. He also asks them to write short sentences about their own families, indicating how many brothers and sisters, as well as indicating whether there are more males than females. He assists those who have difficulties and gives additional tasks to those who are fast in completing the task. After the learners have completed their tasks, the teacher highlights the main points of the lesson.

**C**

It is a grade 4 Math class. The teacher reminds the learners what they have done the previous day. She then rapidly writes 4 sums on the chalkboard. She asks 4 learners to solve the sums. While they are working out the answers, she writes another set of sums on another chalkboard. When the first group have finished, she asks the rest of the class to check if the answers are correct. While this is taking place, the second group of learners are working on the next set of sums. This sequence continues until every learner had a turn at the chalkboard. Towards the end of the lesson, the teacher gives a chance for learners to ask questions.

**D**

Mrs Swarts is teaching grade 3. In her introduction of the Environmental Studies lesson on the topic 'Our community', she asks learners to tell her about their villages, that is, what adults and children do in their villages. She gives out a work sheet in which each learner has to list ways of keeping their villages clean. She watches them and responds to individual seeking help. After the learners have finished, she asks them draw their villages and put their drawings on the wall, after the work is completed.

**E**

Mr Theo is a grade 4 teacher. He plans his lesson to help children understand the concept of electricity. He has arranged all the materials necessary for the lesson, during the morning break. He puts at each desk, a collection of bulbs, wire, batteries and switches. When the children enter the class from the break, they jump to their desks. He calms them down. He first explains some difficult concepts regarding electricity. He also asks the class to mention any objects that are related to electricity. He divides learners in pairs, gives out a work sheet in which the children have to complete some sentences regarding things about electricity. He assists different each pair to come up with ideas through asking them questions and explaining certain words. He asks each pair to exchange with other pair so that others can see what others have done, he then summarises the main points of the lesson.

**F**

Mrs Tjiteo is a grade 1 teacher. It is a Maths lesson:

Mrs Tjiteo: Children, today we are going to learn to count up to ten.
Jerry: I know how to count. Can I start?
Mrs Tjiteo: No, no Jerry I must teach how to count first. Ok, children, say the numbers after me. One, two, three.
Class: One, two, three.
Mrs Tjiteo: Four, five, six.
Class: Four, five, six.
Mrs Tjiteo: Seven, eight, nine.
Class: Seven, eight, nine.
Mrs Tjiteo: Ten.
Class: Ten.
Mrs Tjiteo: Very good children, but I did not hear everybody's voice. Let's count again.
Class: (The entire exercise is repeated)
Mrs Tjiteo: She sings a song with numbers.

## CHAPTER 5

## SCHOOL SELF ASSESSMENT IN NORTHERN NAMIBIA: AN ADAPTATION OF CRITICAL INQUIRY

### *INTRODUCTION*

As noted above, since Independence, Namibia's political leaders have applied a large measure of the available human and material resources to building an education system based on equity, access, quality, and democracy (Presidential Commission Report, 2002). Along with other donor agencies, the United States Agency for International Development (USAID) has supported the government's efforts to meet those broad goals in the education system through a variety of projects. As is the sequence in almost all education systems in developing nations, once the goals of access and equity are largely met, the major push is toward improving the quality of the endeavour (e.g., Levin, Lockheed 1989, Heneveld 1994). In Namibia, improving the quality of lower primary schooling in the most disadvantaged schools in the four northern education regions has been supported by USAID's Basic Education Support (BES I and BES II) projects, designed jointly to support implementation of Government's policies to reform instructional practice in Grades 1-4 classrooms and methods of assessing and reporting learner performance in those classes, guide improvement in education management, and insure greater involvement of parents and community members in matters related to primary schooling.

An important feature of the reform effort has been the degree to which critical inquiry theory along with constructivist theory of learning have informed policy development, curriculum, and training plans for both prospective and practising classroom teachers. As has been noted, the inclusion of critical inquiry into the process of reforming Namibia's education system was at least partly the result of the belief that doing so would contribute to the young nation's need for insuring a greater degree of social equalization (Swarts, 1998). Due to the nature and philosophy of the apartheid education system, prior to Independence teachers had little or no opportunity, training, encouragement or systematic methodology to reflect on their own professional practice, to ask questions about their own and others' actions in their classrooms and schools, or to relate their instructional practice to the success or failure of schooling for their learners.

The BES II Project's initiated School Improvement Program (SIP) Self Assessment System (SAS). SIP/SAS is designed to bring teachers, parents, and principals directly into the process of asking the "why? how? what can be changed?" questions that emerge from critical inquiry. SAS allows teachers and other stakeholders to hold up a mirror to themselves and their work together in schools so that they can make informed decisions about ways to improve that lead to greater success for learners.

### *THE SCHOOL IMPROVEMENT PROGRAM AND THE SELF ASSESSMENT SYSTEM*

The schools participating in the SIP have been identified by the Ministry of Basic Education Sport and Culture as part of the group of the "most disadvantaged" in the nation (USAID RFP#690-99-005). The goal of the SIP is to develop and sustain "schools with norms of continuous improvement" (Harris and Hopkins, 2000) in Namibia. The program design makes use of the theoretical framework from the World Bank study that synthesizes the findings of the school effectiveness and school improvement literature from the perspective of the needs of education systems in developing countries, specifically sub-Saharan Africa

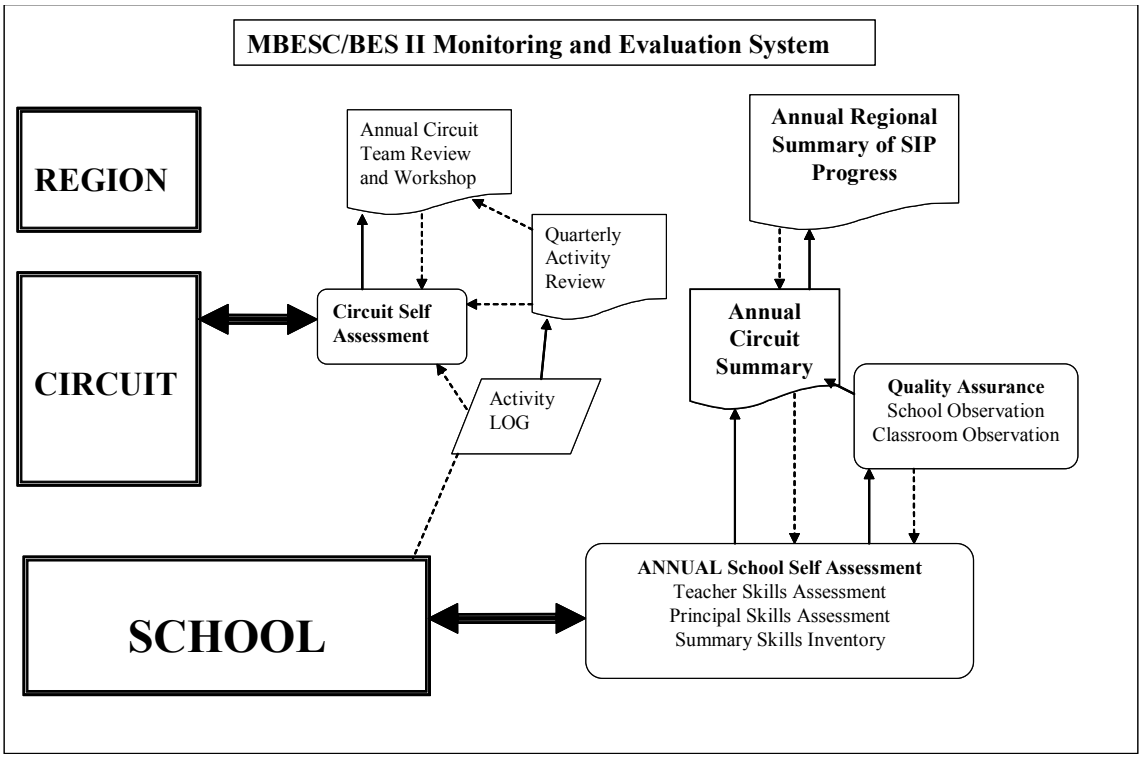
(Heneveld, and Craig 1996). In Namibia, the major components of that framework have informed many of the principles in the overall education reform effort and have guided the design and implementation of the School Improvement Program.

The self assessment system, as a method of monitoring and evaluating results of the School Improvement Program interventions, emerged about a year after the project's inception as a result of the recognition on the part of the project Steering Committee[18] that more information was needed about how the participating schools were responding to improvement efforts. Members of the Committee, along with the Honourable Minister of MBESC, Mr. John Mutorwa, observed a self assessment system in action in the Seychelles and became convinced that such a system could serve Namibia's purposes. The concept that the school is the unit of change in reforming education systems (Coleman and LaRocque, 1990) was one of the cornerstones of the Ministry's School Improvement Program design. The next logical step was to involve the teachers, parents, and principals in the process of monitoring and evaluating the results of improvement efforts. At the same time, the need to respond to the government's insistence on parent and community involvement in schooling, provided further impetus for a monitoring and evaluation system that takes those stakeholders into account (Education Act, Presidential Commission Report).

SAS is seen as a mechanism, a framework, for guiding locally initiated and implemented school improvement activities. At the same time, the summary results of the school level data offer the officers in the support system with information to guide their work in terms of teacher and principal skills training, providing material support from the system outside the school, and informing policy development at the national level. Perhaps most importantly, in terms of how the SAS supports the concept and use of critical inquiry, one major purpose of the self assessment system is to build the capacity for reflective practice, the ability to create and use, analyse, information among the education officers who support school innovations, the teachers and principals who are attempting to improve their practice, and parents and learners who are participating in the process.

The overall design of the self assessment system is outlined in Diagram A

[18] The 'advisory board' for the BES II project, composed of senior level MBESC officials from three directorates responsible for national level planning, education program implementation, and curriculum/staff development as well as senior education officers representing each of the target education regions, USAID officials, and project leadership.




As can be seen from the diagram, the system starts with a school self assessment that includes three parts, one for teachers to complete individually, one for the principal to complete individually, and a summary skills inventory. The summary is completed during a meeting at which parents and community members, as well as the teachers and the principal, discuss their individual responses and collaboratively develop the summary score in each of the quality indicator categories: teaching strategies, school management, outside support, and parent involvement. The school self assessment summaries are then synthesized into the circuit and regional summaries for each of the four target regions. Because the current project is limited to Grades 1-4, a specific instrument was not developed for learners in the pilot phase. During the revision process after the pilot, the issue of developing an instrument for learners was discussed. It was agreed that a learner instrument should be included in the process.

The quality assurance component of the system includes classroom observation and school visit protocols that are conducted by the Circuit Support Team (CST) members. The teams are composed of the Circuit Inspector, the Lower Primary Advisory Teacher, and the SIP Resource Teacher. The observation and visit instruments match the indicators in the self assessment forms and offer a comparison of the two perspectives. After the data have been entered and charts of the summaries prepared, the CST members meet with the school teams to discuss the differences and similarities. That discussion is used to formulate professional development needs as well as to update school development plans.

The other major aspect of the system is the circuit team self assessment. The instruments are completed, and the data entered and analised by the teams themselves to determine their professional development needs and to guide their plans for future work in supporting school improvement efforts.

As with other school self study systems, the need to collaborate with the stakeholders on the design, utilization, and analysis of the instruments was recognized as paramount from the beginning (Smith, 1996 and 1999 MacBeath, 1996, etc.). During the month of November, 2001, the BES II team worked with officers in the planning unit at the national Ministry level to insure that data collected was useful and worthwhile and could be added into the larger data bank of information used at national level to inform education policy and procedure. At

the same time, both the leaders of the four project target regions and the officers who provide direct support to SIP schools (Advisory Teachers, Circuit Inspectors and SIP Resource Teachers) were engaged in the instrument design. After the first drafts of instruments were completed, another inter-regional team meeting was held in January 2002 to formulate the procedures for implementing the pilot instruments in the SIP schools and among the school support personnel themselves.

The year-long pilot of the total SAS system took place during 2002 in 162 schools, involving 810 Grade 1-4 teachers and the results were compiled by the CST members who guided the schools through the process. During the final school term in November, schools received reports that summarized their self assessment responses, and offered a comparison of their school quality indicators with the circuit averages on the same indicators. These indicators included drop out rate, grade 7 pass rates, percentage of learners with C and above in Grades 1-4 as well as the eleven indicators of school quality. These reports formed the basis of discussions among the teachers, principals and parents who participated in their school self assessment process. At the beginning of 2003, new SIP schools joined in the SAS process and the schools that participated in the 2002 pilot are currently assessing their own programs based on the first round of SAS findings.

In addition to the summary report comparing school findings with circuit and regional averages, the support teams provided each school with an individual school comparative report that compares summaries of school self assessment results with results of classroom observations that were conducted by the support team members during the course of the year. The observation protocol includes all of the indicators that are found in the self assessment instrument related to classroom instruction. The comparison report provides the teachers and support team members with an opportunity to refine definitions and understandings of the indicators and make plans for teacher professional development based upon both their own assessment of their teaching as well as that of the observer.

As can be seen from the diagram, the total process is complex both in terms of the instruments used and the flow of information through the education system. For purposes of this paper, the concentration is on the Teacher Skills Assessment and its function in terms of providing a systematic means of encouraging reflective practice among classroom teachers. It should be noted that the “quality assurance” section of the M&E system is provided by outside observation of school and classroom practice.

## *TEACHERS AS REFLECTIVE PRACTITIONERS IN THE SELF ASSESSMENT SYSTEM*

A large proportion of the teachers in SIP schools have had little or no exposure to the BETD principles of action research or guidance in the use of reflection as a tool in their repertoire of professional skills. Thus, using the Teacher Skills Assessment section of the SAS is often the first time these teachers have been asked to systematically think about their daily work in the classroom. As noted above, the instruments themselves were collaboratively developed and based on principles outlined in Namibia’s policy documents on two of the basic reform initiatives related to classroom instruction: Learner-centred education (LCE) and Continuous Assessment (CA). Both those policies were formulated and are grounded in the principles of constructivism and critical inquiry (NIED, 2002).

The two instruments used by teachers in the School Improvement Program Self Assessment System are included here as Appendix A. The teacher instrument which forms part of the whole school self assessment form is composed of a set of indicators classified under the teaching and learning component of the SSA system. As part of the total school self assessment process, each teacher completes a Teaching and Learning Practices Inventory that includes indicators on classroom practice, classroom atmosphere, texts and materials,

and continuous assessment. The scores from the individual inventories are then transferred to the four categories of school quality indicators: teacher attitude, classroom management, learner-centred education, and continuous assessment to form a summary score. Some examples from the individual skills inventory include:
*Learners do projects or presentations in groups*
*I use a variety of teaching techniques*
*Learners work together in pairs to complete assignments*
*I use assessment to measure learner knowledge of basic competencies*
*I give my learners opportunities to present what they know to others.*
*I am confident that I always know whether my learners really understand the material*

Each teacher in the school will respond to each of the indicators and at the end, all of the teachers then meet and reach a consensus of the score for the school for each indicator. All the scores for the indicators under each category are then averaged to give a composite score for that category. For example, in the section on continuous assessment which has ten indicators, a school ranking for each of these ten indicators might add up to a total of 25. The score of 25 is then divided by the total of 10 indicators, giving a score of 2.5. That score is placed on the summary school rating along with other summary ratings from the other indicators to give a school report.

The second instrument deals with teacher individual teaching skills and serves as an indicator of specific actions that the teacher is able to perform. It is in two parts with the first part being a general self assessment for each teacher that is kept by that teacher for his/her use in reflecting on his/her practice, while the second part requires the teachers to rate their own level of proficiency in a range of skills related to LCE and continuous assessment using a ranking of expert, good, basic and novice. A summary ranking is then made of all of the teachers in the school. While not identifying teachers by name, the summary does indicate the number of teachers in each ranking, so that it is possible to identify the total number of teachers in a school or circuit with a particular ranking. Such information is useful for the support providers as they plan professional development activities.

As noted in the instructions for using the instrument, this section remains with the teacher for her/his use while a summary of the indicators in the categories of learner-centred education, classroom management, continuous assessment, and classroom atmosphere is compiled from all the teachers' responses for the school self assessment report. The total school report includes a summary of principal practices as well as parent involvement indicators. The school report is used both to inform decisions about professional development activities for teachers and to inform decisions principals, parents and teachers make about local school improvement activities they design and implement, either as an individual school or in conjunction with nearby schools in their cluster and/or circuit. A sample school report is included as Appendix B.

In many cases, the support providers report that as the teachers review their school summary report, comparing their own responses with the classroom observation summaries, they realize that their understanding of the meaning of the indicators was limited and incomplete. The discussion of the summaries and comparisons enables the teachers to go back to their own individual assessments to discuss the meaning of individual indicators. Thus, the reflection process itself provides the basis for informing change in teacher behaviour, both as individual teachers and as groups of teachers in schools, clusters and circuits. At the same time, the meetings about the self assessment process provide support providers with valuable information based upon teachers' understanding of their needs in terms of professional development. Over time, the teachers begin to take responsibility for guiding and informing in-service decisions based directly on results of their reflection on their daily activities in classrooms.

*REFLECTION AS TEACHER EMPOWERMENT: A STORY OF FOUR TEACHERS*

As a complement to the SAS instruments, the SIP teacher support providers have been using video technology as part of the process of helping teachers become reflective practitioners. Starting in February this year, a group of four female lower primary teachers, two from an urban school and two from a rural school, have been meeting at the Teachers Resource Centre on an average of every two weeks with their SIP Resource and Advisory Teachers, the BES II Teacher Training Coordinator and the project's Teacher Development Advisor.

The original purpose of the meetings was to collaboratively develop one or more video tapes in the teachers' classrooms to be used as models of good practice in the use of LCE and CA. During the first session, the discussion centered around definitions of many of the indicators on the self assessment. The teachers decided they wanted to focus on specific aspects of LCE, practice those strategies, and then develop a training tape once they were comfortable with their level of skills. As a result of that first meeting, the teachers and support providers spent the remaining three months on a cycle of classroom taping, analyzing the tapes, and planning lessons to demonstrate more effective use of the LCE strategies they were working on.

In the beginning, the teachers had some difficulty articulating the relationship between their behaviours and those of their learners and the indicators on the SAS instrument. In order to focus the discussions, the group mutually decided to pick three or four key indicators to work on for each lesson presentation. One early strategy used to focus the discussion was to estimate the amount of teacher talk compared to the amount of learner talk in the lesson. It very quickly became clear to the teachers that the more they heard their own voices in the lesson, the less time was available to learners for questioning and discovering. As could be expected, at first the teachers were somewhat shy about pointing out their own strengths and weaknesses. However, the initial reluctance soon melted as trust was established among the teachers and support providers: the process was one based upon mutual support for problem solving and analysis. The videos were a direct mirror of actual practice and the discussions offered the opportunity to develop strategies for improvement. Toward the end of the very first meeting, the teachers themselves looked at the list of LCE and CA indicators and chose three or four they wanted to focus on. From there they decided to plan collaboratively for the next video taped lessons. At that point, the Resource Teachers were able to support the and assist the lesson planning process by offering specific ideas related to the LCE and CA strategies the teachers had chosen to work on.

Since that first meeting, the teachers themselves as well as the support providers have been truly delighted and amazed at the degree of improvement in their instructional practices. In a recent video of the second grade teacher whose first tape was judged to include about 70-80% teacher talk, the environment education lesson opened with learners presenting a role play in masks they had made and then went on to five different group activities while the teacher moved to each group using a well constructed continuous assessment strategy to measure and record learner progress. Throughout the lesson learners were helping each other with their activities, manipulating a variety of tools and materials, discussing solutions to the tasks they had been given, proudly displaying the results of their groups' efforts, and clearly demonstrating that they were at the center of the learning process. The teacher was confident and articulate as she discussed how she and her colleague planned and presented the lesson, pointed out the key LCE strategies she used, and why she chose the particular CA technique for the basic competency related to categorizing and identifying the names of domestic animals and wild animals.

During the most recent meeting of the LCE Forum (the name the teachers have given themselves) one member of the group proudly reported that she and her colleague were now being asked by other lower primary teachers in their school to help them plan more learner-centred lessons. On their own initiative, they have made arrangements with the principal and the Resource Teacher to assist them with scheduling so that they can team-teach in both their classrooms. Their accomplishments are beginning to be recognized by the principals and their peers. As they grow in knowledge and confidence they are becoming a resource for other teachers in their school and eventually in nearby schools. With the impetus of systematic reflection via the SAS, video taping as a tool that allows review of actual classroom situations, and the opportunity for collaborative problem solving, the experience of these four teachers is a model of what reflective practice can accomplish toward improvement in the quality of education. The teachers are no longer waiting to be told how to improve their use of LCE and CA but are directly informing and choosing the kinds of professional development support they require. Furthermore, on their own they are developing and researching a variety of teaching materials and strategies that they have discovered they need.

## *COST IMPLICATIONS*

The SIP self assessment system design, implementation, analysis and reporting procedures in the four target regions have been almost entirely conducted by the MBESC employees responsible for providing support and professional development to primary schools. The job descriptions of the Circuit Inspectors and the Advisory Teachers include the type of work they do with the SAS during the course of each school year. Thus, expanding the system to other regions of the country, an issue currently under discussion in the Ministry, has cost implications only as they relate to the training that would be necessary to insure that all regional personnel in non-project regions have the skills, knowledge, and access to technology necessary to implement the system activities. This training could be part of regional Advisory Teachers' and Inspectors' continuous professional development training if carefully managed by the MBESC and would not necessarily mean additional training.

In terms of donor funding, the BES II project has supported the design of the system, provided supplies to duplicate the forms, supported team meetings to provide the time for discussions of revision, training on analysis and reporting techniques, and regular on-site support for the CST members in the four target regions. The system could be implemented throughout Namibia with relatively little additional recurrent costs to the government, as establishing the SIP self assessment system in Namibia, especially the first year of such an operation, was costly.

**Following is a breakdown of the cost for the BES II project and the MBESC:**

**Table 2 Cost to the BES II project**

| **Item** | **Amount in US$** |
|---|---|
| Local staff | 360, 260 |
| Local staff travel and transport | 175, 937 |
| Local office costs | 123, 041 |
| Local meetings, conferences, workshops | 32, 232 |
| Participant cost | 480, 600 |
| Equipment | 66, 900 |
| **Total for three years** | 1, 238,970 |
| **Estimated one year cost** | 412, 990 |
| **Estimated five year cost** | 2, 064, 950 |

During one year the unit cost/teacher of donor spending is US$ 385.25/NAD 3, 082
During 1 year the unit cost/learner of donor spending is US$9.63/NAD 77

*COST TO GOVERNMENT*

The cost to the MBESC is the 5% of their time that 52 Inspectors and Advisory Teachers spend on the management of the school improvement plan in the 268 schools where they operate. Further cost is the 15 Heads of Department (HODs) that act as resource teachers for a number of schools in the 4 target regions. (No substitute teacher costs apply in this case as regions/schools made internal arrangements to substitute for those seconded staff members at schools).

**Table 2 Yearly Cost to Government**

| Item | Numbers | Amount in NAD | Amount in US$ |
|---|---|---|---|
| 5% of 52 staff members | ‘ | 6, 240 000.00 | 780 000.00 |
| 100% of HODs | | 1, 500 000.00 | 187 500.00 |
| | 1, 072 teachers | | |
| | 42, 880 learners | | |
| **Total of salaries** | | **7, 740 000.00** | **967 500.00** |
| **Unit cost/teacher/year** | | **7 220.00** | **902.50** |
| **Unit cost/learner/year** | | **180.50** | **22.56** |

US$: NAD = 1: 8

## *CONCLUSION*

At this point in the implementation of the total self assessment system, we have learned that the process of individual reflection on classroom practice is one that takes sensitive guidance, thoughtful encouragement, and support based upon teacher input. As has been pointed out in summaries of teacher in-service programs (NIED, 2002), there is still a considerable gap between what Namibian teachers understand learner-centred instruction to mean and how that understanding translates into actual classroom practices. The teachers who have been participating in the SAS are being asked to reflect on what they actually do with their learners on a daily basis from a set of indicators that reveal use and application of learner-centred instructional strategies. As trust in the process and between the advisory and resource teachers and the classroom teachers is built, reflection becomes both more informative and more useful in terms of changing practice and guiding professional development activities.

The SIP Self Assessment System demonstrates that critical inquiry, as adapted in this model, can and does take the change process directly into the classroom (Swarts, 1999) and results in greater understanding of the principles of LCE as outlined in Namibia’s policy documents (NIED, 2002). Furthermore, teachers who participate in the process are gaining a powerful voice in terms of the kinds and quality of the professional development they need. Reflecting on learner-centredness and how to implement it in their classrooms is by its very nature enhancing and internalising their understanding of those concepts. As teachers become more articulate, adept, and analytical about their own practice, their learners move to the centre of the teaching-learning process and thereby acquire the skills they need to become life-long problem solvers.

*APPENDIX A*

Section of the SIP School Self Assessment Instrument (definitions of the rankings and directions for how to determine scores are included in the general directions for use)
Teacher Self Assessment
Part A. Instructions: **Please review the following activities and rate yourself and your classroom. This sheet is FOR YOUR PERSONAL USE, so please be honest with yourself. You do not need to share this assessment with anyone else unless you want to. Please use this to rate yourself and to help build a professional development plan to become a better teacher.**

| Classroom Practices | Always | Often | Seldom | Never |
|---|---|---|---|---|
| I prepare complete a lesson plan for every subject | | | | |
| I understand the curriculum objectives of my grade or subject. | | | | |
| I refer to the syllabus objectives when I prepare my lesson plans. | | | | |
| I present the learning objectives to the learners before every lesson | | | | |
| I review the learning objectives with the learners after every lesson | | | | |
| I complete assessment activities for every lesson | | | | |
| My assessment activities adequately tell me whether my learners are understanding the lessons | | | | |
| I adapt my teaching plans based on the learning assessment for each learning objective. | | | | |
| I keep regular records on learner progress and can tell at any time how many learners have mastered the basic competency. | | | | |
| I fully understand the content of the subject that I am teaching. | | | | |
| I give clear instructions for all classroom activities | | | | |
| I begin and end lesson activities on time | | | | |
| I have clear rules for learner behaviour in the class. | | | | |
| I am consistent in applying the class rules. | | | | |
| I try to adjust the lesson to take into account the different capabilities of the learners | | | | |
| The learners are allowed to work at their own pace. | | | | |
| I organize my class so that the learners are spending most of the class time on active learning tasks. | | | | |
| My classroom is organized for group or pair work (not all facing the teacher) | | | | |
| I assign homework | | | | |
| I check all homework and class work and give feedback | | | | |
| I have an adequate number of textbooks for all learners | | | | |
| I use writing materials (pens, pencils, exercise books) | | | | |
| I prepare materials for class, such as posters, real objects like stones or sticks. | | | | |
| I have the learners prepare materials for class, such as puppets, dolls, drawings. | | | | |
| I display learner work on the walls. | | | | |
| I limit my use of non-LCE teaching techniques, such as “whole group call response”, rote repetition, and giving | | | | |

| | | | | |
|---|---|---|---|---|
| the answer. | | | | |
| | | | | |

| **Classroom Atmosphere** | **Always** | **Often** | **Seldom** | **Never** |
|---|---|---|---|---|
| There is a relaxed and friendly atmosphere in my classroom. | | | | |
| I address the learners in a pleasant tone of voice. | | | | |
| My learners initiate questions and observations. | | | | |
| Both the learners and I relate the lessons to activities in their daily lives. | | | | |
| I show genuine interest in what the learners say and think. | | | | |
| The learners show genuine interest and respect for the ideas and comments of their classmates. | | | | |
| I show respect for my learners. | | | | |
| The learners show respect for me. | | | | |
| I know each of the learners individually (names) | | | | |
| I give prompt feedback to my learners. | | | | |
| I give feedback to learners in a way that they find encouraging and helpful. | | | | |
| I reward learners for good work. | | | | |
| I use different ways to give praise to keep the class interesting. | | | | |
| Learners support and praise each other for good work. | | | | |
| Learners bring items to the school to share and learn | | | | |
| Parents make presentations in my class | | | | |
| Parents assist me in teaching | | | | |

**B. Actions I can take:** What can I do to improve the classroom atmosphere and make it more conducive to learning? What will I work on this year?

**C. Assistance needed:** What help do I need from the principal, the circuit team, or others to help me to do a better job. How will I ask for this assistance?

*TEACHING AND LEARNING PRACTICES INVENTORY*

**Part B. The answers on this section will be transferred to the Summary Skills Inventory sheet.**

| **Teaching Practices** | **Expert** | **Good.** | **Comp.** | **Novice** | **NA** |
|---|---|---|---|---|---|
| 1. Learners sit in groups for regular class activities | | | | | |
| 2. Learners work together in groups (talking, sharing ideas, working out the right answer) | | | | | |
| 3. Learners do projects or presentations in groups | | | | | |
| 4. Learners work together in pairs to complete assignments | | | | | |
| 5. Learners work together in pairs for projects or presentations | | | | | |
| 6. Learners are grouped with other learners of similar ability | | | | | |
| 7. Learners are grouped with other learners of different abilities, so good learners can help the weaker ones. | | | | | |
| 8. I use a variety of questioning techniques | | | | | |
| 9. I try to draw out answers from learners rather than giving them the answer | | | | | |
| 10. I use games to teach ideas | | | | | |
| 11. I use role play in teaching | | | | | |
| 12. I use visual aids | | | | | |
| 13. I include community activities in the classroom | | | | | |
| 14. Learners set their own individual targets for learning | | | | | |
| 15. I demonstrate lessons in a way that keeps the learners involved | | | | | |
| 16. I have learners demonstrate lessons in a way that keeps the entire class engaged | | | | | |
| **TOTAL (1)** (sum marks in each column) | | | | | |
| | | | | | |
| **Texts and Materials** | | | | | |
| 17. I can use the syllabus effectively to present the basic competencies. | | | | | |
| 18. I use other materials to teach basic competencies | | | | | |
| 19. I can make my own materials to present basic competencies in a way that is appropriate for my learners | | | | | |
| 20. I use writing materials regularly in class to keep learners actively engaged. | | | | | |
| 21. I use drawing materials regularly in class to keep learners actively engaged | | | | | |
| 22. I have the learners prepare materials for use in class | | | | | |
| **TOTAL (2)** | | | | | |

| **Continuous Assessment** | **Expert** | **Good** | **Basic** | **Novice** | **NA** |
|---|---|---|---|---|---|
| 23. I use assessment to measure learner knowledge of basic competencies | | | | | |
| 24. I use quizzes often (at least once a week) to test what learners understand | | | | | |
| 25. I regularly give homework and check the homework | | | | | |
| 26. I use questions and answers in the class to measure whether each individual understands the lesson | | | | | |
| 27. I give short assignments in class and check them to assess learning | | | | | |
| 28. I give my learners opportunities to present what they know to others. | | | | | |
| 29. I keep detailed records for each learner that reflects what they have learned, organized by basic competencies. | | | | | |
| 30. I am confident that I always know whether my learners really understand the material | | | | | |
| 31. I am confident that my learners will do well on the school leaving exams, based on my CA activities. | | | | | |
| TOTAL (3) | | | | | |
| | | | | | |
| SUMMARY (Add totals 1, 2, and 3 for each column) | | | | | |
| Summary by level of proficiency (add totals for Mastery/Good and Basic/Novice | (1) | | | | |
| Personal Mastery Index (divide number in (1) by | | | | | |
| | | | | | |
| | | | | | |

*APPENDIX B*

**School Report Sample**

| | School Climate | Management Practices | Professional Development | School Planning | School Support-Parent Involvement | Parent Participation | Teacher Attitude | Classroom Management | LCE | CA | Outside support |
|---|---|---|---|---|---|---|---|---|---|---|---|
| School Rating | 2.8 | 3 | 2.7 | 1.7 | 2.7 | 2.7 | 3.4 | 3 | **3.1** | **3.5** | 2.4 |
| Observer Rating | 3 | 3 | 2 | 3 | 2 | 2 | 2.7 | 4 | **2** | **2.7** | 2 |

## CHAPTER 6

## RECOMMENDATIONS AND REFLECTIONS ON THE RESEARCH

Hertha Pomuti and Mariana van Graan

In this chapter we will propose recommendations to the two studies that have been completed on the BETD PRESET and INSET programmes. We will also reflect on the implications of these recommendations for the Professional Development Subdivision of NIED. Planning which have already been done to deal with professional development of teacher educators at the colleges of education will also be highlighted in this chapter.

### *RECOMMENDATIONS DRAWN FROM THE SUB-STUDIES ON BETD PRESET AND INSET*

1. It is strongly recommended that the MBESC revisits the recommendations of the Ten-Year Plan for Educator Development and Support[19] in Namibia (see Coombe, *et al* 1999), especially those recommendations to do with policy formulation, coordination and quality assurance, as there are constrains to implement CPI initiatives and teacher educator development without a clearly stated and agreed policy framework which firmly guides and defines the parameters within which to plan continuous professional development for educators.[20]
2. Teacher educators at both colleges of education expressed the wish and need for professional development in general, but also specifically in applying CPI. A substantial staff development program for teacher educators should therefore be developed to support further implementation of the practice-based inquiry in-service teacher education model in Namibia.
3. The urgent need for induction sessions for new staff members was a further recommendation by the sample of teacher educators. Professional development committees at colleges of education could potentially lead such induction sessions.
4. Opportunities need to be created at colleges of education for teacher educators to become well informed about the logic of teacher-based research through engaging themselves in critical practitioner inquiry. Incentives should be attached to publish and share this kind of applied research.[21] It provides opportunity to share research within the country. This could also contribute to Namibia's bank of literature on applied educational research.
5. The support schools need to be strengthened so that they are in a position to support student teachers professionally in general and specifically in aspects of the Action Research Projects. This will allow the development of a strong professional support network that will provide continuous support for practising teachers graduating from BETD PRESET and INSET. Continuation of critical practitioner inquiry requires support structures so that teachers can benefit from ongoing school-based support from peers and other professionals.
6. An introductory course aimed at developing teachers' analytical and critical thinking skills should be designed. It is unrealistic to expect teachers to acquire advanced skills of reflection if analytical and critical thinking skills (which are needed for advanced reflection) were largely absent from teachers' previous educational experience. The analytical or critical thinking skills should then be integrated in the content of the teacher education curriculum.

[19] In this report 'development and support' is used in preference to training or INSET because it is a broader concept

[20] It is even more important now that Namibia has embarked on decentralising some of its educational services to six more education regions. If there is no clear policy framework and thorough strategic planning in this regard continuous professional development of educators in Namibia could easily become fragmented and inefficient

[21] Such research could be published in the *Reform Forum*, NIED's trimesterly education journal.

7. The model presented in chapter 5 School Improvement Program (SIP) Self Assessment System (SAS) could be considered as a starting point for systematic inquiry on a wider level than the present targeted regions and schools. During the NIED monitoring exercise carried out in 2002 the NIED Research Unit started to experiment with teacher self assessment as a research tool, rather than a teacher development strategy. The potential of using self assessment to improve teachers' analytical skills, through reflecting on specific indicators which are widely negotiated was clearly seen during the training workshop that took place before the monitoring exercise.[22]
8. It would be recommended that if deciding to adopt and adapt the self assessment/school improvement model on a national level, schools/clusters would be given opportunity to negotiate the indicators according to their own contexts and goals for learning and teaching.
9. The issue of equitable spending on colleges of education needs to be addressed by the Ministry of Higher Education, Training and Employment Creation, as they finance the BETD. It is clear from the Cost Implications, reported chapter 3, those inequities still exist in funding formulas. The traditionally disadvantaged colleges are still disadvantaged in terms of unit costs per student and that inevitably affect the quality of educational delivery.

## *REFLECTIONS ON THE RESEARCH*

Completing this study has been very useful to NIED in the sense that it raised awareness again of 'Where are we?' with Critical Reflection and the implementation of CPI in the BETD programmes. It also raised consciousness of the needs for professional development out in the field where education happens.

It highlights the strengths and weaknesses of the BETD programmes. It places NIED's Professional Development subdivision in a favourable position to plan its upcoming, future professional development programmes for both programmes on the basis of these understandings.

It was heartening to learn about the positive outcomes of a programme like the School Improvement Project/ Self Assessment System, which has potential to be adapted and adopted on a wider scale to encourage inquiry-based teacher education in Namibia.

While engaged in the research process, NIED has become aware how crucial and timely the already planned staff development programme for teacher educators is, which will commence in November of 2003. *The **main purpose** of the staff development programme is to further support the implementation of the BETD programme. The programme is also meant to strengthen the capacity at the colleges of education to enable them to run induction programmes for new teacher educators in future. It should be noted here that this staff development programme focuses on continuous professional development of teacher educators rather than on qualification upgrading.*

As the teacher educators at the colleges of education are mainly responsible for tutoring during contact courses and marking of scripts of the INSET teachers, targeting this group for professional development would also potentially strengthen the quality of delivery of the BETD INSET.

The objectives of the staff development programme are to:

[22] A similar instrument than the one in **Appendix A,** (SIP School Self Assessment Instrument) presented in chapter 5, was used in the NIED monitoring.

- *introduce new teacher educators to the philosophy, pedagogical approaches and practices, assessment practices and procedures underlying the BETD programme*
- *further develop teacher educators' conceptual understanding of the philosophical underpinnings of the BETD programme*
- *further develop their understanding, knowledge and skills in assessing learning in the context of learner-centred education paradigm*
- *extend their knowledge, understanding and skills in using an integrated approach to teaching and learning*
- *build on their knowledge and understanding of active teaching and learning*
- *enrich their knowledge, skills about theory and practice of continuous and criterion-referenced assessment.*
- *further develop their knowledge and understanding of education research and critical practitioner inquiry in teacher education.*
- *build on their knowledge and skills of producing and use of teaching and learning materials.* (Extracted from an approved funding proposal for staff development at Colleges of Education in Namibia).

The need for integrated continuous professional development for practising teachers has also been realised again. The findings highlight the fact that both BETD INSET teachers and PRESET graduates need professional support, other than panel inspections, which are observed and reported to be so popular in some education regions. It was also learnt that the support schools where BETD PRESET students do their SBS need professional support. It is clear that many strategic decisions and planning will have to be made soon as to where support will be focussed with so many demands and few resources. Investments that will bring the highest returns might be one of the principles to use when making such decisions, as spending to many resources on untrained teachers at this stage might not yield high returns. It would again be useful to reconsider the recommendations made in the Proposals for a Ten-Year Plan for Educator Development and Support in Namibia and the Presidential Commission Report on Education in this regard.

**Conclusion**

This research has shown that continuous professional development for educators on different levels is essential in a country still struggling to overcome the consequences of decades of Bantu and Apartheid Education. One group's level of professional development inevitably influences the success of another group, which makes it crucial that teacher education is planned holistically across regions as well as across different projects and programmes.

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