

To What Extent Top-down or Centralised Initiatives will be successful to determine the Nature of Teaching, Curriculum and Assessment?

(Dr R S Punia)

Based on selected literature review and cases from personal experience the author shows that it is difficult to answer this question adequately in the light of the context of education. However, generally the success of a project may be assessed in the light of the degree of consensus on the problem and its solution amongst stakeholders and the degree of integration in curriculum, teaching and assessment as a systematic approach to curriculum development in collaborative cultures.

Introduction

Top-down policy is popular in many developing and developed countries to determine the nature of curriculum, teaching and assessment. In this paper I examine the degree of success that might be possible from such a policy. This paper is addressed to policy-makers in the international context generally. It provides my answer as an international consultant engaged mostly in 16+ technical and vocational Education in the international context in several countries. According to my experience there is no general answer to this question. That is why I have adopted the case study approach to answer the question. It allows me to draw on my first-hand experience and professional literature. The paper is divided in two parts. Based on professional literature part one establishes the context to validate my choice of methodology. It shows to me that there is no general understanding of curriculum development as an integrated system consisting of curriculum, teaching and assessment amongst stakeholders. Consequently most projects start without a clear policy and criteria for assessing the success of a project. Learning from experience is rarely the goal of educational projects. Part two includes four case studies illustrating how these factors operated in these projects.

Part 1

Curriculum Development as an Integrated System of Planned Curriculum, Teaching, and Assessment

Teaching

The term teaching though generally known in practice, is rarely used in the professional literature. The Europeans use the term pedagogy and the Americans use instruction. The language of the academics rarely matches that of the practitioners.

Curriculum

The following narrative shows how the professional learnt curriculum development over a long period. Even now there is no generally accepted meaning of this term.

I first understood curriculum development as an integrated system of teaching, curriculum and assessment from the Tyler model (1949). However, this model represents the thinking of a curriculum planner at a time when curriculum development as conceptualised in Stenhouse 1975 had not arrived. The Tyler framework deals with four rational questions:

- **Why to teach? (Course Objectives)**
- **What to teach? (Course Content)**
- **How to teach? (Teaching Methodology)**
- **How to assess? (Assessment of Student Learning)**

In spite of the existence of this model in the sixties curriculum specialists attempted to improve the quality of curriculum through improving the quality of content; educational technologists focused on improving teaching/pedagogy and teacher trainers began to train teachers independently. There was no holistic vision of curriculum development as an integrated system and there was no collaboration amongst practitioners in these disciplines to improve the quality of curriculum holistically (Stenhouse 1975, Sarason 1990).

Often assessment was not an integral part of objectives, content and pedagogy of teaching. Assessment was often used as a tool for selection and certification and rarely for the improvement of teaching and learning and the improvement of the quality of education. Broadfoot (1996) made a strong plea for understanding the relationship in learning and assessment as follows.

Meanwhile in a world obsessed by qualifications, credentials and diplomas, it is important to remember that assessment and reporting have in the past been allowed to become one of the biggest barriers to learning for many young people. It has been the argument of this paper that it is time to challenge the legacy of the past so that assessment can instead become the key to become more effective learning for many more people (Broadfoot 1996).

Torrance (1997) regards assessment as a useful tool for improving the standards in education. He stated: “What is required is improved form of assessment, which may or may not include improved form of testing: Broaden the goals and methods of assessment, and you will broaden the curriculum and raise standards”(p.323). According to my professional judgement

this fragmentation continued in spite of the Tyler (1949) model showing interrelationship amongst these components of curriculum. It was still true to of developing countries I visited as a consultant.

Furthermore, in the past curriculum planners attempted to improve the quality of teaching by improving the quality of the planned curriculum but with limited success. Curriculum planners showed little appreciation of curriculum development from teachers' perspective According to Eisner (2000) as follows curriculum development is a practical art. He stated:

Curriculum development and teaching are fundamentally practical activities. Their aim is not to produce knowledge but to get something done. Getting some thing done is a practical activity that requires an extraordinary sensitivity to context,on individual ability to weigh alternative courses of action to deal with trade offs and expectation that each situation will be significantly unique (p. 354).

I find that Stenhouse (1975) first conceptualised curriculum as a proposal to be tested in the classroom and defined the problem of curriculum development to bridge the gap between the planned curriculum as a proposal and the operational curriculum as taught curriculum. In Punia (1992) I added another dimension to Stenhouse 1975 model. I proposed that the problem of curriculum development in schools was to match the planned curriculum with the operational curriculum within a particular context. I realised the importance of the third dimension as a consultant in curriculum development in several countries with varying contexts. In Punia (1992) I present vocational teachers' perspective of curriculum development in a technical institute and show how the planned curriculum was integrated with the operational curriculum as a form of collaborative action by the consultant, teachers and management of a technical institute in the South Pacific. According to Sears and Marshall 2000 as a field of study curriculum is at cross roads. The term curriculum has now moved away from teaching in schools to self-learning from personal experience in all contexts. For instance, in Punia (2004) I have called my CV as the curriculum of my lifelong learning to generate my present professional self/identity.

Power Relations in Curriculum Development in Top-down and Bottom-up Policies of curriculum development

Generally top-down initiatives descend from governments and their representatives with decision-making powers. The National Curriculum and the past initiatives of the Schools Council in the UK are examples of the top-down initiatives in curriculum development aimed at improving the quality of student learning. Bottom-up initiatives originate from individuals

and groups from within educational institutions. Even these categories do not describe reality adequately. I often found that the teachers in schools regarded initiatives from colleagues as top-down strategies. It would seem that the real problem is not that of a top-down or bottom-up initiative: it is the problem of owning and contextualising the initiative in schools. Furthermore, educational institutions are loosely coupled organisations to make the above distinction more complicated (Reynolds and Saunders 1987).

My professional experience has shown that both top-down and bottom-up initiatives can be highly successful under certain conditions. I personally led small-scale top-down initiatives in short training programmes with high success in achieving the desired results when the training team shared the vision of their leader as a competent curriculum developer in an environment with support and accountability. However, large projects with many sites, one-way communication, without adequate support from the top and accountability from the bottom have failed to achieve anticipated results within the planned budgets. Similarly bottom-up initiatives from teachers and management in schools failed without an adequate external support from the management, profession, the government and industry.

Evaluation of Curriculum Development Projects

Frequently policy-makers are politicians who have to react to pressing and ill-defined social problems quickly and without adequate preparation. They rarely have the time to achieve consensus amongst stakeholders on the need for action and to determine criteria for the success of such projects in the beginning. For instance for Green (1998) success in student outcomes is not about raising standards of education: it is about maintaining standards within affordable budgets. According to Harris and Hopkins 1999, policy has little affect on student outcomes: it is the local implementation at school and classroom levels that determines the quality of student learning. They stated:

Despite the increasing centralisation of educational reform in most western countries, it is becoming increasingly apparent that policy initiatives have little impact on student achievement. It would appear that centralised policy implementation can best set a direction, a framework for action, but it is local implementation that determines student outcomes (Harris and Hopkins 1999, p. 257).

Schooling Context

Probably Goodlad (1979) provides an apt picture of formal schooling today. According to him the problem is that non-professionals in power tend to teach the professionals in teaching how to do their job. The above narrative has the complexity of this task.

Schooling tends to be those spheres of human activity for which *modus operandi* appears to be, since we do not know, legislate. Consequently teacher education and teaching, to a degree, controlled by a host of legislated requirements pertaining to accreditation, certification and mandated curricula which conspire, both legally and psychologically to inhibit creative planning at institutional level. People with minimal technical-professional background, remote from data pertaining to students and their lives, in their wisdom remove to a higher level of incompetence some of the decisions staff should make collectively and individually. Yet, ironically the teacher is still held accountable for the outcomes (p. 55).

According to Sarason 1990 we have never tackled the curriculum development problem holistically and the power relations in education have never been resolved. It is this that makes schooling a difficult task. This complexity is illustrated in the following authentic cases derived from my personal involvement and literature from elsewhere.

Part Two:

Four case Studies of Curriculum, Teaching and Assessment in the International context

Case One: Training and Vocational Education Initiative (TVEI) in the UK

This case study provides a review of prevocational initiative in the UK reported in Pring 1997. According to this academic, this top-down project was successful in solving the curriculum and teaching problem but failed to solve the assessment problem and the problem of learning for future curriculum planning. For instance, lessons learnt from this project were not used to plan the national curriculum.

Pring 1997 examined TVEI as a curriculum initiative from the department of employment (DE) in 1982. According to him the government used a bid and deliver strategy to achieve the objectives of this project. The state stated the problem, provided the funds and the framework within which solutions were to be found. They left the solution to the expertise of the professional educators. The curriculum design problem was to provide a continuing education for a growing number of young people from schools, who were alienated by past failure, disillusioned with education, ignorant of job prospects, but who recognised the importance of education. Relevance of curriculum meant meeting the needs of students and society.

According to Pring 1997 the teachers quickly changed the original idea of the ministers for providing traditional vocational education with emphasis on skills into something more worthwhile. The emerging TVEI curriculum liberalised an otherwise narrowly conceived vocationalism and vocationalised a liberal tradition ignoring relevance to the world of work. This experience shows the limitations of the top-down policies from governments. Teachers did not reject the conception of vocational education: they accommodated it into the existing liberal tradition of schools. This is what I call owning and contextualising the planned curriculum. Pring 1997 reports that the TVEI curriculum challenged several traditional values of schooling.

It was precisely that separation of the theoretical from practical, of the intrinsically worthwhile from the useful, of understanding from skills and personal qualities of ‘knowing that’ from ‘knowing how’, which were challenged by prevocational principles and practice (p.124).

He qualified the above statement by stating that his view was not clearly articulated by the practitioners and that it was an emerging ideal.

In this initiative there was no distinct curriculum in the form of content, teaching method, specific organisation of learning experiences with emphasis on technology as demanded from the top. Curriculum practices included assignment learning, resource-based learning, design and technology, economic awareness through mini-enterprises, community-based projects, links with employers through work placements, profiling and assessment. According to Pring (1997) these practices “illustrated how prevocational development might be seen to endorse a practical, more integrated, more community directed, more economically and technologically aware conception of education”(p.132).

According to Pring 1997 this project was saying something important about the nature of the learning and the aims of education, which was relevant to all students yet it had little effect on those producing the National curriculum with a tripartite system of education. The TVEI project failed to make a success as a whole curriculum. This project failed to create an assessment system coherent with the established practices and to provide routes into the next stages of Further and Higher Education or employment. This experience shows that whatever the merits of curriculum reforms and designs, they must be seen within a coherent system of assessment.

According to my professional Judgement as a professional consultant, Pring 1997 presents the conception of an academic admirably. However, he seems to be less familiar with the

implementation problems of practitioners. The curriculum emerging from the TVEI could have added tremendous workload on schools and teachers and it would be very difficult to implement it fully to ensure uniformity in standards. Teachers would require new professional knowledge, skills and attitudes. As an evaluator of such innovations I often found a few exemplary practices but many practices were superficial designed to keep the students busy with interesting activities. Vocational education and training is expensive and result oriented. Such projects tend to fail due to the shortage of funds and without concrete results.

Usually a project is assessed on fitness for purpose, cost, coherence and context. As a professional educator I would like to add to this list learning from experience. It is difficult to state if this project was a success or a failure. There was no general consensus on the aims of the project amongst stakeholders. Schools may have provided a practical solution to the original problem but their solution remained partial without resolving the assessment issue. Some may argue that the project lacked a systematic approach to curriculum development. From the student perspective this project might be considered unsuccessful, as it did not offer any prospects for further education and/or employment in industry. The public might be dissatisfied with the high cost. The government of that time may have been satisfied with the outcome providing a temporary solution to an immediate problem.

I was not involved in the TVEI project in the UK but I was directly involved in a very similar project in Mauritius presented next. This project managed to solve the problems of the TVEI project but still remained a temporary solution to an immediate political problem. It adds international dimension in answering the question from the perspective of a consultant in curriculum and staff development directly involved with this project.

Case Two: Prevocational Training (PVTI) in Mauritius

The National Problem

Mauritius had compulsory and free primary education for all and there is a national examination at the end. One of the implicit aims of the examination was to reduce the number of students for the available places in the secondary schools, a common phenomenon found in several developing countries. A large number of students who failed the examination were likely to become a social problem in Mauritius. To avoid this situation the government of Mauritius approached the newly established Industrial and Vocational Training Board (IVTB) to find a training solution for these students. Like the TVEI project in the UK in this project the teachers liberalised the traditional vocational education but with a few differences.

The IVTB Solution

The IVTB claimed to have imported a complete training system from Singapore and adapted it to suit its own context. As a result a dozen PVT centres were established in the country to offer a three-year programme for primary school failures. I became involved in owning and contextualising the imported curriculum and staff training for implementation. The IVTB changed the original goal of providing traditional training to young students into an educational experience through vocational education. They liberalised the vocational training for students who were too young for traditional vocational training. It was a practical response to a problem at hand. Unlike TVEI, after the initial goal of providing liberal education through vocational training, IVTB began to prepare these students for entry into apprenticeship in industry and for entry into the formal secondary education at the end of a three-year programme. IVTB used a written planned curriculum and a formal assessment system as an integrated curriculum development system carefully liked with social and student needs.

Project Evaluation

Like TVEI in this project there was no clear criteria to assess the success of the project and there was no learning from this successful curriculum experiment. According to my professional judgement the trainers of IVTB were highly motivated and they received good professional training from a consultant. The IVTB had successfully tackled the initial problem envisaged by the politicians and parents to provide a useful learning experience to avoid a social problem. The quality of student work was very good generally. More importantly the attitude of the students and that of the teaching staff towards their work was exemplary. According to my professional opinion an average student in a PVT centre received better education than that of an average student in the secondary schools. Many students joined the apprenticeship system in Mauritius after completing the three-year course at IVTB. However, no student had joined the secondary education for further education.

I find that this project was a living example of multiple-intelligence amongst school children and the possibility of providing general education through training. According to my professional judgement this project was highly successful in solving the educational problem. However, due to lack of any formal evaluation of the project the public and government remained unaware of the work of the IVTB. A little learning seemed to have occurred as evident from the next episode.

After the elections the new government came in power with new policies. The new government introduced free and compulsory education up to form three. The education

department providing liberal education with little experience of vocational training took over the PVT project from IVTB while the IVTB kept the original staff and buildings. There was little chance of transfer of learning from one project to another.

Without a formal evaluation it is difficult to determine if the project was a success or a failure. The government of Mauritius identified the problem and provided funds to IVTB to solve an immediate and a temporary problem. In this project the most powerful stakeholder identified the problem and provided funds but the professional educators provided an adequate solution in curriculum, teaching and assessment as an integrated system with worthwhile purpose inspiring students, teachers and others involved in this project. The next project is a major curriculum development project in the UK where the government decided to introduce a national subject-based curriculum in schools where no such curriculum existed before.

Case Three: The National Curriculum(NC) in the UK

It is an interesting case study of introducing subject-based national curriculum in British schools where no such curriculum existed before. Ball and Bowie (1992) studied the implementation of the National Curriculum in England and Wales. This study illuminates important issues in top-down strategies. The authors examined policy implementation in three secondary schools and one tertiary college.

These two academics from universities reported on the basis of data obtained through interviews. Their report includes policy implementation at department level, on subject areas (mainly science, maths and English), effects on context, student assessment, teacher professionalism and the management of curriculum.

These sociologists found that the curriculum was not being implemented: it was being produced and reproduced down the hierarchy. They report a significant gap amongst the intended policies, actual policies and policies-in-use. They found the whole implemented curriculum varied with regards to cross-curricular links, due to lack of time on the part of the senior management to operationalise policy and due to conflicting messages coming from the various departments of the government. On subject level teachers were owning and contextualising curriculum in different ways. Mostly variations occurred in the interpretation of policy and in planning. Learning and changes occurred within existing practices. The NC

fitted established practices easily. Implementation was a matter of accommodation and containment.

Teachers' responses to testing were unfavourable. According to the authors, "many teachers have expressed considerable concern about any system of assessment that leans strongly towards testing rather than assessment paradigm"(p.107). Teachers felt that they were not doing professional jobs. They were technicians implementing ideas from the top. They talked about the changes they were making, about the fast pace of change and about the lack of resources to affect change. The authors reported:

On one hand many teachers feel that the national curriculum is asking them to do many things they were already doing, while assuming they were not. On the other they consider it is asking them to do things that simply cannot be done within the constraints within which they must operate (p.109).

There was no direct relationship between levels of funding and changes that schools were required to make; NC was implemented in a period when spending on schools was declining and market related staffing had produced subject hierarchy. Departments suffered from additional workload, additional problems not of teacher making.

According to this study the patterns of problems and responses varied between schools and departments. Authors attributed this to the shifting debate on curriculum within the departments of the state and to variations in the context of schools comprised of skills and experiences of teachers; contingencies /perceived constraints; commitment and readiness for change. For me as a consultant in curriculum development this project illustrates the problem of linking the planned curriculum with the operational one. However, The authors of this go beyond it. They claim that curriculum mutated at each level of the hierarchy.

Case Four: A Training of Trainers Programme in Mauritius

I was a resident consultant in curriculum and staff development at the Industrial and Vocational Training Board (IVTB) in Mauritius during 1993-6. I initiated and led this curriculum development project from beginning to its end. According to my professional judgement, the judgement of the trainees and other resource persons this project was highly successful in achieving the planned goals with minimal resources and support from policy makers. However, the top management of the IVTB failed to celebrate the success due to lack of commitment and involvement in the project at a very turbulent time in the life of IVTB. This programme has a complicated history, which may be instructive to the IVTB

management and other users of this highly successful programme in other contexts. The paper contains the programme design, implementation and evaluation of a highly successful programme. I learnt that in hierarchical organisations without top-down support and bottom up accountability little learning can occur in organisations.

The Origin of the Training Programme

The author arrived in November 1992 as a consultant in curriculum and staff development. IVTB was a new organisation opening new training centres with several training programmes in each centre. Most of the trainers were young with minimum technical qualifications, industrial experience and professional training as trainers. It was difficult to implement the new curriculum with these trainers. I introduced inservice training on specific aspects of trainers' work to support curriculum development processes. However, the then director of IVTB did not support my initiatives in the beginning. He believed that provision of training material to trainers was more important than trainer training.

The success of these training programmes later changed the thinking of the then director of IVTB. He suggested to me to design a Trainer's Certificate, an award-bearing programme for all the registered trainers in Mauritius to provide them with a qualified Trainer Status. He even talked about establishing a trainers' centre to provide training to vocational trainers of all levels to improve the quality of training in Mauritius in the future. But these ideas were never pursued vigorously at policy level as IVTB was mainly interested in establishing new training centres at a time when there was full employment in the country. Quality training was not a priority at that time. I worked hard to communicate the need for trainer training amongst the stakeholders but I was only partially successful. In the beginning even the untrained inservice trainers resisted training. I designed the following programme within this background.

The Curriculum Development Experience: programme design, implementation and outcome

I designed the programme based on the recent thinking on teacher training including integration of theory with practice; on the job support from management, reflective thinking; competency-based training and modular structure to suit the local context. Consequently an interesting training programme emerged after a lengthy process involved in explaining the programme to many stakeholders with little teacher training experience and interest. The design output included a programme proposal, detailed curriculum for each unit and a

comprehensive assessment specification, handouts, textbooks and videos displayed at the end of the programme to celebrate its success.

The training programme catered for several **local constraints**. There was no clear policy, support and control structure to manage trainer training in IVTB. There was a shortage of trainers in training centres making it impossible to offer a full-time programme. There was a shortage of resource persons in trainer training. I had to teach the substantial part of the programme, train local resource persons and train a local person to take charge of the future training programmes when I left at the end of the programme. This was to be accomplished in one year. The following principles guided the design:

1. **The trainer training was an integral part of curriculum development processes.**
2. **Theory was an integral part of practice. 1/3rd of the programme included theory taught through direct teaching in a training centre and 2/3 rd of it included on-the- job support in implementing theory to be provided by myself, and the centre managers.**
3. **All resource persons were to receive on-the-job training from myself.**
4. **IVTB and MES (Mauritius Examinations Syndicate) without any previous experience in trainer training were to make the award.**
5. **A steering committee of local stakeholders and a moderator from the University of Bath were appointed to provide quality of international standards.**
6. **The consultant was to be present in all sessions to make up the deficiencies of inexperienced resource persons.**

I was aware of **the design limitations**. The design emphasised current needs at the expense of future needs and it provided training in pedagogical-content-knowledge only. Unlike the competency-based training programmes in the UK, this programme was time-bound and used direct teaching and training. I had to adopt the above strategy to accelerate the pace of trainer training, to cater for trainers who lacked motivation for training, experience of self-learning through reflective thinking and an adequate command of the English language to learn from written instructional material.

I continuously monitored the programme formally and informally at the end of each module. I A summative evaluation checked congruence in the planned and the operational curriculum. Appendix two provides trainee responses at the end of this programme.

According to my professional judgement during the programme there was 100 percent attendance and a very high participation in the learning processes from the trainees. The

training programme generated a great interest in trainer training amongst trainees who did not believe in training. The centre managers reported positive attitude and improvement in classroom teaching amongst trained trainers. Twenty out of twenty three trainers completed the programme successfully in one year. Myself, the trainees, trainers and the moderator from the University of Bath, were highly pleased with the outcome. Within the above successes several problems also surfaced due to contextual constraints.

The Emergent Problems

In the middle of the programme after the general elections in the country the government changed. As a result the IVT council, the IVTB director and several other persons of the management team were replaced. The new team had its own interests and priorities. They showed a little interest in the programme started by their predecessors. Consequently, the new top management of IVTB and MES failed to celebrate the successes of the programme and to learn from this experience. The following episode remains fresh in my memory.

In the final meeting to process the results of the programme at the MES, nobody from the IVTB management attended the meeting where the consultant, the University of Bath moderator and the MES representatives were present. During this meeting the MES representative decided to label the programme a 300-hour part-time training programme, ignoring 2/3rd of on-the-job training provided in the design specification and in training. The IVTB management did not attend the meeting and the moderator from the University of Bath hired to ensure quality did not defend the planned programme.

I had to train the trainees, the resource persons and the top management to complete the programme. I was training a local counterpart to replace myself at the end of the programme but he failed to complete the training programme. Many of these problems are normal in developing countries, requiring several years to own and contextualise innovations from outsiders. I left IVTB at the end of the programme with the following recommendations for owning and contextualising the future programmes.

Suggestions to strengthen the future training programmes

The following recommendations are based on the following principle derived from my long experience of teacher training in developing countries. It taught me that:

Good quality teacher training can improve the quality of teaching and create a new need for further training. Poor quality training can do more harm than good by discrediting trainer training altogether.

1. The quality of a training programme largely depends on the quality of the programme director with a holistic vision of the programme, curriculum development and ability to lead a team of resource persons. The local programme director was not yet ready to take charge of this programme. He had to complete this training programme and later acquire a Master's Degree in Education. He may need further management training by working with an experienced person.

2. It was necessary to further train the local resource persons by working with an experienced trainer.

3. The training programme was of one-year duration and on-the-job experience is the essential part of it to ensure its use effects on trainer performance in classrooms.

4. An additional module on action research may improve the quality of on-the-job experience of the trainees.

5. To provide further experience and to alleviate the problem of inadequate infrastructure in trainer training within IVTB at present it might be advisable to link the future training programmes with a reputable overseas establishment engaged in trainer training.

Programme Evaluation

From the professional point of view this programme was a great success in achieving its objectives under the leadership of an experienced consultant. However, the management failed to share its success and learn from this experience because they were not directly involved in all aspects of the programme at a very turbulent period in the life of IVTB. I later learnt that it took the new management several years to own and contextualise this training programme.

The UK Experience of Top-down Initiatives

The following evaluation of post-16 training experience in the UK is also a useful guide for policy makers elsewhere. According to Stanton and Richardson (1997) the nature of many education and training initiatives in England and Wales has been pragmatic, opportunistic and piecemeal. As a consequence the national curriculum, NVQ's and GNVQ's have been very difficult to implement in their first incarnation and it is questionable if these innovations were capable of achieving their intended goals. The pragmatism has been accompanied by unwillingness to identify and debate the principles and values underpinning these initiatives. The piecemeal nature of the changes was not coordinated properly. Opportunism

has meant that many of the necessary organisational, staff and resource development were not in place in time to support the change.

Implementation of change used the linear process. Each change suffered from excessive bureaucracy with little attention to cost and value for money. Little was learnt from previous successes and failures. National agencies have the urgent task of managing the interaction and feedback loop between various partners to improve quality. According to Schon (1971) centre-periphery systems for delivering social change are characterised by exhaustion, overload and mismanagement at the centre. It is a vicious circle. Such systems promote this situation by a lack of adequate feedback mechanisms, and this state of affairs provides the system managers with little time to reflect about the feedback problems. Fullan and Stiegelbauer (1991) provide a useful advice to policy makers.

If you want to know how it something works, try by changing it. Changing educational projects is difficult and we do not know enough about it. There are no short cuts and there is no substitute for directly engaging in improvement projects with others. Like most complex endeavours, in order to get better at change we have to practice it on purpose (p. 350).

My Interpretation of the Degree of Success in the Above Projects

In my professional judgement as a curriculum development consultant the first project in technical and vocational education in secondary education is difficult to assess as a learning experience in curriculum development because there was no general consensus on the nature of the project amongst stakeholders. As a consequence the planned curriculum is different from the implemented curriculum. The second project in secondary education in vocational education and training in Mauritius had high success in solving the curriculum development problem using a systematic approach to curriculum development but without due regards for learning from experience. The NC suffered from an unacceptable gap between the planned and the operational curriculum in its early incarnation due to contextual difficulties. The last project in Mauritius was a successful in achieving the planned goals with a systematic approach to curriculum development but it failed due to be a learning experience for the stakeholders due to contextual difficulties. As a result it might have been to sustain the successes of the first trial under the leadership of a consultant.

In my professional judgement top-down curriculum development projects will influence the quality of curriculum, teaching and assessment to the degree of integration of these components as a complete curriculum development system led by professionals with a sound support and control system from the top provided there is a reasonable consensus on

educational goals of the project amongst stakeholders. In large-scale national projects it is a long and an expensive matter.

Recently competency-based training became prevalent in vocational and technical education and training in the UK led by the employers. In this model lead bodies from various sectors of the economy identify competencies and NCVQ supervises assessment. The responsibility for learning is placed on the student and providers of training. How far it will succeed remains in the future. In my professional judgement a sudden shift from state controlling curriculum development to students taking responsibility for their own curriculum development is likely to take long time in the hands of teachers without curriculum development experience. In the present economic competition amongst the various governments, top-down strategies to improve the quality of workforce continue, even if it is difficult to establish a direct link of education and training with economic prosperity.

Way Forward into the Future

In the post-modern age in the context of lifelong learning and learning societies we will have to move from the concept of teachers teaching to individuals learning in all contexts. Young (1998) has developed the idea of **connective curriculum** to promote integration of learning in a variety of contexts and Elliott (1998) presented **curriculum as a social experiment** within and without school boundaries as a form of action research. Whitehead (1999) has the idea of curriculum development as **a living theory form of action research**. In spite of these ideas from the academics top-down strategies from governments remain prevalent in formal public institutions. Usually there is a big gap between theory and practice in curriculum development in education, which is a highly fragmented profession.

According to my professional judgement each educational project is to be a social experiment for stakeholders to conduct collaboratively to learn from each experiment. The success is largely determined by the degree of congruence between the planned and the operational curriculum in a particular context and the degree of learning taking place amongst the participants with minimum cost. In Punia (1992) I have provided an example of such a project. Other educators such as Stenhouse 1975, Elliott 1998, Rudduck 1991 held this view. Fullan (1993) wrote on teacher learning. According to him, **“Teachers capacities to deal with change, learn from it will be critical for the future development of societies. They are not now in apposition to play this role” (p.11)**. The above narrative has validated his observation.

References

1. Ball, S. J & Bowie R (1992): Subject Departments and the implementation of the National Curriculum Policy: an overview of the issues. **Journal of Curriculum Studies** Vol. 24, No 2, March-April 1992.
2. Blenkin, G M et al 1992: **Change and the Curriculum**. London: Paul Chapman.
3. Broadfoot, P: Educational Assessment: the myth of measurement (In) Woods, P ed. (1996): **Contemporary Issues in Teaching and Learning**. London and NY: Routledge in association with the Open University.
4. Calderhead J. (1990), Conceptualising and Evaluating Teachers' Professional Learning. **European Journal of Teacher Education** Vol. 13, No3, (pp.153-160).
5. Calderhead J ed (1987), **Exploring Teachers Thinking**. London: Cassell Education.
6. Cooper, P & MacIntyre, D (1996): **Effective Teaching and Learning**. Buckingham: Open University Press.
7. Eisner, E W (2000): Those who ignore the 12 easy lessons for the next Millennium. **The Journal of Curriculum Studies** Vol. 32 No. 2 (pp. 343-357).
8. Elliott, J (1998), **The Curriculum Experiment**: Buckingham and Philadelphia: Open University Press.
9. Fullan M G and Stiegelbaur, S (1991), **The New Meaning of Educational Change**. London: Cassell
10. Fullan M G (1992), **Successful School Improvement**. Buckingham: Open University Press.
11. Fullam M G (1993), **Change Forces**. London: Falmer Press.
12. Green, A (1998), Educational achievement in centralised and decentralised systems **(In) Halsey, A H et al (1997), Education: Culture, Economy and Society**. Oxford and New York: Oxford University Press.
13. Goodlad, J (1979), **Curriculum Inquiry: the study of curriculum practice**. New York. London. New Delhi: McGraw-Hill.
14. Hargreaves A (1989), **Curriculum and Assessment Reform**. Milton Keynes: Open University Press:

15. Hargreaves, A (1998), Restructuring, Restructuring: Postmodernity and Prospects for Educational Change (In) **Halsey A H et al op cit.**
16. Kessels, J and Plomp T (1999), A Systematic and rational approach to obtaining curriculum consistency in corporate education. **Journal of Curriculum Studies, Vol. 31, No. 6, (pp. 679-709).**
17. Harris A and Hopkins D (1999), Teaching and Learning and the Challenge of Educational Reform. **School Effectiveness and improvement** Vol.10, No. 2, (pp.257-267).
18. Krishnamurti, J (1978), **The Awakening of The Intelligence**. San Francisco: Harper.
19. McDonald, B and Walker R (1976), **Changing the Curriculum**. London: Open Books.
20. Mortimore, P ed. (1999), **Understanding Pedagogy and its Effect on Learning**. London: Paul Chapman.
21. Murphy, P. (1996), Integrating learning and assessment: the role of learning theories (In) Woods, P. ed. (1996) op. cit.
22. Obenge, E (1994), **Project Leader's Secret Handbook**. London: Prentice Hall.
23. Pring, R (1997) Education and Training: the prevocational tradition (In) Stanton G. and Richardson W. eds. (1997) Qualifications for the future: a study of tripartite and other divisions in post-16 education and training. London: **feda Report No 5, Vol. 2.**
24. Punia R. S. (1992), Research on teachers' planning and its use in guiding curriculum, staff and institute development. **M Phil. Dissertation: University of Bath.**
25. Raynolds J. and Murray, S. (1987), Teacher responses to curriculum policy: Beyond the delivery metaphor (In) Calderhead, J (1987) ed. **Exploring Teachers Thinking**. London: Cassell.
26. Rudduck, J (1991), **Innovation and Change**. Milton Keynes: Open University Press.
27. Sarason, S (1990), **The Predictive Future of Educational Reform**. San Francisco: Jossey Bass.
28. Schon D A (1971), **Beyond the Stable State: public and private learning in a changing society**. Hammondsworth: Penguin.

29. Sears, J T and Marshall J D (2000), Generational Influences on Contemporary Curriculum Thought. **Journal of Curriculum Studies Vol. 32, No. 22 (pp.199-214).**
30. Stanton, G and Richardson, W ed (1997) Qualifications for the Future: a study of tripartite and other divisions in post-16 education and training. London: **feda Report Vol. 2 No. 5.**
31. Stenhouse, L (1975), **An introduction to Curriculum Research and Development.** Oxford: Heinemann Educational.
32. Stoll L (1999), Realising our potential: understanding and delivering capacity for lasting improvement. **School Effectiveness and Improvement Vol. 10, No. 4 (pp. 503-532).**
33. Torrance, H (1998), Assessment, Accountability and Standards: using assessment to control the reform of schooling (In) **Halsey A H et al 1997 op. cit.**
34. Truman, G (1996), Models of Good Teachers: Defining and redefining teacher quality (In) **Woods, P. op. cit.**
35. Tyler R W (1949), **Basic Principles of Curriculum and Instruction.** Chicago: University of Chicago Press.
36. Whitehead J (1999), Educative Relations in a New Era. **Pedagogy, Culture & Society** Vol. 7, No 1, 1999.
37. Young M (1998), **The Curriculum of the Future.** London: Falmer Press.

