

TEN STUDIES OF VOCATIONAL TEACHERS' PLANNING IN THE FE/HE SECTOR

These studies were conducted by me to understand the state of the operational curriculum in a technical college in the south pacific in the Eighties.

This work is invaluable to researchers, teacher trainers and teachers engaged in teaching and learning instructional, curriculum and school improvement planning using the Tyler Model (1949) in top-down strategies of curriculum development .

Dr. R S PUNIA

E-mail rampunia@yahoo.co.in

Introduction

In these studies I conceptualised teachers' planning as operational curriculum at a time when research on teachers' planning had no idea how teachers' planning might be connected to curriculum and staff development.. I conducted the following ten studies as a consultant in curriculum and staff development in a developing country to understand curriculum development from teachers' perspective in the eighties when the Tyler Model 1949 was popular in curriculum and instruction development in top-down strategies for curriculum development. I needed the information to plan, implement and evaluate a school-based curriculum development model to fit the local needs.

It was illuminating for me to learn that the Tyler 1949 model being used in technical and vocational education in the UK and USA for curriculum development and staff development did not describe teachers' conception of curriculum development. I found that there was no support and control on teachers' operational curriculum, curriculum teachers offered to their students. Teachers lacked adequate training, time to plan and consultancy to translate the prescribed curriculum into an operational one.

Teachers in these studies report to planning their work for various reasons using different methods. They do not plan systematically to share their knowledge and to achieve planned student learning objectives. They planned their work to improve the quality of their lesson presentations and to cope with personal and the contextual constraints. It was more like a form of action learning used to generate personal knowledge. The studies supported Stenhouse 1975 thesis that there was no curriculum development without teacher development. These studies provided me with the real significance of Stenhouse 1975 thesis.

These studies are likely to be highly informative to curriculum specialists about the possibilities and problems in using the Tyler model (1949) for curriculum development in top-down models of curriculum development still popular in developed and developing countries. Technical and vocational teachers in the FE/HE sector might learn the possibilities and problems in their own instructional planning. Teacher trainers may find possibilities to support teachers' planning as a reflective process, not just a preparation before teaching.

These studies remain exploratory. I later used the findings of these studies to guide curriculum, staff and institute development with considerable success. However, more research is needed to understand teachers planning as a nested process integrating instructional planning, curriculum development and school development. Sadly very little research is reported in this area of education. These studies may revive new interest amongst researchers and teachers working together to improve the quality of direct teaching in classrooms.

Today we have an alternative to the Tyler model (1949). It is called Action Research which is suitable for individuals and groups of teachers to improve their teaching and their professional learning. Here again teachers need outside assistance to reflect on their work and to generate personal and practical knowledge. The emphasis on teacher teaching has shifted to student learning with teachers as facilitators of learning. Students are expected to plan their own curriculum.

In my view the responsibility of achieving specific learning objectives cannot be assigned to teachers and students alone. It is the joint responsibility of all stakeholders in education in collaborative projects with teachers' planning as the focus of school improvement. My MPhil dissertation (Punia 1992) presents how I used such thinking with good results. Much work remains to improve this type of thinking for general use to improve practice.

Systematic Instructional Planning Using The Tyler Model (1949): promise, problems and suggestions to overcome the problems according to a group of trainee teachers from the Hong Kong Technical Teachers' College

As a teacher trainer in a teacher trainer I conducted this study to evaluate the validity of the content of a training programme on instructional planning based on the Tyler 1949 Model for its practical use. Teachers report several contextual constraints in their schools and inadequate teacher preparation as major problems in planning their work based on the Tyler 1949 model. I first became aware of the theory/practice gap in instructional planning in teacher training from this study. I interpret teachers' report and make suggestions to improve the reported situation.

1. Introduction

We conceptualised instructional planning as a process of translating the planned curriculum into an operational one and it formed a significant part of teacher training at the Hongkong Technical Teachers' College. During a training session twenty seven inservice vocational teachers from the technical institutes and the polytechnic learnt the following principles of instructional planning.

1. The Tyler model (1949) was a useful guide for instructional planning in vocational education.
2. Planning consisted of three inter-related processes namely planning (preactive planning), acting according to the plan as far as possible during

interactive teaching and refining the first plan according to experience gained through the implementation of the plan (reflective teaching).

3. It was useful to prepare three inter-related plans such as yearly, term and lesson/unit plans at different intervals during an academic year.

4. Each plan needed to be comprehensive and systematic enough to be meaningful to colleagues, tutors and seniors in schools.

5. Each plan was to include objectives, content, teaching method and an evaluation.

However some teachers from this course and from previous courses occasionally commented on the impracticality of the above guidelines for instructional planning. Fuller and Bown (1975) had commented, "*no one knows what is actually taught in teacher education or whether what is taught is consonant with teachers' needs.*" (p.39). At the same time the technical institutes and the polytechnic of Hongkong were implementing The Technician Education Council (T.E.C.) form of curriculum imported from the U.K. TEC curriculum was based on the Tyler model (1949). The Hongkong Technical Teachers' College prepared teachers for this innovation. According to Olson (1980), It is in relation to existing goals, techniques and social relationships that teachers make sense of innovative proposals. Within this context I became anxious to explore how these vocational teachers made sense of this innovation and of what they learnt at the Hong Kong Technical teachers' College.

Teachers' planning practices were beginning to attract the attention of researchers who conceptualized teacher planning in several ways. For Example, Clark and Yinger (1979) defined planning as a process of preparing a framework for guiding teacher action including teachers' thinking, decision -making and judgment. According to Sutcliffe and Whitfield (1979) decisions involved in teacher planning were reflective decisions. Eggleston (1979) high-lighted the teacher's role in decision-making when he said: '*No authority outside the individual classroom can*

possibly make many of the decisions now required of the teacher because no external authority can have access to the evidence on which they must be made' (p.2). Clark and Yinger (1979) summed up the importance of research on teachers' planning by providing four reasons for its development.

1. Teacher planning was a promising area for the study of teachers' thinking and the relationship between thought and action in teaching.
2. Informal conversation with teachers and administrators indicated a conviction on their part that planning for instruction was a very important aspect of their work .
3. The study of teacher planning may serve as a window to the pedagogical ideals of teachers.
4. Research on teacher planning offered the possibility of linking research on curriculum and research on teacher behaviour.

At this time there were no studies on the planning practices of vocational teachers in the Further and Higher Education Sector. Most of the research on teachers' planning was exploratory and it had been conducted mostly in primary schools in the U.S.A.. In England Taylor (1970) had studied the planning practices of secondary school teachers. All this research had been conducted within the framework of the Tyler model (1949)for curriculum and instructional planning. According to Shavelson (1981) the limited research conducted that far indicated that objectives did not play a major role in teachers' planning. Teachers were found to be mostly concerned with subject matter.

To summarize, the concern for the alleged gap between the theory and practice of instructional planning together with my concern to prepare teachers for an innovation led to this inquiry. The inquiry had three main goals:

1. To test the validity of the Tyler model for curriculum and instructional planning for general use for vocational teachers in public vocational institutions;
2. To evaluate the content of the unit on instructional planning taught at the HongKong Technical Teachers' college;
3. To find out how these teachers were translating the T.E.C. planned curriculum written in specific learning objectives into an operational curriculum.

2. The Research methodology

The group involved in this inquiry consisted of twenty seven assistant lecturers, lecturers and senior -lecturers attending the two year part-time technical teachers' certificate course conducted at the Hongkong Technical Teachers' College. They taught technical and commercial subjects in the technical institutes and the polytechnic of Hong Kong at trade and technician level. Their academic qualifications varied from a higher certificate to a masters degree. Their teaching experience varied from 1-15 years and their ages varied from 25-40 years. They formed a fairly representative sample of commercial and technical teachers from the technical institutes and the polytechnic of Hong Kong.

At the end of a unit on instructional planning I asked the participants of the course to write an essay in the light of their own experience and what they had learnt from the Technical Teachers' College. The structured essay title provided to the group read as follows:

Give an account of instructional planning in the light of your personal experience and what you have learnt from the course of instruction, including its principles, purpose, nature, techniques, problems and suggestions for its implementation.

They were asked to conceive of the various items of the essay in the form of six questions listed below.

1. Which components or a component of the Tyler model is the focus of your planning? (principles)
2. What is the goal of your planning? (purpose).
3. What plans do you prepare and what is the relationship,if any, between these plans? (nature of planning).
4. Which planning techniques learnt from the course are most useful to you? (techniques).
5. What problems, if any, do you have in planning your work in your institute? (problems).
6. What are your suggestions to improve instructional planning in practice? (suggestions).

I used this method as it fitted naturally as a part of the evaluation of the training programme. I avoided using a questionnaire as I knew that teachers disliked filling questionnaires unless they had an immediate value for them. As a teacher trainer I was thoroughly familiar with the work of these teachers. I had already inspected and assessed six of their assignments on an yearly plan, a term plan and a lesson plan. One set of three for teaching workshop theory (teaching of knowledge) and the other set for teaching workshop practice (teaching of practical skills). I had also observed each teacher once during interactive teaching.

However, I was aware of the limitations of my method to find answers to my questions. Clearly there may be differences between what teachers said and what they actually did in teaching. What they reported in the essays may have been influenced by their ability to express themselves in English and by their intentions to provide what the trainer wished to hear. From my previous experience with these teachers during classroom discussions I

found these teachers forthwrite and open to express their views. However, the reader must be aware of the limitations of the researcher's method.

I abstracted the content of the essays under the six categories in the essay. To ensure reliability in the analysis I checked the findings three times. The results of the analysis and my interpretation were later validated with the group and are reported below.

3. Findings and their interpretation

3.1. Which component of the Tyler model was the focus of their planning?

Only nine out of twenty seven teachers claimed to use all the components of the Tyler model (1949). Fifteen of them used content only as the focus of their planning and three of them focused on method of teaching.

It was rather surprising for me to find that only 1/3 rd of the teachers used objectives to plan their work. Most of these teachers worked with syllabuses written in behavioural objectives and they operated in that area of education where the Tyler model(1949) was considered to make a good fit(Stenhouse, 1975). One would also have expected the training to have had its effect. In spite of it, almost half of the lecturers defined planning in terms of the content to be taught. It was difficult for me to explain this finding. Inadequate training and insufficient support from the management could have been the contributory factors.

However, it was interesting to note that the results were consistent with the results of the previous research in primary and secondary schools where teachers in schools also seemed to be mostly concerned with content (see Taylor 1970, Peterson et al. 1978, Ben- Peretz 1981). I could explain lack of focus on method. Most of these teachers did not vary the method of their

teaching. They used talk and chalk with frontal teaching to large groups of mixed ability classes.

I concluded that these teachers tended to focus on different components of the Tyler model (1949) but objectives and evaluation were not the focus of their attention as taught during training.

3.2. What was the goal of their planning?

According to their reports five teachers planned their work to provide them confidence in and control over their work; three planned their work so that they could present lessons clearly; nine of them planned not only to be clear in their teaching but also to do it within available time. Thus, planning was also viewed as a means to “efficient teaching”. Ten teachers reported to planning to achieve specific learning objectives .

This information suggested to the researcher that 2/3 rd of these teachers planned instruction for personal reasons such as to give them confidence, to provide clarity to their teaching and to match available time with the content to be covered. Only 1/3 rd of them claimed to plan instruction to achieve specific learning objectives prescribed in the curriculum. These findings were consistent with similar studies elsewhere.

In previous research on teachers’ planning by Clark and Yinger 1979, teachers had reported similar goals e.g. reduction in anxiety and providing teachers with a framework to guide their interactive teaching. Kounin 1970 and Anderson et. al.1980 had suggested that planning avoided management problems. Research on ‘time-on-task’ such as (Smyth 1981, Anderson 1981) had highlighted the importance of matching time to task for effective teaching.

3. What kind of plans did these teachers prepare?

Nine teachers reported that they prepared annual plans, term plans and lesson plans; five teachers prepared annual plans and lesson plans and thirteen teachers prepared lesson plans only. None of them reported to prepare only annual and term plans.

All of these teachers had been taught to plan their instruction with three inter-related plans namely annual plan, term plan and lesson plans. Each plan was to be an elaboration of the previous plan and all plans were to be prepared on different times during the academic year. However, only 1/3rd of these teachers reported to preparing all three of these plans. In a previous research also teachers were found without long term plans. In McCutcheon (1980) teachers reported that they did not prepare long term plans as they found them unreliable in a turbulent working environment. McCutcheon also reported that there was no continuity and focus in their planning.

All teachers reported that they planned lessons. However Clark and Yinger (1979) reported that in their study unit planning was found to be the most important and lesson planning was the least important to teachers. One possible reason for this discrepancy might be the the differences in terminology. The distinction between a lesson plan and a unit plan was not very clear in the minds of the teachers in my study. They defined lesson planning in terms of planning for a topic/unit, not for a specific time of teachers' class contact.

3.4. Useful Techniques for planning

Eight teachers reported that they found all techniques taught during teacher training useful, viz writing objectives, content-analysis, selection of methods and media and selection of assessment methods to measure students performance, including the interrelationship between the various components of the Tyler model (1949). Fifteen teachers found content analysis and selection to be the most useful technique. Only one teacher

mentioned the writing and selection of objectives as the most useful technique and only one teacher mentioned assessment of student performance as the most useful technique. Two teachers mentioned the selection of method and media.

I interpreted that these reported results were consistent with their responses in the previous questions. The focus of their planning was the transmission of content. Consequently they found content analysis as the most useful technique. Writing and selecting objectives may not have been popular as their syllabuses contained specific learning objectives. Their teaching method was almost a routine comprised of chalk and talk with few other teaching aids in direct frontal teaching. Student assessment in interactive teaching was informal in the form of student participation and cooperation in learning, ability to answer teacher's oral questions and the ability to do supervised class work. Formal assessment was used only occasionally whereas content-analysis was needed for each lesson. This scenario provided a possible interpretation of teachers' responses under this heading.

3.5. Reported problems in instructional planning

The most frequently reported problem was lack of time to plan (n=16). Matching plans to the reality of the classroom came next (n=7) followed by difficulty in assessing student performance (n=3). Problems of time management, lack of teaching resources, lack of interest and appreciation of planning by the management came next in importance (n=2,each). Other reported problems included mixed ability classes, difficulty in selecting appropriate teaching activities, lack of coordination, lack of teacher experience, difficulty of identifying the real problem for planning and frequent changes in lecturer's time- table with (n=1,each).

Individual comments seemed to reflect individual concerns at the time of writing the essay. Most of the problems seemed valid and sensible. I was familiar with the reported training problems such as lack of time to plan,

difficulty in matching plan to the reality of classroom teaching and time management during interactive teaching. However, the contextual problems such as frequent time-table changes, lack of appreciation of instructional planning in education were less familiar to me.

I classified the teachers' reports under two categories: problems associated with the working environment and problems associated with training. This category system was very general indeed. Approximately (60%) of the reported problems were associated with the teachers' working environment and (40%) of the problems were training problems. Such a category system provided me with a guide to take future action to correct the present situation.

Similar problems had been reported in previous research in primary and secondary schools. Most of the teachers' reported problems were environmental and training problems. Reported environmental problems included interruptions from outside classrooms, time-table changes, class size, lack of importance accorded to teachers' planning and lack of time to plan (McCutcheon 1980, Ben-Peretz 1981, Clark and Yinger 1980). Lack of teacher training was also reported in these reports.

3.6. Teacher suggestions for solving the problems

Their suggestions and comments included reduction of work load for teachers, provision of teacher support by management, teachers to prepare brief and flexible plans with (n=4) each. Adjustment of preactive plans in the light of interactive teaching experience with (n=3) and planning to be conducted by teams of teachers with (n=2) were also mentioned. Other suggestions and comments included planning to be recognized as an essential part of teaching, planning to improve teaching and learning, teachers to review their preactive plans based on interactive experience, preactive plans to be based on realistic assumptions (n=1) each. One person suggested that plans should be prepared by teachers personally for their personal use only.

It was difficult to find any pattern or to find a comprehensive suggestion in these adhoc comments. All comments seemed sensible and they covered all aspects of teachers' planning including constraints, goals, format and processes involving preactive planning, interactive teaching and postactive reflections. The researcher became particularly interested in their comments about brief and flexible plans. Comments like "*all teachers must be required to plan*" told the researcher more than the literal meaning of the comment. It also meant that some teachers did not plan because they were not officially required to plan. There were some conflicting suggestions also e.g. some were asking for planning to be personal while others were advocated for team planning in a centralised setting . Generally about half of the comments were directed towards the management of the technical institutes and the polytechnic to improve the context and the rest were about teacher competence in instructional planning. Their comments pointed towards two models of instructional planning. The training model prepared teachers to implement the planned curriculum and the teachers' action research model based on teacher professional needs emphasised teacher development.

4. Summary of findings

There were differences in the planning styles of these teachers. However, the following patterns could be detected in relation to the goals of the study .

1. Content was the focus for the majority of them. Only 1/3 rd of the teachers reported defining their planning in terms of all the components of the Tyler model(1949).
2. For the majority of them clear presentation of content and matching content to time remained the main purpose of their planning. Only about 1/3 rd of them reported that the purpose of their planning was the achievement of specific learning objectives.
3. All of them reported to preparing lesson plans, making lesson plan the most important plan. Only 1/3rd of them reported the use of annual, term and lesson plans.

4. Content-analysis was the most popular technique for them.
5. (60%) of the reported problems were environmental and (40%) of the reported problems were training problems. The researcher explained the findings as follows.

5. Researcher's explanation of findings

The problem of the gap between theory and practice was known to educators both in the U.S.A. and U.K. However, few of us in Hong Kong were of this problem. It is evident from the fact that occasionally the management of the technical institutes and that of the polytechnic blamed the technical teachers' college for the poor performance of their trained teachers in implementing the planned curriculum. The teachers' training college blamed teachers and management for not applying what they had learnt from training. I felt it necessary to explain the gap between training and practice and to suggest ways to overcome the problem in Hong Kong.

The following tentative explanation is based on my knowledge and experience of vocational education in Hong Kong, informal talks with significant people from the polytechnic, the technical institutes and the Hong Kong Technical Teachers' College and findings of this enquiry.

According to my professional judgement four significant factors influenced this problem. I examine each factor to suggest ways to overcome the problem.

1. The suitability of the Tyler model for instructional planning in vocational education.
2. The quality of teacher training at the Hong Kong Technical Teachers' College.
3. On-the-job support available to teachers
4. The quality of teachers' learning.

5.1. The Tyler model (1949) and instructional planning

Vocational education is mainly concerned with the achievement of specific learning objectives derived from the manpower needs of a country. The Tyler model (1949) provides a good fit for vocational education (Stenhouse 1975). It has been successfully used in other settings by educational technologists for the production of instructional materials and systems. For instance, the Open University and the Open Tech. in the U.K use it successfully. It was not appropriate to abandon this model for use in vocational and technical education, particularly when the TEC planned curriculum is based on this model.

5.2. The quality of teacher training

The content and the quality of teacher training in instructional planning could have affected the result of this enquiry. A little was known about the content and the method of training used in instructional planning in initial teacher training. For example, I received only a few hours of talk and a sample lesson plan when I obtained Teachers' Certificate in (1964). As the trainer of this unit I very familiar with the content and the the method used to train the teachers involved in this study. There was a considerable improvement on what I was given in (1964). I was learning to improve this situation.

According to my later personal experience the Tyler model (1949) for instructional planning involves complex knowledge, skills and attitudes which are mastered with considerable experience and training. A few days or a few weeks programme on instructional planning in initial teacher training might not be sufficient for adequate teacher training. This was one of the main reasons for the emergence of many diploma programmes in educational technology in the U.K. during the eighties. In the U.S.A. Instructional Systems Design (I.S.D.), another name for systematic instructional planning, is now a specialized branch of educational technology. In short training in instructional planning in initial teacher training programmes may be inadequate.

5.3. Nature of on-the- Job teacher support

I knew from considerable personal experience and contact with the management of the technical institutes and the polytechnic that there was no systematic on-the-job teacher support to encourage trained teachers to practice what they were learning from teacher training. For example, teachers were not required to plan their instruction. They had no time to plan their instruction and they lacked teaching-learning resources. There was no on-the-job professional guidance and monitoring of teachers' performance. In fact at that time the importance of teachers' instructional planning in curriculum development was not fully appreciated in education generally. Teachers were left to implement the planned curriculum without support and control.

5.4. Quality of teachers

A rapid expansion was taking place in the technical and vocational education of Hong Kong. At that time the attention of the management was more on quantity than on quality. The teachers were mostly young with inadequate industrial and teaching experience, but, they were intelligent and motivated to learn. Teachers lacked experience, time to plan, teaching materials and extrinsic motivation to plan.

In the light of the above contextual analysis, the research findings make sense. It might even be argued that (30%) transfer from training to teachers' reported use was a reasonable achievement under these conditions. On the other hand the reported use of training is not the actual use of it. Immediate action was necessary to tackle the problem.

6. My Recommendations to improve practice

Based on my contextual analysis I made the the following recommendations.

1. Teacher trainers should continue using the Tyler model(1949) for instructional panning in vocational education designed for the achievement of specific learning objectives. However, training was to be of adequate depth so that teachers could utilize it with confidence. How this might be achieved in practice remained to be explored.

2. The management of the technical institutes and the polytechnic of Hongkong should support teachers' planning by providing time, teaching-learning resources and guidance for teachers' planning .

3. If the T.E.C. curriculum in specific behavioural objectives was to be successfully implemented in the technical institutes and the polytechnic of Hong kong, all teachers need management support and training in intruactional planning to implement the planned curriculum. It might be useful for the management of the technical institutes and the polytechnic to further examine this matter.

4. The teachers should continue to practice what they had been taught at the Hong Kong Technical Teachers' College without hastily adopting coping strategies. With practice several of the reported problems disappear or become less serious.

7. Professional significance of the study

The study was an exploratory inquiry based on weak data. It consisted of written reports of action rather than the action itself, but, this weakness was amply compensated by the researcher being a participant observer who had access to other sources of information to validate teachers' responses. The conclusions drawn from the inquiry were based on reasonable evidence but they were tentative.

The study was of great interest for teachers, teacher trainers and administrators in vocational and technical education in Hong Kong informing them of the theory and practice gap in education. Later some of the recommendations of this study were put into practice. For instance the polytechnic established educational technology department to support their teachers. This study transformed my professional life at that time. I became very interested in the study of the two problems revealed in this exploratory study. To better understand the problem of gap between the theory and practice in teacher preparation and the gap between the planned and the implemented curriculum, I later conducted nine studies of teachers' planning in another country where I became responsible for dealing with these problems as a consultant in curriculum and staff development.

Senior Lecturers' Thoughts on Their Instructional Planning Practice at the Fiji Institute of Technology

I conducted this exploratory study as an advisor in curriculum and staff development with interest in understanding the nature of the planned curriculum in the Institute. This study presents the thoughts of a group of experienced teachers on their instructional planning practices to me as a researcher who was also their trainer before the commencement of a training programme on systematic instructional planning based on the Tyler model (1949). According to their reports they did not use systematic instructional planning, which means there was no generally shared and accepted system of teachers' instructional planning in the Institute. They seemed to be aware of the need for such a system necessary to link the planned curriculum with the taught curriculum as content.

1. Introduction

In January 1982 I came to the Fiji Institute of Technology (F.I.T.) as an advisor in curriculum and staff development. Most of the curriculum and staff of F.I.T. had been localized a few years earlier. I was to guide the teachers and the management of the institute in offering courses meeting the manpower needs of the local industry with local resources. It meant that the courses offered at F.I.T. were to be directed to the specific learning objectives jointly agreed by the industry and the institute.

In the U.K. the Technician Education Council had carried out this task. The TEC was mainly a course validating body (Roberts 1976). The colleges of the F.E./ H.E. sector had the option of designing their own courses. The course design had to follow the Tyler model (1949) with clear objectives reflecting the

needs of industry. The course prescriptions included specifications of all the components of the Tyler model(1949). The syllabuses were written in general and specific learning objectives. The TEC also monitored the implementation process of approved courses. I was to perform the duties of the TEC.

The F.I.T. was responsible for designing, implementing and evaluating its own courses without any validating and monitoring body. I came to F.I.T. to advise the institute in instabling its own sytem to solve the problem of relevance of training programmes to meet local needs. To improve the situation I had to study the current practices in curriculum development.

According to my experience as a teacher I knew that I prepared various plans of my own without training and time to plan. These plans were aimed at maintaining consistency with the planned curriculum. In this study I wanted to explore these practices at FIT. The research at Hong Kong Technical Teachers' College had suggested that teachers had difficulties in operationalizing the Tyler model (1949). Research in teacher's planning in primary and secondary schools had indicated that teachers did not use the Tyler model (Clark and Yinger 1977, Shavelson and Stern 1981). Teachers adopted a pragmatic approach to solve their planning problem. They started planning with their conception of what was available and what was possible. They did not start with students' learning objectives. The planning task (the problem teachers were trying to solve) at yearly planning level seemed to be to match the planned curriculum with the students' needs, time and other resources available to teachers, and teacher's professional ability and interests. Converting content into activities seemed to be the focus of teachers' attention at lesson planning level.

In March (1982) I conducted a course of instruction in instructional planning for the senior-lecturers of F.I.T. The aim of the course was to improve the quality of the implemented /operational curriculum. This inquiry was an integral part of training programme with the following goals:

- a. To validate the findings of the previous study conducted in Hongkong in a different context.
- b. To determine the previous knowledge of instructional planning of the senior-lecturers before the commencement of the training programme.
- c. To explore the present state of the implemented curriculum in F.I.T..
- d. To make a conceptual contribution towards the knowledge base of instructional planning.

These goals are embedded in the reported findings of this study.

2. Research methodology

Twenty senior-lecturers from F.I.T. with 3-10 years of teaching experience with trade and technician students participated in this study. I decided to obtain their comments in a structured discussion before the commencement of training. I made this decision made due to two main reasons. Firstly, the teacher responses were to be made openly, quickly and as an integrated part of training. Secondly discussion provided me opportunity to probe deeply into questions. I avoided the use of formal methods of data collection because I was new to the Institute without previous rapport with this group of teachers. However these teachers had no reason to misrepresent the current practices to me. They knew that I had access to all the information within the Institute. Day after the discussion they provided me with samples of their lesson plans, term plans, and syllabuses.

I put each question to the entire group as the chairperson, and requested everyone to express his/ her views. I summarised the viewpoints for each question. A member of the group transcribed the participant responses. All statements were read out to the participants to check accuracy.

This was my first meeting with this group of teachers. I found the senior-lecturers very articulate with good understanding of instructional development in their Institute. This may be due to the fact that all of them were trained teachers with 3-5 lecturers and assistant lecturers responsible to them. They were very enthusiastic and committed to improve curriculum development in F.I.T.

The findings reported below are based on majority views of the participants during discussion and on my later inspection of their planning documents.

3. Teacher Responses

3.1. What was meant by instructional planning?

Their instructional planning consisted of term and lesson plans as a three-phased process comprised of preparing plans, matching plans to reality and adjusting plans after interactive teaching. However, they also reported that their planning was not always a three-phased process.

3.2. What kinds of plans did they use?

These teachers used term and lesson plans. They did not prepare yearly plans as mentioned in previous research (Clark and Elmore 1981) and in Hong Kong study. This difference occurred due to the fact that in F.I.T. most of the courses were one term (12 weeks) long. They were not of one academic year duration as usual in other contexts. That was why these senior lecturers reported to preparing term plans only. The content of term plans was similar to that of yearly plans as described in (Clark and Elmore 1981). It included sequencing content and matching it with available time, other resources and teachers' own experience. In other words they were owning and contextualising the planned curriculum. Not all teachers reported to preparing both plans. Lesson plans were the most popular and content was the focus of their lesson planning.

These teachers were mainly concerned with matching content with time and student abilities. They were not report concerns with the teaching-learning activities and the learning objectives.

3.3. Why did they plan their instruction?

One person claimed to use all the components of the Tyler model (1949). Other members of the group reported to using two or more of the components of this model. (75%) of them reported to matchingsubject matter with time. The main purpose of planning was to present their lessons clearly and to match content with time. Some of them also reported that planning provided them with confidence. They did not mention planning to achieve students' learning objectives.

3.4. What was the format of their Plans?

They reported to use brief and flexible plans which were for personal use only. They suggested that only inexperienced teachers needed detailed plans and that flexibility allowed them to accommodate unexpected events occurring during interactive teaching. Some of them also reported that brief plans were easy to refer during interactive teaching.

In a few cases there was no distinction between the syllabuses and the term plan formats. The main distinction between a term plan and a syllabus was that in a term plan topics were arranged in a teaching sequence and time was allocated to each topic. Some term plans indicated holidays, examinations and revisions.

Lesson plans came in various forms. Many of them were lists of teaching points with time allocations for each teaching point, sketches and brief notes. Some consisted of student notes, two were partially complete handouts and two contained teacher and student activities. Written plans seemed to indicate teachers' concerns during interactive teaching.

3.5. How did they use these plans?

They reported that all plans needed adjustments to fit the reality of the situations. During interactive teaching they matched their plans to the pace of student learning and to available time. Most of them reported to matching their plans to students' rate of learning.

3.6. Did they evaluate and adjust their plans?

Most of them reported to adjusting their plans after interactive teaching, but they also reported that they did not adjust their plans always. Two of them argued against adjusting plans due to lack of time.

3.7. How much time did they spend in their planning?

According to them it was difficult to report the time required for planning. Each plan seemed to involve quarter to one hour of teacher time. It took longer to prepare a plan for the first time but after a few trials it took a considerably less time.

3.8. Were there any problems in their planning practices?

Their planning problems included lack of time and lack of management support in instructional planning. They did not mention need for further training but they complained of heavy workload and lack of teaching resources within the Institute.

3.9. Were they required to plan their work by the management?

According to teacher reports teachers in F.I.T. were left to themselves to implement the prescribed curriculum without any management support and control. There was no requirement for instructional planning. Teachers' planning was personal and idiosyncratic. There was no standard method of instructional planning. They expressed need for such a system to promote the use of instructional planning to match the planned curriculum.

4.4. Two planning styles reported by these teachers

These teachers mentioned several styles in their planning. One teacher made no distinction between preactive plans and interactive plans. His records of the past teaching were his future plans. Another teacher prepared his plans, but, rarely modified the plans to suit classroom reality. Some teachers prepared their plans well in advance of their teaching, used these plans with flexibility and they amended them after a postactive reflection. Clark and Yinger (1979) called such teachers "**Comprehensive Planners**". Some teachers relied heavily on their mental plans to structure their teaching round opportunities arising during interactive teaching. These teachers argued that this style was effective only when teachers were thoroughly familiar with the subject matter. How did they develop these styles? In which situation did they use a particular style? Answers to these questions were not fully discussed.

4. My Interpretation of Teachers' Reports

4.1. Similarities and dissimilarities between HongKong and Fiji studies

The findings of this study confirmed the main findings of the study conducted in Hongkong. Like Hong Kong, the focus of teacher planning was content and the main purpose of planning was clear presentation of subject matter and efficient use of available time. Lesson planning was the most popular plan in both countries.

There were some dissimilarities. More teachers (33 %) in Hongkong reported to using all components of the Tyler model. In F.I.T. there was only one teacher who claimed that he used the Tyler model(1949) for his instructional planning. This difference might be due to the fact that the syllabuses teachers in Hongkong used were written in behavioural objectives. Teachers in Hongkong study had mentioned many problems in operationalizing the Tyler model(1949). Teachers in Fiji mentioned only lack of time and management

support in instructional planning. These difference may be due to the fact that the lecturers from F.I.T. were not using the Tyler model(1949) for their instructional planning. Their responses are before the commencement of a training programme whereas the Hong Kong study presents teacher responses at the end of a training programme.

4.2. Instructional planning in FIT

Instructional planning seemed to be concerned with clear presentation of content to students. It was not about the achievement of planned student learning objectives. Most of these teachers claimed to use term and lesson plans and all of them reported to preparing lesson plans. Most of them viewed planning as a three-phased process comprised of preactive planning, interactive teaching and postactive reflection to learn from experince. Planning was important to them and they suggested that they needed more time and management support to encourage further use of instructional planning in thie institute.

4.3. Nature of the operational curriculum in FIT

According to these teachers the implemented curriculum had been left to teachers without management control and support. The implemented curriculum was not directed towards specific learning objectives. The researcher decided to investigate the nature of the planned curriculum. If the courses offered by the Institute were to meet the needs of the local industry, it was essential to specify the planned curriculum in terms of specific learning objectives and for the management and teachers to assume a joint responsibility for the achievement of the planned learning objectives.

5. Discussion

Teachers in the HongKong study had reported difficulty in operationalising the Tyler model(1949) in spite of the fact that they used syllabuses written in behavioural objectives and they had been trained in instructional planning at the Hong Kong Technical Teachers' College. I interpreted that teachers in

F.I.T. did not use the Tyler model (1949) for instructional planning because their syllabuses were not written according to this model. Later my inspection of syllabuses showed lists of topics and sub-topics. I concluded that if teachers in F.I.T. were to be persuaded to use the Tyler model(1949) for their instructional planning, the planned curriculum needed to be written according to this model.

There was some research evidence to support this hypothesis. Martin (1991) reported that teachers use objectives for their instructional planning when they rely on objectives from curriculum documents. The T.E.C. syllabuses in the form of general and specific learning objectives aimed to encourage teachers to use objectives in their teaching. So a significant difference in the use of objectives in teachers' instructional planning at F.I.T. and in Hong Kong might have been due to the format of the syllabuses teachers used.

There were no significant differences in teachers' perception of instructional planning. In Hong Kong 1/3rd of the teachers reported that they prepared yearly plans, term and lesson plans. Fiji teachers reported that they used term and lesson plans only. All teachers in both countries reported preparing lesson plans. In the present inquiry, most of the teachers reported to perceiving instructional planning as a three-phased process consisting of planning, using plans during teaching and reviewing them after teaching. They used brief plans as brief plans provided flexibility necessary to match a plan to the reality of teaching situations. In both countries teachers' planning was personal and idiosyncratic and it was not valued by the management.

In Hong Kong study and most of the previous studies elsewhere teachers reported lack of management support for their instructional planning. There might be several reasons for this in hierarchical organisations. Teacher autonomy in teaching and lack of clear goals and roles in educational organisations are some of them. Furthermore, we do not know enough about teachers' instructional planning and the senior staff do not possess the

expertise required to guide and monitor teachers' planning. This is one area where consultants and academics from universities have the opportunity to support curriculum and staff development in schools.

6. Conclusion

The planning practices of teachers at the F.I.T. were similar to those of the teachers from the Hong Kong Technical Teachers' College. There was one notable exception. Teachers at F.I.T. did not use objectives in their teaching at all while some teachers in Hong Kong reported to using learning objectives from the planned curriculum. **Teachers in both studies reported that they were left to implement the prescribed curriculum without management support and control. These studies suggested a loose link between the needs of industry, the planned curriculum and the implemented curriculum.** This conclusion led me to investigate the problem of a loose - coupling between the planned curriculum and the operational curriculum. This investigation led to a second study of instructional planning at F.I.T, informal talks with other teachers, heads of schools and the top management of the Institute.

Instructional Planning at FIT: Problem and Possibilities for Improvement

This study presents the experienced teachers' perspective on instructional planning problems and their solutions in FIT. According to these teachers there was no planning culture in this Institute as a whole. They had no time and other resources to plan their work. To link the planned curriculum with the operational one a systematic approach to instructional planning may be answer.

1. Introduction

This study is an extension of the previous exploratory study of instructional planning at the F.I.T. The same group of senior-lecturers was involved in both studies. However to my surprise, teachers reported that the implemented curriculum was left to teachers without adequate management control and support and that they were mainly engaged in presenting content to their students.

My main task as an advisor was to guide the Institute in producing students who met the manpower needs of local industry. If F.I.T. were to meet these needs, it was essential to specify the curriculum in detailed learning objectives and to direct the teaching-learning process towards the achievement of these objectives. Within this context I decided to investigate teachers' instructional planning practices further to understand its nature fully and to take appropriate steps to improve the current situation. The study aimed to answers the following questions:

1. What was the nature of instructional planning at F.I.T.?
2. What work did teachers plan and why?
3. What work did teachers not plan and why?

4. What work needed to be planned?
5. What were teachers' planning problems?
6. How could these problems be removed?

Question one verified teachers' perception of instructional planning in more detail using a different method of data collection. Question two and three provided information about the planned and unplanned work respectively. Question four captured teachers' perception of what needed to be planned. Answers to questions five and six provide teacher suggestions to develop an appropriate strategy to reduce the quantity of unplanned work. Basically the six questions aimed to define the problem and to find a solution for the problem. I translated these questions into (13) questions in an open-ended questionnaire presented in **(appendix two)** .

2. Research methodology

The same group of senior-lecturers who participated in the first study at F.I.T. were asked to complete a semi-structured questionnaire as an integral part of a training session. Everyone present completed the unpiloted questionnaire. However to ensure that the teachers understood the questions and that they responded with care, I guided them in understanding the questionnaire. The teachers provided useful information to serve my goal. Here is a typical response constructed from all questions by one of the respondents:

Planning is writing down in advance what I will be teaching in semester plans and lesson plans. I have a book in which I do all my planning. I teach three different subjects. Most of my time is spent on collecting better materials and studying for self- development.

I have ample time to plan my work which is mostly planned. I tend to do the most interesting work first. Work for students holds first priority and the work for the seniors comes next. My planning includes managing my section, preparing, collecting relevant handouts and planning lessons.

The main advantage of planning is that it removes uncertainty and it improves effectiveness in class. Everyone should plan- even the experienced teachers should plan for effectiveness.

Time-management, setting priorities and desire for effectiveness are some of the factors which influence me to plan. I don't plan sometimes when I feel I can manage without it. However, lack of planning reduces effectiveness. Planning can be promoted by convincing lecturers that they can become better teachers if they planned their work and had their plans in writing.

The questionnaire verified some of the findings of the previous study using a different method of data collection. The teacher responses in the two studies were consistent. I interpreted the data from the questionnaire in conjunction with various other kinds of formal and informal information available to me. For example, I had ready access to the management, the course prescriptions, term plans and lesson plans. Finally the findings were discussed with the respondents and later in the Academic Board of the Institute.

3. Findings and Discussion

3.1. Nature of instructional planning

Eleven of these teachers defined planning as thinking about organising activities, materials, content for the achievement of best results.

Five of these teachers defined planning in terms of the plans they prepared e.g. one person reported planning as "*a document prepared to guide classroom teaching.*" It is interesting to find congruence in teachers' and researchers' conception of teachers' planning. Like teachers' reports, as a subject of research, planning had been defined in two ways: as a psychological

process and as a phenomenon i.e. the work teachers do when they say they are planning.

About half of the teachers reported preparing term and lesson plans but the other half prepared lesson plans only. All teachers prepared lesson plans. The researcher suspected that teachers who did not prepare both types of plans would lack continuity and focus in their teaching. McCutcheon (1980) also had reported to this effect. However, this issue required further investigation.

In the previous study these teachers had reported that they planned without management support and control. I was anxious to find out the motive for their planning. Answers to questions five and six provided me with strategies and priorities in their work. Twelve of them reported that work done for students held first priority and four of them reported that the most interesting work held first priority. In the next question, ten teachers reported that work done for their students was the most important and for four of them their own work was the most important and for two of them work done for their seniors was the most important. These reports were good indicators of differences in espoused values of these teachers.

Generally teachers tended to grow from self interests to the interests of their students to the interests of their schools to become extended professionals (Hoyle 1972). However very little was known about the teachers' professional growth processes. In brief, these experienced teachers were mostly student-centred rather than self-centred (Fuller 1969).

According to my interpretation for the majority of these experienced teachers the focus of their planning had shifted from 'self' to their students. From my past observations of the teachers' concerns, I had noticed that the beginners and inexperienced teachers tended to be concerned with class management, control and content for teaching. When teachers had mastered their initial concerns they tended to be more concerned about their students' learning.

3.2. What kind of work were they planning?

They all mentioned that they were involved in teaching and some supervision of their subordinates' work. The approximate ratio of teaching to supervision was (80-20) and the majority of them supervised the work of 3-6 subordinates.

3.3. Nature of the planned work

Ten teachers reported planning both teaching and supervision. Six of them planned teaching only. In response to another question they suggested that supervisory work was difficult to plan in an environment where planning was not a norm.

The most frequently reported advantage of planning was to get one's work done within the available time (n=10). To these teachers work done within time meant finishing the given content within the given time. They also reported some personal advantages (n=5) e.g. giving the teacher sense of direction, confidence, peace of mind, control over the teaching-learning environment, fewer problems and less anxiety. They also reported that student motivation to learn increased (n=2). In Clark and Yinger (1979) teachers reported similar benefits of planning. Not a single person mentioned planning for the achievement of specific learning objectives.

3.4. Nature of the unplanned work

The most frequently reported unplanned work was administrative work and work beyond their control (n=9). Work done beyond their control meant all kinds of work for which they had to rely on others. According to them administrative work belonged to this category. They also mentioned unimportant, complex and familiar work with (n=2) each. The familiar, unimportant and complex work also remained unplanned. It would seem reasonable to me to conclude that these teachers essentially planned for their personal use and that there was no corporate planning in the Institute with a hierarchical structure.

They did not plan work when it was beyond their personal control, when they had no time to plan and when they lacked motivation. They also mentioned that they did not plan some work because they were not given time to plan (n=7) and that they were not expected to plan their work (n=3). These reports indicate the planning culture in the institute.

The reported ill-effects of unplanned work for students (n=6) included such matters as confusion, lack of motivation to learn, lack of learning and poor relationship with the teacher and the ill-effects for teachers included frustration, confusion, lack of confidence and ability to answer students questions. They also mentioned inability to finish work in time.

3.5. How much work needed to be planned?

(60%) of these teachers reported that they managed to plan 60-90% of their work, presumably from that which they intended to plan. (40%) of them planned only 50% or less of their work. These figures provide teachers' subjective estimates. The only useful conclusion to draw is that there was need to improve the current situation. To find accurate information answering this question required an indepth study of a few teachers. This study served my purpose who was seeeking to describe teachers' present practices as a starting point for improvement.

3.6. Instructional planning problems and their solutions

The reported problems were mostly beyond teachers' control (n=19). Only one teacher mentioned teacher's own attitude towards work and planning. Factors beyond teachers' control included lack of time (n=6), lack of resources (n=1), too much work (n=2), interruptions from outside the classroom (n=6) and lack of cooperation from colleagues with n=4. Other studies had reported similar environmental problems(Clark and Yinger 1980, Clark and Elmore (1981), McCutcheon 1980).

To overcome instructional planning problems, they suggested that good teaching and planning should be valued in the institute (n=6), teachers should have more time to plan (n=5) and that teachers should be trained (n=4) to plan their work. Almost all the previous studies including the Hong Kong study made such suggestions. Most of the problems mentioned in teachers' instructional planning seemed to be beyond teachers control but within management control. To remove these problems management could appreciate the need for teachers planning, provide time and training.

4. Individual differences in teachers' planning

There were individual differences in teacher responses. This is evident from the following two responses constructed from the questionnaire. These differences seem to reflect individual concerns and styles of teachers' planning.

1. Planning is putting activities (work to be done) in a sequence with time limit. Plans are sketches or brief outlines of work to be done. The workload does not allow sufficient time to plan well. All my teaching is usually planned but not in writing. Administrative work is done with little forward planning. Work done for students holds first priority and work done for the seniors comes next in priority. My work includes writing syllabuses , preparing lesson plans and term plans.

The main advantage of planning is that less time is wasted and more work gets done. Teachers should be given more time to plan so that they become better teachers and they can produce information for future use. I do not plan daily administrative work. There is insufficient time to plan all my work. As a result, my work may not be of a high standard. Planning is always desirable to improve the quality of teaching. The most important factor hindering planning is that several things happen simultaneously. To promote planning management ought to value good teaching.

2. Planning provides a focus for the translation of syllabuses into a logical teaching programme. My plans consist of lesson plans, usually 2-3 pages with notes, examples and diagrams. My work includes teaching 18 hours, administration of a section, marking, recording, examining etc. About 80% of my work is planned. Unforeseen and routine activities are not planned. Work done for self- survival comes first. Criteria to set priorities depends on my mood. The main advantage of planning is that it allows me to make the best use of my time. Teachers should be given more time provided planning is monitored.

5. My interpretation of teacher reports

1. These teachers defined instructional planning in terms of thinking ahead of the future work and in terms of the plans they prepared in translating syllabuses into teaching acts. Half of them prepared term and lesson plans and the other half prepared lesson plans only. All of them reported to preparing lesson plans. Their planning task consisted of teaching and supervision. They planned for teaching the planned content within the given time.

2. Most of them planned teaching to reduce uncertainty and to reduce wastage of time. They did not plan for the achievement of specific learning objectives.

3. They did not plan work beyond their direct control, nor did they plan familiar, trivial and complex work. Lack of time and lack of requirement to plan were the main reasons for not planning.

4. (40%) of them managed to plan only (50%) or less of their work.

5. Most of the planning problems were beyond teachers' control but within management control.

6. To remove teachers' planning problems management could value teachers' planning, provide teacher training, time to plan and suitable teaching-learning resources. The change required a new policy within the institute.

To conclude, these teachers felt that they were left to themselves to implement the planned curriculum. The teachers in Hong Kong and in Fiji suggested that management was not interested in their work and that was why they were not supported in their planning. It is important to realise that these teachers were not aware of the management problem in supporting systematic instructional planning in FIT.

Providing teachers with additional time to plan, training and additional teaching-learning resources, monitoring and guiding their work was a difficult task for the management. For example, in F.I.T. there was always a shortage of funds and there was nobody experienced enough to provide leadership in instructional planning.

6. Possibilities to improve practice

According to this study, for half of the senior-lecturers, the operational curriculum consisted of term plans and lesson plans and for the remaining half, it was lesson plans only. The main goal of planning was finishing the syllabuses within the available time. Four out of ten of them managed to plan only half or less of their work due to problems beyond their control. It suggested a considerable opportunity for attempting improvement in their existing practices.

Teachers did not plan to achieve specific learning objectives. The Hong Kong study of instructional planning had already indicated several teacher problems in operationalizing the Tyler model(1949) for general use in teaching. Hong Kong teachers needed management involvement and support in the form of time to plan, training of adequate depth, on-the-job support and adequate supply of teaching-learning materials. According to the senior-lecturers

involved in the two studies conducted at F.I.T., all these facilities were not available to teachers at F.I.T. as well. I interpreted that the instructional planning had to transcend from the level of covering content within available time to the achievement of specific learning objectives in the planned curriculum.

My perusal of curriculum documents and talks with teachers indicated that the state of the planned curriculum in F.I.T. was even worse. The existing planned curriculum had been prepared by the expatriate staff, who left the institute several years ago. Many syllabuses were mainly lists of imported topics to teach. No adequate system to control the implemented curriculum existed. Probably expatriate teachers were responsible to implement the planned curriculum without support and control.

like the TEC and BEC in the U.K., there was no system to ensure that the planned curriculum reflected the needs of the industry. Specific learning objectives linking industrial needs to the teaching-learning process offered at F.I.T. did not exist in curriculum documents. So I concluded that there was need to generate a system to establish consistency in industrial and student needs, the planned curriculum and the operational/implemented curriculum. To strengthen the links and to provide harmony, the researcher made the following recommendations:

1. Industrial involvement in curriculum development was highly desirable.
2. The planned curriculum should specify objectives, content, teaching strategy and student assessment. It could consist of a general proposal for the course as a whole and detailed prescriptions for each unit of a course. All of it could be bound as one document approved by the teachers and the industry.
3. To link the planned curriculum with the operational curriculum a standard method of instructional planning is required throughout the Institute. It meant

that all teachers prepare term and lesson plans using a standard format to be agreed after consultation. A system might be worked out after consultation with the stakeholders.

5. All the teaching staff need training in instructional planning and in the use of a variety of methods and media to improve the quality of the teaching-learning process. The senior staff might be thoroughly trained to support and monitor the work of their subordinates.

At the end of their training programme on instructional planning the senior-lecturers involved in these studies took the initiative to introduce the above recommendations after consultation with other stakeholders. It took two years to install the proposed system fully.

7. Professional significance of the study for me to illuminate curriculum development

The Hong Kong study of instructional planning illuminated the gap between the theory and practice of instructional planning in teacher training. The two studies at F.I.T. explored instructional planning within an institute to find ways to improve the quality of the operational curriculum to reduce inconsistency with the planned curriculum. The two studies in F.I.T. illuminated several the problems of curriculum development to me.

1. As a result of the two studies at F.I.T. I became aware of the need for management involvement in implementing the planned curriculum and teacher support in the form of training, time to plan, and provision of appropriate teaching-learning resources.

2. The researcher became particularly aware of the importance of teachers' instructional planning in curriculum development and staff development. In systematic instructional planning, "*there is no curriculum development without teacher development* ." (Stenhouse 1975).

3. I became aware of the important area where I could make special contribution as a resident consultant in curriculum and staff development. In F.I.T. some teachers went overseas for higher qualifications and for exposure to new ideas. Occasionally overseas consultants came to conduct short courses and seminars to provide propositional knowledge but then teachers were expected to implement these ideas without further support and control. I learnt that Ideas were not enough: Institutes needed consultants to guide the implementation process.

4. Past attempts to improve curriculum development failed because teachers had not been consulted (Hirst1980, Kelly1980, Elbaz1981, Handler1982, Westbury1983). My research generated the teachers' perspective on curriculum development and explored how the two perspectives might be linked.

This study became the basis of most of the innovative work undertaken in FIT later. The study suggested several other areas for future research in teachers' planning. All the teachers in previous studies had reported to preparing lesson plans. So I considered it necessary to study teachers' lesson planning practices to further understand teachers' instructional planning in FIT.

Appendix

Nature of Instructional Planning at FIT

This questionnaire is designed to understand the nature of instructional planning in FIT. Your collective reports may provide us a useful basis for improving practice. Please think carefully before answering each question. Answer the questions to provide information on how you plan your work: not how you might be planning your work in future.

.....
.....

1.How do you define instructional planning?

2.What form your plans take? Give two examples.

3.Which of the following strategies do you use to prioritise your professional work?

1. First come first served.
2. Most interesting for you first.
3. Most important for students first.
4. Most important for you first.

4.Which of the following tasks is the most important for you?

1. Work done for students.
2. Work done for self-survival.
3. Work for seniors
4. Work done for unforeseen matters.

5.Briefly describe the nature of your professional work.

6. What work do you plan? Give examples.

7. What are the benefits of planning?

8. What kind of work you do not plan?

9. Why don't you plan all you work?

10. What kinds of problems emerge as a result of unplanned work?

11. What portion of your work remains unplanned?

12. List the various factors hindering you from planning all your work.

13. What might be done to remove the instructional planning problems in FIT?

Thank you for your help
RSP

How Experienced Teachers Planned Their Lessons in the Fiji Institute of Technology (F.I.T)?

This study presents the lesson planning practices of a group of experienced teachers. Their lesson planning is a form of action research directed towards personal professional development in pedagogical-content-knowledge. It is not systematic lesson planning directed towards specific learning objectives.

1. Introduction

According to my previous three studies all teachers reported to preparing lesson plans. This made lesson planing the most important document teachers prepared to implement the prescribed / planned curriculum. According to these studies content was the focus of teachers' planning. Experienced teachers had reported to planning for the presentation of subject matter clearly and efficiently i.e. without wasting time. They preferred brief and flexible plans and they used various planning styles.

Previous research elsewhere on teachers' lesson planning indicated that the focus of teachers' planning in primary schools was activity (Yinger 1977) but in secondary schools it was content (Ben-Peretz 1981). Teachers' lesson plans were partly written and partly mental (Morine 1979, Clark and Yinger 1979, McCutcheon 1980). Lesson plans were mostly mental with brief notes, which served as memory joggers (McCutcheon 1980). Teachers' lesson planning was preparation for teaching involving teacher and student activities to be undertaken within the given time. Very little was known about how teachers used their preactive plans during interactive teaching and postactive reflections.

Within this context I decided to explore teachers' lesson planning more fully as an important aspect of the operational curriculum in F.I.T. I translated my goal into the following questions derived from previous research and personal experience.

1. What determined the context of teachers' lesson planning?
2. What was the task in teachers' lesson planning?
3. What was the form of teachers' lesson plans?
4. How and why did they refer to their lesson plans during interactive teaching?
5. How did they relate their plans to the reality of interactive teaching?
6. What did they do with their lesson plans after use?
7. Do they reflect on their interactive teaching?
8. Do they learn from each teaching experience?

2. Research Methodology

Sixteen inservice senior lecturers from the Fiji Institute of Technology (F.I.T.), the same group involved with the previous two studies, participated in this study as well. According to my professional judgement, teachers generally provided reliable accounts of recent incidents and cases, but they were often inaccurate in generalising from their experiences. Therefore I asked these

teachers to describe the life history of a lesson plan they had used during the present week. I provided them with a structured questionnaire with the eight questions described above to guide their descriptive writing (**see appendix 4**). I advised them to complete the questionnaire soon after teaching the described lesson and to attach their written lesson plans to it. I failed to pilot the short questionnaire. It led to find some language difficulties described later. However, teacher descriptions provided me with useful information. A full response from one of the respondents is presented below.

Diploma 2 students in the subject of economics were to learn 'taxes in Fiji'. The task was to explain to the students that all the taxes mentioned in the textbook were not applicable to Fiji. The plan was to explain taxes in Fiji with examples. I glanced at the plan once in a while during lesson presentation and tried to control the plan by trying to refer to it as far as possible. Student questions diverted me a little. The plan, after use, has been filed with a note on it that it has to be changed. The plan succeeded but with a lot of control over time and student questions. At times it became very difficult to stick to the plan (time and content) especially when students knew quite a lot about the topic.

I listed and categorized responses under each question. The analysis of responses proved to be a laborious process. The emergent categories describe teachers' preactive planning, interactive teaching and postactive reflections presented below. For validation and for further clarifications I discussed my analysis with the respondents as a group.

A better method to capture teachers' lesson planning would have been to select a small sample of teachers and to ask them to plan a lesson for teaching. The researcher would observe their interactive teaching and conduct in-depth interviews with the teachers during postactive reflections. I did not use this method because my main aim was to capture the planning practices of all the senior lecturers of F.I.T. to understand the state of the operational curriculum in their institute. Moreover I had the opportunity to discuss my interpretations with them as a group.

3. My Interpretation of Teacher Reports

3.1. Structure of preactive plans

The preactive plans mainly consisted of sub-topics (teaching points) listed in teaching sequence (n=8) and sub-topics listed in a teaching sequence with time allocation (n=4). Only three teachers reported using lists of teaching-learning activities. It means that 80% of the teachers were concerned with the content and 20% of them were concerned with the teaching method.

Based on researcher's past experience, one way to explain the differences in their responses seemed to be that the 20% of the teachers who focused on method may have mastered their subject matter and their concerns had shifted to the teaching method. Most of them defined the *context* as topics to teach(n=12). One person mentioned subject and another mentioned the course. They seemed to define the context in terms of elements of the planned curriculum.

Nine of them defined '*task*' as sub-topics, components of topics described as context. Two teachers defined it as topics, two as teaching- learning activities and one in terms of teaching goals. These teachers did not seem to be familiar with the term task.

Teacher descriptions of planning '*tasks*' and '*contexts*' did not match my expectations. I expected them to describe the topic of the lesson under '*task*' and factors influencing their lesson planning such as the course, the subject, the students, classroom facilities; available time and their own teaching experience etc. under '*context*' with positive and negative influences on their work. I later discovered that these teachers were not familiar with these terms and realized the importance of piloting a questionnaire before its use. The two terms were not part of the teachers' normal vocabulary.

3.2. Use of lesson plans during interactive teaching

All of them reported to refer to their plans for various purposes such as for sub-topics, sequence, sketches and words. Two persons reported to abandoning their preactive plan due to a complete change in circumstances during interactive teaching.

To match a preactive plan to the reality of the classroom teaching these teachers seemed to be dealing with changes in lesson content, available time and students' rate of understanding. Their reports included adjustments to content only (n=1), content and time (n=1), time only (n=4), student understanding and time (n=1), and all three (n=2). I had observed teachers with focus on content and available time and ignoring students' rate of understanding. Others were very particular about matching content to students' rate of understanding but paid little attention to time. These variations were present in this group as well. These differences might be good indicators of teacher's personal values or professional concerns.

According to several studies of interactive teaching in Clark and Peterson (1986), the antecedents of teachers' interactive decisions were the learner, the content, the instructional processes and the environmental factors with learner being the most significant of them all. Unlike the previous research, in this study time management seemed to be the most important factor influencing these experienced teachers' decision-making.

Matching plans to the reality of interactive teaching was indeed a difficult task. Eight teachers from fifteen reported that their plans were successfully matched; five reported that their plans were only partly successful and two plans failed completely. Teacher's inexperience in handling a new strategy and poor coordination in team teaching caused the two total failures. Lack of visual aids, too many questions from students and teachers' plans based on unrealistic assumptions were the reported causes of partly successful plans.

In failed plans teachers in my study also postponed decisions-making as reported in Morine (1979). They did not attempt to make any adjustments to their plans during interactive teaching. These teachers made inflight decisions in handling partly successful plans. The standard of professional judgement these teachers used to evaluate the success of their lesson plan was the congruency between their preactive plans and the reality of interactive teaching. The following descriptions provide further insight into the teachers' dilemma of fitting preactive plans to their interactive teaching.

Description of an unsuccessful plan

I was teaching business law. The problem was to make a statute more meaningful for certificate level students. The plan was to start with some personal examples to be obtained from the students and to generalize from these examples. My lesson plan included generalizations in writing. I referred to the lesson plans for generalizations. I tried to control my plan during the presentation of the lesson by controlling the time allocation and by selecting the relevant examples. After the lesson presentation of the lesson I made notes for the improvement of the plan in future i.e. to use a case study at the end of the lesson for students to analyze. My lesson plan failed because appropriate examples did not come from the students. I could not generalise from the collected examples. Some students were completely lost in the learning process. Planning should be flexible but in writing. It is an ongoing process and plans should be matched to the ability of the class.

Description of a partly successful plan

I was teaching the principles of pumps in the subject of Principles of Hydraulics. The lesson was to explain to students how a pressure pump worked and to help them understand different types of pumps. The plan was to commence with the principles of a Hand Pump and then to proceed to more complex pumps. During lesson presentation I referred to the plan for the main headings, brief notes and sketches to build up class notes. I also had a list of visual aids to use. Deciding what was relevant and what was irrelevant to be included in the lesson content controlled the plan. The plan is filed for future use. The plan was moderately successful. The nature of the content required working models for adequate

explanations. In teaching efficiently and effectively teaching aids play an important part.

3.3. Postactive adjustments of lesson plans

Eleven teachers reported that they kept their lesson plans for future use after revision and three of them kept them without any adjustments and one teacher reported to throwing his unsuccessful plan away.

The adjustment of preactive plans to interactive teaching is a controversial issue amongst teachers. Some teachers in the past had argued with me against making adjustments to their preactive plans on the grounds that it put extra work on teachers. It means to me that probably all teachers do not adjust their preactive plans to interactive teaching.

Recently (Borko et. al. 1987) reported on student teachers teaching multiple classes. Three student teachers discussed differences between the classes but did not indicate if these differences affected their instructional strategies. However, three teachers spoke of adjusting their later lessons in the light of what happened earlier during the day. I suspect that all teachers do not adjust their plans the same way: some make written adjustments, some make mental adjustments and some do not adjust at all.

3.4. Teachers' Postactive reflections on the entire experience

Different teachers made different comments about the benefits of preactive planning and interactive teaching. Comments about preactive planning included clarity in lesson presentation, enhanced teacher confidence and control over teaching-learning environment. They also mentioned the need to build flexibility in preactive plans to provide ease in adjusting the plan to reality of interactive teaching and to prepare these plans on the basis of reliable information, sound thinking and available resources. In other words

they suggested that the preactive plans should be based on sound knowledge of the context of teaching.

Comments on interactive teaching included the need for visual aids to capture student interest and to explain concepts quickly and easily. Also the plans have to be used with flexibility, like a road map. According to these experienced teachers time management was a difficult to master.

They provided a list of useful insights grounded in practice for lesson planning. According to the two reported insights planning was an ongoing process involving thinking about the future, being aware of the present and reflecting on the past simultaneously. In other words teachers' planning consists of preactive planning, interactive teaching and postactive reflections as an integrated process. Teachers' written preactive plans represent only a part of teachers' planning. To capture teachers' planning fully and systematically researchers have to combine teachers reported lesson plans with classroom observations and in depth interviews about their reflections-on-actions.

Their lesson planning seemed to be a form of experiential learning where teachers were owning and contextualising the planned curriculum. Unlike the previous reported research, lesson planning of teachers in this study consisted of preactive planning, interactive teaching and postactive reflections as an integrated process. These teachers seemed to be reflecting-in and on-action (Schon 1983). The whole process involved complex knowledge, skills and attitudes. The term lesson planning did not describe the complexity of the entire process.

4. Implications for curriculum and staff developmet.

The study had important implications for the teacher education program offered at the F.I.T. Teacher trainers conceptualized teachers' planning as preparation for teaching and they taught teachers to prepare preactive plans using the Tyler model (1949). How teachers used their preactive plans was left

to them. This study revealed that teachers in FIT needed training in matching plans to the reality of classrooms and in postactive reflections. How such training might be provided remained to be explored.

These experienced teachers appeared to plan their lessons using a three-phased integrated process comprised of preactive planning, interactive teaching and postactive reflection. The planning process seems similar to instructional systems design (Martin 1991), curriculum development (Stenhouse 1975) and action research (Elliot 1990). However, lesson planning of teachers in this study was not systematic and complete. Their plans lacked objectives, content, teaching method and student assessment as an integrated process (Tyler 1949). Furthermore, the lesson plans did not provide for an adequate structure in their lessons providing for events such as an introduction, feed back, reinforcement, summary and enrichment. Without such systematic planning it was difficult to link teachers' teaching to the planned learning objectives.

6. My recommendations to improve practice

These teachers planned their lessons to present subject matter to their students using a three-phased process of preactive planning, interactive teaching and postactive reflections. They had gathered useful insights about teachers' lesson planning. However, this form of planning lacked a systematic approach based on specific learning objectives. Based on the information gathered from this study I made the following recommendations for further action in teacher training and curriculum development. Most of these recommendations were put in practice.

1. In teacher education teacher planning is to be a three-phased process, not simply a preparation for teaching. Future training for lesson planning ought to include all three phases of lesson planning.

2. The Tyler model (1949) is a useful guide for the planned and the operational curriculum when properly supported by the management in the form of adequate teacher preparation and teaching-learning resources.

3. If the implemented curriculum was to be linked to the manpower needs of the local industry and the planned curriculum based on the Tyler model (1949), teachers' lesson planning had to be based on specific learning objectives, content, teaching method, and student assessment as an integrated system, not just on content as reported in this study.

4. Each plan should include events for introduction, presentation of content, obtaining feedback, providing reinforcement of learning and enrichment. This type of lesson structure may link the teaching-learning processes in classroom with the needs of local industry.

However, several aspects of lesson planning remained unanswered in this study. Most significantly I did not know how a large number of inexperienced lecturers in FIT planned their lessons? I needed this information to reform the teacher training programme offered in the Institute. The last question led to inexperienced teachers' lesson planning reported in the next study

Appendix.4

Senior-lecturers' Lesson Planning @ FIT: The Questionnaire

This simple questionnaire is designed to understand your current lesson planning practices. Please think of a most recent planned lesson and describe it in the light of the following questions.

.....

1. Please describe the situation (context) of the lesson (topic, time and other resources, students and your particulars)

2. Why did you plan your lesson?

3. What was your plan? Please attach your lesson plan herewith.

4. How did you use your lesson plan during lesson presentation (interactive teaching)?

5. How did you match your plan with the reality of the lesson presentation?

6. What did you do with your lesson plan after use?

7. Did your lesson plan succeed or fail? Please give reasons for your answer.

8. What did you learn from this experience?

Thank for your responses.

RSP

How Inexperienced Teachers Planned Their Lessons in Fiji Institute of Technology?

The inexperienced teachers in this study report to planning lessons to provide them confidence in teaching and to maintain a smooth flow of activities during direct teaching in classrooms. Unlike the senior lecturers in the previous study they are not yet concerned with efficient and effective teaching. Their plans are mere preparations before teaching. They are yet to learn it planning as a three-phased integrated process useful for self learning.

1 Introduction

There were occasional complaints from industry about the quality of the students trained at F.I.T. Specifically the employers complained of the relevance of the planned curriculum and the students' ability to apply what they had learned at F.I.T. Within this context the principal of F.I.T. requested me to examine the problem and to suggest ways to overcome it.

In my previous study of lesson planning of the senior lecturers' lesson planning at F.I.T. I had found that they used a three-phased planning process comprised of preactive planning, interactive teaching and post active reflection for personal professional development. However, the goal of their lesson planning was clear presentation of content from syllabii. Their lesson planning was not directed towards the achievement of specific learning objectives carefully derived from the needs of local industry.

The teaching staff of F.I.T. included senior lecturers, lecturers and assistant lecturers. Most of the lecturers and the senior lecturers were qualified teachers. They had obtained this qualification from a teacher training program available in the Institute. According to the principal and the Heads of Schools, due to the shortage of qualified vocational teachers and the rapid turnover of

staff in F.I.T., many assistant lecturers taught in various schools without any training. Little was known how these inexperienced teachers planned their work.

Within this context I decided to explore the lesson planning practices of a group of inexperienced teachers undergoing training to obtain qualified teacher status. I had three goals:

1. To capture inexperienced teachers' thoughts of lesson planning.
2. To identify major areas of their lesson planning where improvements might be made through training and management action on-the-job.
3. To make a professional contribution towards the knowledge base of teachers' lesson planning, if possible.

The study focused on answering the following twelve questions.

1. What was the goal of teaching?
2. What was the purpose of lesson planning?
3. What task were they planning?
4. What form did their planning take?
5. How did they plan their lessons?
6. How did they use their lesson plans during interactive teaching?
7. How did they evaluate their lesson plans?
8. What was the extent of their lesson planning?
9. What principles did they use in planning?
10. What were their planning problems?
11. How could their lesson planning problems be overcome?
12. How important was lesson planning to improve the quality of teaching?

2. Research methodology

I designed a very comprehensive questionnaire (see appendix 5) divided into three sections. **Section (one)** was to build a general picture of lesson planning from quick descriptive responses. **Section (two)** was to identify important features of the context of teachers' planning and **section (three)** was to obtain detailed information about the various aspects of teachers' lesson planning more systematically. My experience had shown that teachers' lesson planning made better sense when studied in context. Teachers' planning varies according to teachers' experience, the subject they teach and the teaching method they use. The part two of the questionnaire contextualises teacher reports on lesson planning.

I asked twenty in-service inexperienced teachers (assistant lecturers) attending a Technical Teachers' Certificate course at F.I.T. to complete the questionnaire during a training session on teachers' instructional planning. These teachers had already been introduced to preparing their lessons in an induction program and they claimed to use lesson plans in their teaching. I told the group that the information collected through the questionnaire was to be used to capture their present knowledge of lesson planning to guide us in their further training and support within schools.

Before allowing the teachers to complete the questionnaire I explained each question carefully and emphasised the importance of understanding each question before answering it. However, this does not mean that teachers understood the questions. Interviews with individual teachers might have provided more reliable and detailed data but interviews were time-consuming and inconvenient for teachers and trainers. To obtain a general perception of the group as an integral aspect of training, the questionnaire seemed a suitable instrument. I had the opportunity to confirm their reports from samples of their lesson plans and interactive teaching in classrooms. My questionnaire also had inbuilt checks. For instance, questions in part one had been repeated in part three and worded in a different way. Generally their responses in both parts were consistent. The teachers took about an hour to

complete the questionnaire. All questions were answered as well as I expected.

I analysed the completed questionnaires by hand. On the whole the analysis was laborious and the quality of the questionnaire needed improvement for future use. I validated my interpretations with the respondents and other stakeholders

3. Data Analysis

3.1. Teachers' General Knowledge of Lesson Planning:

Section 1

3.1.1. The task teachers planned in lesson planning

Due to inadequate theoretical training, these teachers defined the planning task in a variety of ways. They defined the task as a topic (n=8), content to be taught (n=4) and helping students to learn (n=4). Lesson aims, teaching activities and sequence were also mentioned with (n=1) each.

3.1.2. Purpose of lesson planning

66% of them reported to planning their lessons for personal benefits such as providing confidence (n=7) and better structure in lesson presentation (n=7). Two mentioned improvement of the teaching-learning process and three of them mentioned time management and one person mentioned student motivation. I interpreted that these teachers were still concerned with their personal problems. Like the senior lecturers in the previous study their concerns had not shifted to efficient teaching efficiently, teaching clearly without wasting time.

3.1.3. Principles of lesson planning

They provided a variety of responses. 50% of them reported to matching content with time. 25% of them claimed to match objectives with other components of the Tyler model (1949). Ensuring student learning, planning for content, method and assessment, ensuring plans to be brief and flexible were also mentioned (n=1 each). Generally they seemed to be planning for one or more of the components of the Tyler model (1949) according to their personal needs. These teachers were not clear about the principles of systematic planning using the Tyler Model (1949).

3.1.4. Form of their lesson plans

Nine teachers reported preparing lesson plans mainly in writing and eleven of them reported that lesson plans were in memory with brief written notes. During the induction program these teachers had been advised to plan lessons in detail and in writing using a standard format. They were further advised that written plans were useful for evaluating and communicating with trainers and colleagues. In spite of it eleven of them reported using only brief lesson plans.

3.2. Detailed Analysis of Teachers' Planning Context :

Section 2

The group consisted of ten assistant lecturer from the Fiji institute of technology with 3 months to 3 years of teaching experience in teaching trade students aged 18 to 20 in classes of 15-20 students. Two trainers came from the police training school with one year training experience, one of them was a dentist from the Fiji School of Medicine teaching 18-year-old students in classes of 10. Seven teachers taught vocational subjects in secondary schools to 15-18 year old students in classes of 20 students. All twenty of them taught in a traditional manner i.e. using frontal teaching to mixed ability groups of students.

Detailed Analysis of Teachers Planning Reports: Section 3

3.2.1. Goals of teaching

Clark and Peterson (1986) had found inconsistency between teachers' espoused teaching goals, lesson planning goals and the planned teaching-learning process. All teachers reported achieving all the four goals in the questionnaire to a varying extent. The reported order of importance in these goals was giving new information and helping students to learn it, motivating students to learn, giving new information and guiding students to learn by themselves. It meant to me that these teachers were not aware of the most important goal of teaching in vocational education, which is the achievement of learning objectives derived from the needs of the industrial and business world.

3.2.2. Purpose of lesson planning

The most significant reported goals were: lesson plans gave them confidence and provided smooth flow in lesson presentations. They also reported that to some extent students enjoyed planned lessons and their learning improved. It meant to me that mostly they planned to serve their personal goals: to give them confidence and to provide a smooth flow of events during lesson presentations. Planning to achieve specific learning objectives was missing.

3.2.3. Form of teachers' lesson plans

They were mainly sequencing content (n=8) and some matched it with time (n=4). They also mentioned organization of teaching-learning materials (n=5) and determination of objectives (n=3). Twelve of them reported that lesson plans were records of teachers' intentions, which must be followed. Five of them reported that lesson plans were like road maps to be use with flexibility and three of them reported that they were records of what occurred during a lesson. Fifteen of them reported that plans were partly in writing and partly in mind. Content and sequence was mostly in writing and particulars of students and the teaching-learning environment were kept in mind.

3.2.4. How did they plan their lessons?

The planned content was the most frequently reported starting point for lesson planning (n=10). Available time (n=6), student ability (n=4), objectives (n=3), available resources (n=2) were also reported. It would seem that they were still mainly concerned with the presentation of content within a particular context (available resources, time and student ability). According to Fuller (1969) and my previous experience had shown that beginning teachers were usually concerned with content only. Fuller (1969) reported:

In the studies reviewed, concerns with class control, content adequacy and supervisor evaluation often occurred together. Perhaps all are assessments of teachers' adequacy, by the class and the supervisor. Taken together they are a massive concern of beginning teachers. (p. 221).

The main factors influencing lesson plans were syllabus content, available time and teaching sequence. Ability of the class, available materials, teaching-learning activities and objectives were not so influential. Again content was the focus of their attention.

Textbooks and syllabuses were the most popular sources of information for their lesson planning and sequencing content was the most popular technique they used. It meant to me that syllabuses provided them topics to teach and textbooks provided them detailed content. They simply rearranged the content in a sequence perceived suitable for them and their students. They rarely used objectives, task-analysis and teaching aids. It was probably due to the fact that they had not been trained to use these techniques.

I found it difficult to envisage how these teachers could be teaching clearly and rapidly (efficiently). Content analysis and objectives provide focus, sequence and priorities for clear teaching and teaching aids are highly

effective for rapid and clear explanations. These teachers needed training in these techniques for their further professional development.

3.2.5. How did they use their lesson plans?

Half of them reported abandoning their lesson plans occasionally. Six of them reported that they always adapted their lesson plans to the reality of their classrooms; four did not adapt their plans and one reported to abandoning his lesson plans frequently. Only six of them may have learnt to use their plans with flexibility. They reported referring to their lesson plans to varying extent, occasionally to all the time.

They changed their plans mainly due to inadequate time management and unrealistic assumptions about their students' previous knowledge. These reports were according to my previous experience with inexperienced teachers planning. Inexperienced and new teachers find it difficult to manage time and to assess students' preparedness to learn the new lesson.

Fourteen teachers reported that lesson plans did not divert their attention from their students' reaction to their teaching. However six of them found that lesson plans diverted their attention from student responses to their teaching. I was aware of the fact that teachers who relied heavily on their written plans during interactive teaching became less sensitive to their students' reactions to their teaching.

They reported that they referred to their preactive plans for sequence (n=16), diagrams and exercises (n=9), time (n=7), and teaching points (n=5). They used their preactive plans as memory joggers as suggested in previous research elsewhere.

I interpreted that generally these teachers had not learnt to use their plans with flexibility. It was not surprising when 75% of them still regarded their lesson plans as records of teachers' intentions, which they must follow.

3.2.6. Extent of teachers' planning

85% of them reported planning 50% or more of their lessons. They claimed that they spent 5-10 hours in planning their lessons per week and half of their lesson plans were prepared at home and half in school. Lesson planning was indeed important to these teachers and they spent considerable time on it. My previous experience had shown that inexperienced teachers tend to spend considerable time on planning their lessons

3.2.7. Lesson planning problems and their solutions

In reports of lesson planning problems, lack of time and training were on top with equal weighting. Lack of management support, discrepancy between the reality of the classroom and the plan were next in importance with equal weighting. Frequent changes in timetable and difficulty in assessing student ability were insignificant. To overcome these problems, provision of time and other resources and proper training were the most important factors.

3.2.8. Importance of lesson planning to improve teaching

Fifteen teachers reported that their classroom performance in lesson presentation would improve to a large extent if they could plan all their lessons. The previous research had not established any link between teachers' lesson planning and teachers' performance in lesson presentation. 2/3rd of these teachers reported that such a link existed. However, the meaning of the term quality is not clear in this study. My experience as a teacher trainer has shown that a clear lesson presentation of a lesson was largely dependent on the quality of teacher's lesson plan

4. My Interpretation of Teacher Reports

These teachers used frontal teaching. Their espoused goal of teaching was to impart knowledge, skills and attitudes to their students and to help them to learn. Lesson planning aimed to provide them confidence and to avoid confusion during interactive teaching. Obviously there was a mismatch between their espoused teaching goals, and their reported lesson planning goals.

In their lesson planning they mostly matched content and time. Their lesson plans consisted of sequenced content. Plans were partly in teachers' minds and partly in writing. Probably particulars of the environmental constraints and those of their students were kept in their mind. They mostly commenced planning with content and the main factors influencing their plans were content, time and teaching sequence. The main sources of information for planning were textbooks and syllabuses. However, most of them had not learnt to use their plans with flexibility. Unlike the senior lecturers, who used a three-phased process in reflective teaching, these teachers used planning as a preparation for teaching. They needed more formal training and on-the-job support to bring them to the level of senior lecturers planning and planning for the achievement of specific learning objectives. The following features of teachers' planning differentiated experienced from the inexperienced teachers.

1. Inexperienced teachers' planning was very basic in quality mainly designed to serve their interests and needs. Lesson planning for these teachers was preparation for teaching. They defined lesson plans as records of teachers' intentions, which must be followed during lesson presentation and their lesson plans served as teaching aids during interactive teaching. Fuller (1969) had found a similar pattern in the concerns of inexperienced teachers. She reported: "*both in-service and new teachers had principal concerns and we would classify it as concerns with self*". (P. 218).

2. There was a marked difference between the lesson planning practices of the experienced and the inexperienced teachers. The experienced teachers were concerned with efficient teaching. Their concerns had shifted from 'self' to 'task'. Fuller (1969) had reported along similar lines when she said: "*characteristic of experienced superior teachers, concerns seem to focus on pupil gain and self-evaluation as opposed to personal gain and evaluation by others.*" (P. 221). Steps had to be taken to bring inexperienced teachers to the level of experienced teachers.

3. Based on the findings of the two studies of lesson planning at F.I.T and the concept of three stages in learning to teach proposed in Fuller and Bown (1975) the researcher proposed that teachers' lesson planning could be conceptualized at three levels of complexity according to teachers' intended goals. Lesson plans could be prepared (1) to fill time i.e. to provide information within the given time; (2) to teach clearly and efficiently i.e. to make efficient use of time and other resources and (3) to achieve specific learning objectives. These proposed stages were consistent with Fuller and Bown (1975) who reported:

Three stages of learning to teach have been tentatively identified or at least labeled. Different researchers consider the first stage a survival stage. A second seems to be a mastery stage, when teachers are trying to perform well. In the third stage, the teachers may either settle into stable routines and become resistant to change or else may become consequent oriented: concerns about her impact on pupils and perhaps responsive to feedback about herself (p. 37).

According to my professional judgment, the lesson planning reported practices of this group of teachers belonged to the first level and that of senior lecturers to the second level. The concept of levels conceptualised here later proved very useful for curriculum, staff and institute development.

6. My Recommendations to Improve Teacher Training in FIT

An appropriate strategy was needed to guide these teachers from the present stage of lesson planning towards planning for the achievement of specific learning objectives (Tyler 1949). Research in teacher education was not mature enough to provide any guidance in determining an appropriate strategy to deal with this issue. According to Fuller and Bown (1975):

The question is: which intervention by which interveners in what situations elicit what responses from which prospective teachers? Each of the variables warrants examination. . . . the appropriate question at this stage of our knowledge is not are we right? but only what is out there? (P. 52).

Based on my experience in teacher training, findings of the previous studies and the knowledge of the context at F.I.T., I made the following recommendations to provide a strategy for trial.

1. These teachers need a solid theoretical base to plan their lessons with understanding.
2. Training of appropriate depth and sufficient guided practice might reduce the time these teachers take to plan their lessons.
3. These teachers need thorough training in task analysis; writing, selecting and using behavioral objectives and the use of teaching aids such as overhead projectors and handouts. These techniques are helpful for clear, efficient and effective teaching.
4. Teachers should be taught lesson planning as a three-phased process. They should be able to prepare realistic plans quickly, match these plans to classroom reality and improve their plans in the light of their interactive experience.
5. These teachers need on-the-job support to improve the quality of lesson planning. Also, these teachers need time to plan and teaching aids such as overhead projectors and handouts to present their subject matter quickly and clearly.

This study added new professional knowledge of teachers' planning practices to my professional knowledge. It generated the concept of three stages/levels in teachers' learning to plan their teaching. This concept is proved useful to guide teachers' professional training. Furthermore, I later used it to identify the stages of development in institute improvement and development to recommend an appropriate action strategy reported in (Punia 1992). It made significant contribution towards the improvement of Teacher training in FIT

Appendix 5: The Questionnaire

Inexperienced Lecturers and Assistant Lecturers' Lesson Planning @ FIT

This questionnaire consists of a number of statements to understand your lesson planning practices. There is a considerable variety in such practices and there are no right or wrong answers. I want your individual experiences. If you do not understand a question or statement you can consult me. Please write in appropriate spaces and by using ticks in the appropriate boxes.

The questionnaire is divided in three parts. In part (1) you can describe your lesson planning in your own way. Part (2) describes the context of lesson planning and part (3) is designed to understand your personal style of lesson planning and to plan further training, if required.

.....

PART (1)

The Lesson Planning General Description

- 1. What do you include in your lesson plan? (subject matter, activities etc.)**

- 2. Briefly describe how you plan your lessons?**

- 3. Why do you plan? (What are the reasons for planning your work)?**

- 4. How do you use your lesson plans during and after lesson presentation?**

5. What does your lesson plan look like? Please attach a typical lesson plan with this questionnaire.

Part Two: Context Analysis

- 1. What are your professional qualifications?**
- 2. What is the name of your school?**
- 3. What is your position in the organisation structure?**
- 4. What subjects do you teach?**
- 5. How many years have you been teaching?**
- 6. What courses do you normally teach?**
- 7. What kinds of students do you teach?**

8. What is the normal size of your classes?

Part 3: THE DETAILED ANALYSIS OF TEACHERS LESSON PLANNING

A: The Preactive Planning

Please provide your answers by making a tick or by filling the blanked spaces.

1. Which of the following is the most important aim of your teaching?

1. Providing relevant knowledge to the students.
2. Helping students to learn what is taught.
3. Motivating students to learn by themselves
4. Anything else-----

2. Which of the following statements is true of you?

My lesson plans are:

1. My intentions for classroom teaching which I rigidly follow during lesson presentation.
2. Like road maps to follow with flexibility.
3. Records of my experience of interactive teaching
- Anything else-----

3. Which of the following statements defines lesson planning?

Lesson planning is mainly:

1. Writing of learning objectives.
2. Organisation of content.
3. Organisation of teaching-learning materials.
4. Matching teaching activities with available time.
5. Matching content with available time.
6. Any thing else.....

4. Which of the following units defines your lesson?

1. A topic
2. Subject
3. Activity
4. Period of time.

5. Which of the following statements is true for you?

I plan:

1. All my lessons.
2. 75% of my lessons.
3. 50% of my lessons.
4. Less than 50 % of my lessons.

6. How much time do you spend on lesson planning each week?

1. Five hours.
2. More than five hours.
3. Less than five hours.
4. Anything else-----

7. How much time do you spend on planning a typical lesson?

1. More than one hour
2. One hour
3. Half of an hour
4. Anything else_____.

8. Which of the following statements is true for you?

I plan my lessons mostly:

1. At home
2. In school
3. Partly at home and partly at school
4. -----.

9. Which of the following statements is true for you?

I plan most of my lessons

1. Mentally
2. In writing
3. Partly in writing and partly mentally
4. Any other way?_____

10. Which of the following is the main reason for planning my teaching?

1. I am required to plan my lessons by the school.
2. Planning gives me confidence during classroom teaching.
3. I can learn to teach better by planning my lessons.
4. Students enjoy planned lessons.
5. Students learn more.
6. Anything else-----

11. Which of the following is the most important factor influencing your lesson planning?

1. Available materials.
2. Available time.
3. Syllabus/planned curriculum.
4. Student ability and readiness to learn.
5. Your own ability and readiness to learn.
6. School requirement to plan.
7. Anything else_____.

12. Which of the following is the most important source of information for planning your lessons?

1. Syllabus/planned curriculum.
2. Textbooks.
3. My own experience.
4. Yearly plan.
5. Semester plan.

13. Which of the following techniques is most useful in learning to plan lessons?

1. Writing learning objectives
2. Defining and sequencing teaching points
3. Selection and timing the various activities in a lesson
4. Selection of appropriate content to teach
5. Use of various teaching aids.

B- INTERACTIVE TEACHING:

Using Lesson Plans during lesson presentations

15. Which of the following statements is true for you?

1. I occasionally abandon my lesson plans during lesson presentation.
2. I often abandon my lesson plans during lesson presentations.
3. I always adapt my plan to the reality of the interactive teaching
4. I always follow my plans completely.

16. Which of the following is the most important problem during lesson presentations?

1. Students ask too many questions.
2. There is inadequate time to cover the planned lesson.
3. I tend to make unrealistic assumptions about the students' previous knowledge
4. There are frequent interruptions from outside the class
5. Any other-----

17. How often do you refer to your lesson plans during lesson presentations?

1. Frequently
2. Occasionally
3. Never

4. Any other

18. Which of the following is true of you?

I refer to my lesson plans for

1. Teaching sequence
2. Main points of the lesson
3. Time management
4. Content including diagram, exercises and so on.

19. Lesson planning can divert teacher attention from student reactions to teaching to planned lesson excessively. To what extent it is true of your lesson presentations?

1. Mostly
2. Occasionally
3. Not at all

C-Post-active Reflections:

Reviewing lesson plans for learning after lesson presentations

20. Which of the following is the most significant indicator of the success of your lessons?

1. Students enjoy the lesson
2. Students understand the lesson
3. Lesson events occur as planned
4. I learn from the lesson.

21. Which of the following is the most significant problem in lesson planning?

1. Lack of time to plan
2. Lack of management control and support for teacher planning
3. Lack of adequate training in lesson planning
4. Lack of planning culture in the school
5. Any other-----

22. To What extent your interactive teaching might improve if you could plan all your lessons?

1. To a very large extent
2. To a large extent
3. To some extent
4. Not at all

23. To what extent you might learn to teach better if you could plan all your lessons?

1. To a large extent.
2. To some extent only.
3. Not at all.

Thank You
RSP

Trainee Technical and Vocational Teachers'

Reflections on Their Interactive Teaching?

The exploratory study illuminates the complexity of the teaching task and the problem of teacher trainers to facilitate teacher learning. It reports on how a group of inexperienced trainee teachers were learning to link their preactive plans with interactive reality of teaching under the guidance of their tutor. They had difficulty to match planned time, assumed student ability to learn with the reality of interactive teaching.

1. Introduction and Research Questions

To guide the trainee teachers in using preactive plans effectively and to understand teachers' problems in matching these plans to reality of interactive teaching, I began to monitor teachers' implementation of their use of lesson plans during formal training in classroom setting. So the general goal of the study was to explore and understand the problem of matching preactive plans to the reality of interactive teaching. This general goal was divided into six questions listed below:

1. What was the goal of lesson plan evaluation?
2. What were teachers' problems in matching preactive plans to interactive teaching?
3. How did they overcome these problems?
4. Can teachers evaluate their lesson plans?
5. Do they need any guidance?
6. What were the significant factors influencing the success or Failure of teachers' lesson plan evaluations?

2. Research method

I tried general discussions with the teachers on their interactive teaching and postactive reflections without success. Often teachers had a little to report about their problems without a framework to guide their thinking. I learnt the

importance of frameworks by chance. Once after an observation of classroom teaching of a trainee teacher I asked him to evaluate his own lesson presentation. I put a framework in front of the teacher and asked him to try again. To my delight, the teacher managed to evaluate his lesson presentation successfully. I had discovered that frameworks were useful tools for training beginners in teaching. Within this context I designed a framework in the form of a self-evaluation questionnaire (**appendix 6**) to guide teachers in evaluating their lesson plans. Trainee teachers completed these questionnaires immediately after using their preactive lesson plans during interactive teaching. They later used their completed questionnaires in open discussions with trainers and other trainees. This process of evaluating one plan each week continued for about a month. This study is based on teachers' reports in the final week. In-depth interviews with individuals would have provided better information. However, it was too time consuming for a trainer.

Sixteen vocational teachers with 0-3 years of teaching experience attending a part-time day in-service program for a Teachers' Certificate completed the questionnaire. They had learnt to prepare preactive plans in writing using a standardized format based on the Tyler model (1949). The teachers had no difficulty in using the simple questionnaire. I abstracted and categorized teacher reports under the eight questions in the questionnaire.

3. Analysis of Teacher Reports

During interactive teaching these teachers seemed to be matching planned time, content and student ability with the reality of the interactive teaching. Time management and mixed ability classes were their reported problems. In future they aimed to use handouts to accelerate the speed of their lesson presentations; include independent class work in future lesson planning and to make a flexible use of their plans during interactive teaching. They seemed to be learning from his experience. Their responses to various questions of the questionnaire are reported next.

3.1. List the areas which went according to your plan

Their responses varied considerably. For example, they mentioned every thing with (n=5); everything except time allocation (n=2); content and time (n=4); method and time (n=3) and content and method (n=2). *It is interesting to find that only five out of 16 reported preactive plans matched the reality of interactive teaching.*

3.2. Give reasons for the success of your plan

They mentioned teacher preparedness to teach with (n=3); student readiness to learn the lesson (n=3); teacher and student preparedness to teach and learn (n=2); time management by the teacher (n=2) and content matched student needs and ability (n=3). Availability of facilities, student and teacher relationship were also mentioned with (n=1 each). According to their reports one plan was totally unsuccessful. *Teacher and student preparedness and the match between the content and the student abilities were the most frequently reported factors influencing the success of a preactive plan.*

3.3. List the areas which did not go according to plan

They mentioned timing of the lesson with (n=6) and none went against the plan with (n=3). Lesson structure and content, objectives and evaluation, content and time, introduction and sequence, student ability, feedback, introduction and feedback and evaluation were also mentioned with (n=1 each). *Time management was the most frequently reported problem.*

3.4. Give reasons for the failure of your plan

They mentioned time management (n=3), mixed-ability classes (n=3), students asking too many questions (n=2), teacher had too much material to cover, student ability and time, inadequacy of teacher explanations each (n=2). Lack of preparation by the teacher and students' previous knowledge were also mentioned (n=1). *Contextual factors such as mixed-ability classes and lack of time were the most frequently reported reasons for the failure of their plans.*

3.5. What action would you take to remedy the situation?

They mentioned making flexible use of lesson plans and using of teaching aids such as handouts to expedite the lesson presentation with (n=3 each). Need to allow more time and more explanations in their preactive plans were mentioned with (n=2). Reflections- in- action, not answering students' irrelevant questions, postponement of the interactive problems, giving due regard to students' previous knowledge, emphasizing important points, removing part of the content were mentioned with (n=1, each). Flexible use of lesson plans and the use of teaching aids such as handouts were the most frequently proposed solutions to the problem of time management. *It was interesting to find that different teachers perceived and aimed to solve their problem differently.*

3.6. What changes would you make in your lesson plan?

They aimed to use of teaching aids such as handouts (n=5) and allow some time for students' to do independent work (n=4). They also mentioned using reflection-in-action (n=2), planning according to students' abilities, allowance for more time and detail, making allowance for contingencies in planning (n=1). One of them refused to change his lesson plans on the grounds that it was too time consuming for him.

3.7. How would you evaluate the success rate of your lesson?

Seven of them rated it good and nine of them rated it fair. What did they mean by these terms remained nebulous. It is difficult to define the degree of match between the plan and the reality of the classroom teaching.

3.8. Any other comments and suggestions

- a. He could have added variety in his teaching.
- b. Many changes in lesson plans would discourage teachers from planning.
- c. Plans should be changed only after, not during lesson presentation.
- d. Time allocation should include allowance for contingencies.

- e. Teachers need thorough training in lesson planning.
- f. Time management was the main problem.
- g. Students should be able to understand English well.
- h. Workshop lessons were easy to conduct.
- i. When students' ability matched a lesson plan it usually succeeded.
- j. I now see the advantage of a written plans (n=2).
- k. More practice was needed in learning to match preactive plans to interactive teaching.

4. Interpretation of Teacher Reports

1. The goal of evaluating preactive plans seemed to be matching preactive plans to the reality of the interactive teaching. It would seem to be a difficult task indeed. For example only 30% of these teachers reported to have achieved this goal. How they achieved this task remains unknown?

2. Teachers' general problem seemed to be matching the preactive plan to the students' rate of understanding during a lesson presentation. They seemed to be dealing with several variables at the same time e.g. they were matching content, available time and other resources, student ability and preparedness to learn and the teacher's ability and preparedness to teach. They were indeed grappling with a difficult task. With this particular group time management and mixed ability classes were the most significant problems.

3. To overcome the problem of time management they proposed to make more use of teaching aids such as handouts to speed up the interactive teaching and to better explain the lesson content. They also mentioned that they would make a flexible use of their plans during interactive teaching. To overcome the problem of mixed-ability classes they suggested that they would incorporate more independent work for students in their lesson plans. All these suggestions seemed appropriate.

4. It was rather gratifying for me that these inexperienced teachers were able to produce a reasonable evaluation of their preactive plans with the use of the framework I had prepared for them. Two interesting side-effects of this exercise seemed to be that two teachers who did not prepare written plans previously had realized the value of written plans for a systematic evaluation of their preactive plans.

5. These teachers needed further guidance in using their plans with flexibility and in time management. They also needed management support in providing them with teaching aids such as over-head projectors, handouts to present their lessons more efficiently.

6. Match between the content and the mixed-ability students was the most important factor influencing the success of their interactive teaching. One teacher commented:

“When a lesson plan matched student ability and needs, it usually succeeded.”

Some of them mentioned teacher preparedness to teach as well.

5. Discussion and suggestion for further studies

We knew little about how teachers learnt to relate their preactive plans to their interactive teaching and how they reviewed their plans. The present study made a modest contribution in this direction. Many studies may be necessary to conceptualize teachers' use of lesson plans fully. The following account is based on my personal observations and speculation sprinkled with the findings from this study.

Usually inexperienced teachers follow their lesson plans rigidly rendering the plans unproductive as an aid to student learning. Inexperienced teachers, like those in this study, need guidance in learning to match plans to the reality of their interactive teaching. The teachers involved in this inquiry were successfully learning to prepare comprehensive written preactive plans and to match their plans to interactive teaching using a formal framework. Matching

preactive plans to interactive teaching is a difficult task. Even experienced teachers have difficulty to accomplish this task. Usually experienced teachers with written and systematic lesson plans have less difficulty in matching their preactive plans to classroom reality.

The process of matching the preactive plan to the reality of the classroom can be divided into three inter-related processes: preparation of realistic preactive plans, ability to match the plan to interactive teaching, and reviewing the preactive plans in the light of experience gained through interactive teaching. Each element requires different knowledge, skills and attitudes. Teachers need to reflect-in-action and to reflect-on-action as suggested by Schon (1983) and the process is a form of action research.

The first requirement to solve the problem is to prepare realistic lesson plans based on realistic information. New and inexperienced teachers lack the necessary information to prepare realistic lesson plans. On the other hand experienced teachers possess a wealth of such information accumulated through years of experience and they have less difficulty in preparing realistic plans.

To master interactive teaching, teachers have to be sensitive to students' readiness to learn, pace of learning and their learning needs. Often lesson plans require adjustments such as leaving out a part of the lesson plan. It may even involve an extension to the original plan. Inexperienced teachers, like those in this study, often find it difficult to manage the planned time. During preactive planning they cannot estimate the time required to teach the given content. During interactive teaching they fail to monitor time and during postactive reflections they do not adjust their original plans. Only careful lesson planning, careful assessment of the situation during interactive teaching, making continuous adjustments to the original lesson plan and exercising control over the learning environment tend to close the gap between the classroom reality and the lesson plan. It takes a long and

continuous process to master the task of matching plans to reality of teaching. Some teachers in this study report that they would make a flexible use of lesson plans in future. They were only beginning to realize that preactive plans need adjustments during interactive teaching. During postactive reflections, teachers have the opportunity to improve the quality of their lesson plans. For example, some teachers in this study reported that they intended to restructure their lesson plans, include handouts and some independent work for students.

Teachers do not adjust their plans to the classroom reality in the same way. Some do not make any adjustments at all. One teacher in the present study argued against adjusting his reactive plans. Morine (1979) had reported that teachers were reluctant to change their plans even if plans were not proceeding as well as expected. Some teachers make adjustments only during interactive teaching and some during postactive reflections only. Some teachers in the present study proposed to adjust their plans both during and after their interactive teaching. It may also be true that some make mental adjustments, others make written adjustments and some make both written and mental adjustments. Each teacher has his personal style of lesson planning as an integrated process to suit his professional experience and context of teaching.

I hypothesise that the beginning teachers do not make adjustments at all, after some teaching experience they learn to make postactive adjustments. Learning to adjust plans during interactive teaching is learnt last. It might be useful to test this hypothesis in a future study.

Professional Significance of This Study

The study achieved my intended goal in capturing the postactive thoughts of a group of inexperienced teachers to guide their reflective teaching. I learnt that learning to adjust preactive plans to the reality of interactive teaching is difficult for teachers and it takes time, training and will to learn from

experience. I also became aware of the difficulties of relating planned curriculum to the operational one.

Teacher trainers at FIT had no previous experience of guiding teacher postactive reflection. As a result of this study teacher trainers began to monitor teachers' use of their preactive lesson plans. Other teacher trainers can speed up the teacher learning process using the methodology of this study. However, more research is required to fully understand how teachers learn to adjust their preactive plans to classroom reality through training and from personal experience. Later the questionnaire used in this study proved useful as a learning tool for trainee teachers and teacher trainers began to use it during postactive interview in clinical supervision of teachers.

The next study presents how teacher trainers at FIT facilitated the implementation of teachers' planning as a three-phased reflective process to improve the quality of their classroom teaching.

Appendix 6
Lesson Planning: Post-active Reflections

This questionnaire is designed to help you in evaluating your lesson planning individually and with aid from your tutors. Answer the following questions carefully. You may extend this list if you like. With a systematic approach like this one you can develop the habit of evaluating all your lesson plans mentally and in writing and share your experiences with colleagues.

.....

1. List the areas of your lesson plan, which matched interactive teaching e.g. time allocation.

2. Give reasons for this match.

3. List the areas of your lesson plan which did not match your interactive teaching eg students' previous knowledge.

4. Give reasons for the mismatch.

5. What would you do in future to remedy the problem of mismatch?

6. What changes would you introduce in your future lesson plan and why?

7. Which of the following statements determines the success of your lesson plan?

- Plan matched the interactive teaching.
- Students were interested in learning.
- Students learnt the lesson content.
- I feel in control of lesson presentation
- I like to improve my lesson presentations.

Lesson Planning Problems of a Group of Inexperienced Vocational Teachers from the Fiji Institute of Technology

In this study a group of trainee teachers report their problems in using systematic instructional planning as preactive planning, interactive teaching and postactive reflection as an integrated system to teacher trainers attempting to overcome their problems. Their reported problems include contextual problems such as lack of time and teaching-learning resources, their inadequate professional development and student readiness to learn their lessons.

1. Introduction

The usual teacher training in lesson planning at the Fiji Institute of Technology included the preparation of preactive plans based on the Tyler model (1949). The plans were to be comprehensive, systematic and in writing to be meaningful to all the stakeholders. Training included lectures followed by trainee practice in preparing lesson plans later checked and assessed by the trainers. The trainees were left to implement their learning in their own ways. However, as a result of the exploratory study of experienced teachers' lesson planning teacher trainers began to teach preparation of preactive plans, effective use of preactive plans during interactive teaching and evaluation of preactive plans in the light of interactive teaching as an integrated process. They also began to monitor teachers' lesson planning problems to reinforce

their usual teacher training and to support teachers to improve practice in their departments.

To provide teachers with adequate support in implementing their lesson plans it was necessary to fully understand teachers' planning problems and to find ways to help them to solve these problems. This study reports the lesson planning problems of a group of trainee teachers at the Fiji Institute of Technology. This study provides only a snapshot view of the teacher problems of a group of teachers during a week. No generalization is intended in this study.

2. Research methodology

Eighteen vocational teachers with 0-3 years of teaching experience attending an in-service program for Technical Teachers' Certificate offered at the Fiji Institute of Technology were involved in this study. I asked these teachers to describe a significant lesson planning problem each week on a blank form (**appendix 7**). They brought the completed forms to teacher training sessions for discussions amongst their colleagues and their trainer. This practice continued for six weeks. However, this study presents the problems recorded in the second week.

The blank form is designed to describe teachers' problems and the way they solve them. I aimed to understand the nature of teachers' problems and how they solved them. This study reports the nature of teachers' planning problems, not with the way they attempted to solve these problems. The following teacher reports provide the nature of the data produced. The next table provides the frequency count of the various problems

Sample of Teacher Reports

1. I prepared a lesson for two hours. Part of the lesson was written and partly unwritten. Every thing went according to the plan for an hour. After the first hour an odd thing happened. The students (only

seven in the class) started to ask many questions-mostly doubts in relations to their reading. It took me half an hour to answer all the questions. By this time my lesson plan was disturbed. I could not help answering the questions, which were relevant. I carried on with the lesson plan where I had left off. I decided not to rush with the lesson. I just reshuffled my lesson plan.

2. I was taking a second year class in engineering. I presumed that the previous lecturer had covered his topic and I planned my lesson accordingly. However it was found that the other lecturer had not covered his topic. I had to cover most of his topic. The topic I was to cover had parts related to the previous topic. Unless it was covered it was wrong to go any further. Lesson plans are no good unless the previous records are clear.

3. When I reviewed the previous lesson with the students, they were unable to answer the basic questions. There seemed to be an atmosphere of uncertainty and blank expressions were present on students' faces. I was frustrated and felt that what time he had spent with the class the previous day was wasted. I felt then that something was wrong with my teaching and that I had to learn to self-evaluate my lessons and to plan my lessons.

I rewrote a lesson plan with an introduction and developed it on the main points of the lesson. I included the lesson objectives and class exercises to do so that I may obtain feedback to stress the main points again at the end of the lesson.

With the new plan students showed more enthusiasm. They did the class exercises very well. As we reviewed the main points at the end of the lesson, student participant was incredible. I learnt that if a lesson plan is

well prepared and followed during lesson presentation students are bound to learn.

4. I planned a lesson for an hour, according to the time allowed in the syllabus, but I could not teach the topic within the time. I reported the matter to the Section Head who reported the matter to the Head of the School. The matter was discussed and finally an extra half of an hour was allowed for the topic.

Data Analysis

The Frequency Count

<u>Problems</u>	<u>Frequency</u>
1. Teacher had to teach without a plan	4
2. Insufficient time to cover the lesson content	3
3. Difficulty in writing behavioral objectives	2
4. Students were not ready for the new lesson	2
5. Lack of teaching aids in schools	2
6. Difficulty in selecting content of appropriate quantity and quality	2
7. Lack of time to plan lessons	1
8. Need to adjust plans	1
9. Difficulty in matching various components of the lesson plan	1

3. Interpretation of the teachers' reports

Report analysis shows that preactive planning is important to these teachers. They find it difficult to teach without them. They report problems associated with preactive planning, interactive teaching and postactive reflections as

provided below. It means that this group of teachers is learning to use lesson planning as a reflective process taught during training.

1. These teachers appreciated need for lesson plans to support their interactive teaching (n=4).
2. The reported contextual problems included lack of time to plan (n=1) and availability of teaching aids (n=2).
3. The preactive planning problems included difficulty in writing behavioral objectives (n=2), selecting content of appropriate quantity and quality (n=2) and matching various components of the Tyler model (n=1).
4. Reported interactive problems included lack of student readiness to learn (n=2) and teacher difficulty in matching time to the planned content (n=3).
5. Adjustments of preactive plans after interactive teaching was also reported (n=1).

I categorized the reported problems into training problems and contextual problems. It would seem that six problems could be resolved through further training by the trainers but ten problems were contextual problems beyond teachers' control. They required management support to teaching and student readiness to learn their lessons. It would seem that teachers' planning as a reflective action without other stakeholder cooperation remains of limited value.

4. Recommendations to improve practice

To overcome all teachers' lesson planning problems is indeed a difficult task. It involves teacher preparedness to teach, student preparedness to learn and management preparedness to support the teaching-learning process through adequate teaching-learning resources. It was rare for me to find educational establishments where these requirements were adequately met. This is what makes it difficult to match the planned curriculum to the operational one in education where top-down strategies of curriculum development are used. To overcome the problems of this group of teachers the researcher made the

following recommendations, which were later accepted by the stakeholders and put into practice:

1. To promote teachers' planning in the Fiji Institute of Technology, management intervention is necessary to overcome contextual problems.
2. Careful student selection and counseling in study skills is likely to better prepare students to learn their lessons.
3. Monitoring lesson planning on and off -the-job is a useful strategy to reinforce formal teacher training.
4. If teachers were to use lesson planning with confidence they may have to be trained in to mastery level during teacher training.

5. Professional significance of this study to improve practice

This study shows how teacher educators might support practice in schools. A simple and a useful method of generating new knowledge about improving practice through teacher planning has emerged from this study.

The study illuminated important issues in matching the planned curriculum with the operational one in the institute. All the stakeholders learnt from this study that the achievement of learning objectives of the planned curriculum cannot be the sole responsibility of teachers. It required cooperation and support from students, management and the consultant. It involves a team effort. This study clearly showed that to implement the planned curriculum successfully, teachers have to be prepared to teach; students have to be ready to learn and management has to be willing to provide time and other resources to create an appropriate teaching-learning environment in a collaborative culture. I later used these ideas to generate a new model of school-based curriculum development at FIT (see Punia 1992).

In this study, teachers reported that the success of a lesson plan depended on teacher preparedness to teach and student preparedness to learn. As a result of these remarks, I became interested in obtaining teachers' perception of

effective teachers and effective students. This led to next three studies of teacher images of effective lessons, effective teaching skills and good students.

Appendix 7
Teacher's Lesson Planning Problems

(The Questionnaire)

This questionnaire has two goals. First, I would like to support you in solving your planning problems without being present in your lesson presentations. Secondly, I would like you to share your experience with your colleagues in teacher training and with your colleagues on-the-job. To record the information with a minimum of inconvenience I have designed this questionnaire for you. Please record the most important problem carefully and accurately.

.....

1. What was the situation?

2. Exactly what happened?

3. What did you do?

4. What was the result of your action?

5. What have you learnt from this incident?

Thanking you.
RSP.

Technical Teachers' Perception of Effective Teaching in Direct Teaching

According to the trainee teacher reports in this study effective teachers present their subjectmatter clearly with student involvement in the teaching- learning process. They regard visual aids most useful to achieve these goals. They do not mention teaching to achieve the planned learning objectives.

1. Introduction

In the previous two studies teachers at FIT mentioned that effective teaching depended on teacher preparedness to teach and student preparedness to learn. Frequently other teachers in the Fiji Institute of Technology mentioned that it took a good teacher and a good class to make a successful lesson. They talked of good teaching without defining it.

As a teacher educator I believed if teacher trainers are to help teachers to acquire new knowledge, skills and attitudes, they ought to be familiar with their existing knowledge, skills, attitudes, beliefs and perceptions.

There was no generally accepted definition of good and/or effective teaching. Teachers, students, public administrators and teacher trainers all varied in

their perception of effective teaching (Wragg 1984, Calderhead 1984). Bar (1961) summarizing a massive amount of American research concluded:

Some teachers were preferred by administrators, some were liked by the pupils and some taught in classes where there were substantial gains in pupil learning and generally speaking these were not the same teachers. (Wragg 1984. p 4.).

Brown (1975) distinguished between good teaching and effective teaching from a teacher educator's viewpoint. According to him effective teaching involves the achievement of specific learning objectives and good teaching is in the eyes of the beholder.

At the time of this study very little was known about the criteria teachers used to define effective teaching. Taylor (1970) reported that evaluation did not seem to be the concern of teachers. Some studies of primary school teachers and secondary school teachers indicated that student involvement was the most important criterion teachers used to evaluate their lessons (Taylor 1970, Zahoric 1982). If student involvement was a means to an end or an end in itself was not clear from these studies. Process-product research of the past decade had failed to link teacher behavior to student learning with sufficient reliability so that it might be useful to train teachers.

As far as I was aware, no studies had been conducted to link teaching processes to learning outcomes in vocational education. This inquiry aimed to fill this gap and to provide me with the present teacher perception of good teaching to understand the nature of the operational curriculum in FIT more fully. This inquiry provides only a snapshot view of a so-called good lesson. It includes:

1. Teachers' reported behaviors in teaching.
2. Criteria teachers used in assessing their effectiveness in teaching.
3. Teachers' goals embedded in their teaching-learning processes.

2. Research methodology

Nineteen in-service teachers attending the Teachers' Certificate Course conducted at the Fiji Institute of Technology participated in this study as an integral part of teacher training. They taught vocational subjects at trade and technician level in courses mainly conducted at the Fiji Institute of Technology. Their teaching experience varied from 0-3 years and they usually used direct teaching method marked by talk and chalk with occasional use of visual aids with some variety in their teaching styles. The classrooms of Fiji Institute of Technology were built for the use of this method.

For a descriptive study of this kind I assumed that teachers' reports on specific cases were a valid source of information. As an integral part of training I asked each teacher to describe his own recent experience of successful teaching. I guided the respondents in their descriptive writing by requiring them to complete a simple structured questionnaire as shown in **Appendix 8** seeking information about the following aspects of a good lesson they taught or observed recently.

1. The context (the situation) in which teaching took place;
2. The teacher's behavior (what teacher did in the particular situation) in teaching;
3. The effects of teacher behavior on students.

The context was important to me for two reasons. Firstly, teacher behavior is largely context- dependent. Secondly, context knowledge is useful to transfer this experience in other contexts. Teachers' reported behavior was to provide insights into the teaching-learning process in classrooms and the last piece of information was to reveal teachers' goals in his lesson. In addition to teachers' self-reports, as a teacher trainer I knew all the teachers personally and I had observed them during interactive teaching as an integral part of teacher training. I later discussed my interpretations with the teachers. Three descriptions from teacher reports are provided below.

Samples of Teachers' Descriptions of Good Teaching

19 Students of form 3 in a secondary school were learning typewriting. The topic of the lesson was centering of Headings. The lesson consisted of two-way communication. The students were asking the teacher questions and the teacher was asking them questions. The teacher regarded the lesson successful since students were asking him so many questions. They were involved in the learning process.

20 Trade students of mechanical engineering at F.I.T. were being taught a theory lesson. The teacher turned all the teaching points into questions, which he gave to students to answers by observing various machines available in the workshop. The students managed to find the answers to his questions by themselves. Self -learning is better than learning from direct teaching.

The teacher taught 25 accounting students of form 4 in a vocational school. He carefully linked the lesson to previous lessons, clearly presented the new information, obtained feedback, provided supervised practice and summarized the lesson at the end. He found the lesson successful, as most of the students in the class completed their independent work within time and without teacher's intervention. I found that the structure of lesson taught during teacher training does work in practice.

3. Analysis of Teacher Reports

3.1. Context of teaching

Generally these teachers taught various topics from trade level courses mainly conducted at the Fiji Institute of Technology, but a few teachers taught in secondary schools of Fiji. Teachers' descriptions of the context included the name of the school, class name and the number of students in the class and the title of the lesson. There was no mention of student ability and motivation to learn and the availability of the required teaching-learning materials. For me teachers' knowledge of their context as negative and positive forces effecting their classroom work was incomplete, requiring further clarification.

3.2. Effective teacher behavior

To analyse effective teacher behaviour I summarised teacher reports and used Gagne' and Briggs (1974) framework recommended for structuring effective lessons to interpret teacher reports as follows. Teacher trainers at FIT also used this framework in their training.

TEACHER REPORTED BEHAVIOUR IN LESSON PRESENTATION

1) Linking the previous lesson with the present	1
2) Providing complete Knowledge.	1
3) Providing knowledge clearly	7
4) Using two way communication	4
5) Providing guided practice after presenting new information	2
6) Providing adequate structure to lessons.	2
7) Students' independent learning with project work and inquiry-based learning.	2

In the light of Gagne' and Briggs (1974) framework for structuring lessons which I also used in my training programmes these teachers reported to providing for the following events:

1. **Introduction** including opening the lesson to gain student attention, presentation of lesson goals and review of the previous lesson to prepare students for the new lesson.

2. **Development** of the lesson to include presentation of content in small steps with adequate explanation and feedback for each.
3. **Consolidation** of new knowledge, skills, attitudes using homework, supervised class work and project work.
4. **Summary** to provide integration by restating the goals achieved in the lesson.

Only two teacher reports include all the events outlined above. Others reports include parts of the whole structure e.g. review of previous lesson (n=1), clear presentation of content (n=7), use of visual aids for explanations (n=3) and reinforcement of learning (n=2) and so on. See table above.

They did not mention the use of introductions to their lessons, the use of summary, and the use of specific learning objectives in opening and closing their lessons. Student learning objectives were not included in their reported teaching behaviors at all.

The teacher responses clearly show that these teachers were not just transmitting knowledge and skills, they were helping students to learn it and they seemed highly appreciative of student participation in learning. Achievement of planned learning objectives may have been left to students. More importantly, there were individual differences in teacher perceptions of good lessons. They valued specific aspects of the Briggs/Gane framework, probably to suit their personal ability and environmental constraints.

3.3. Criteria used to measure effectiveness

The following summary of the criteria teachers used in this study to assess the effectiveness of their lessons supports Taylor (1970) study. Writing about secondary school teachers in England Taylor (1970) reported, "*an important index for success for teachers is the extent to which their attention commands the pupil attention, awakens his interest, involves his energies and leads him*

to be eager to learn more" (P77). For eleven of these vocational teachers this was also the goal of their good lessons.

REPORTED CRITERIA USED FOR MEASURING SUCCESS

- | | | | | | | | |
|----|---|-----------|-------------|------|----------|-----------|-------|
| 1) | Students | were | busy | with | their | work | |
| | | | | | | | 4 |
| 2) | Students | were | cooperative | in | learning | | |
| | | | | | | | 2 |
| 3) | Students | were | happy | in | their | work. | |
| | | | | | | | 2 |
| 4) | Students asked many questions from the teacher | | | | | | 3 |
| 5) | Students answered teacher's oral questions correctly. | | | | | | 5 |
| 6) | Students | performed | well | in | guided | practice. | |
| | | | | | | | 2 |
| 7) | Students | performed | well | in | a | formal | test. |
| | | | | | | | 1 |

4. My interpretations of the data

The teaching goals inferred from the descriptions of the teaching-learning process seemed to be student involvement in the teaching-learning process (n=12) and clear presentation of content (n=7). Student involvement included a variety of activities such as students asking questions (n=3), participating in discussions (n=2), learning through discovery learning (n=1), engaging in project work (n=1), completing teacher's supervised student practice (n=3) and student involvement in a two-way communication throughout the whole lesson (n=2). Clear presentation of content included clear presentation of subject matter, using visual aids (n=6) and realistic examples (n=1).

The distinction between clear presentation and student engagement in the learning process is not absolute. For example, in the use of questions, discussions, discovery learning and project-based teaching strategies, it is difficult to separate the two categories. Generally it is reasonable to interpret

that teachers' goals were student involvement in the teaching-learning process with a clear presentation of content. This conclusion was consistent with the reports in my previous studies at the Fiji Institute of Technology, Zahoric (1982) and Taylor (1970).

It may not be appropriate to draw any conclusions from this type of data. However, it might be interesting and useful to construct an image of an effective teacher from the viewpoint of these teachers. Wragg (1984) had presented such an image as follows:

There is less dissent about what constitutes effective teaching in discussion between people outside the profession than there is in research and evaluation literature. Good teachers, it is commonly held, are keen and enthusiastic, well organized, firm but fair, stimulating, know their stuff, and interested in the welfare of their pupils.

According to the teachers of this study: *Effective teachers motivated their students to participate in their lessons, knew their subject matter well and presented it to their students in a stimulating and a meaningful way. The achievement of the specific learning objectives was the responsibility of students.*

According to them good teachers do not merely transmit knowledge to their students: they seek student involvement in the learning process. However, they do not report any concern for the achievement of students' learning objectives. Thus the report provided me with an interesting issue in teaching for discussion with the group. Who should be held responsible for the achievement of student learning objective?

According to my professional judgment as an advisor in curriculum and staff development the study validated occasional complaints from industry about the quality of training provided at the Fiji Institute of Technology. If present

teaching practices continued at FIT generally, students trained at the Institute might not be able to apply the content learnt at FIT.

5. Discussion

We all tend to understand life from personal point of view. We fail to understand that our lives are interrelated. That is why often policy makers and the public in general are not aware of teachers' contextual difficulties in teaching towards the achievement of planned learning objectives. Often the anticipated goals of good teaching amongst teachers, teacher trainers, curriculum planners and the industrialists are different. For instance, curriculum planners and policyholders regard teachers responsible to achieve specific learning objectives. Teacher trainers expect teachers to structure their lessons adequately as taught in teacher training programmes but they remain oblivious of teacher perspective. In this context this study was
Of paritular interest to me as a curriculum development consultant.

Later the teachers in this study cogently argued that it was unreasonable to hold teachers responsible for the achievement of planned learning objectives without full support from the students, the management, the industry and the policy-makers. They also expressed need for further training to structure their lessons adequately and management support to provide adequate time and teaching materials to finish the prescribed curriculum to adequate depth. Their comments provided me and the management useful information to take the necessary action described elsewhere (Punia 1992).

Appendix 8

Teacher Perception of a Most Successful Lesson

Very little is known about how technical and vocational teachers evaluate their lessons. I want to learn how you evaluate a good lesson. It will help me to improve your present understanding. This questionnaire is designed to enable you to describe your experience without inconvenience. Please describe one of your successful lessons under the following headings.

1. What was the situation?

2. What happened in the lesson? (What did the teacher and/or students do?)

3. What was the effect on the lesson?

4. What have you learnt from this lesson and why?

Thank you.

RSP

Technical Teachers' Perception of Effective Teaching

Skills

The teachers in this study also report student attention control and clear teaching the most important skills in direct teaching. They make no mention of the other skills required to achieve student learning objectives. They seem to be involved in presenting the planned subject matter clearly. They were interested in pedagogical-content-knowledge. Probably students are expected to take responsibility for the achievement of planned learning objectives.

1. Introduction

The previous study captured teachers' perception of an effective/good lesson. This study complements the previous study by reporting on teachers' perception of various teaching skills/competencies involved in interactive teaching e.g. opening a lesson, obtaining feedback and closing a lesson. The term skill as a concept in teaching is not clearly defined both in literature and in practice. For instance, skills used in various Microteaching programs used in teacher training came from various sources.

The concept of teaching skills is associated with the advent of Microteaching, a method developed to train teachers in lesson presentation skills at Stanford University (Bush and Allen 1964). According to this method of teacher training, the trainee was gradually inducted into the task of delivering a complete lesson. The trainee learnt to present a portion of a lesson to a small group of students for a short period of 5-10 minutes. The lesson was micro in class, duration and content. Portions of the lesson were called teaching skills. In the original program at Stanford they identified several skills, which became the basis of many subsequent training programs in the U. K. and the U. S. A. These skills included:

1. Establishing a set,
2. Establishing an appropriate frame of reference,
3. Achieving closure
4. Using questions effectively,
5. Recognizing and obtaining attending behavior,
6. Control of student participation,
7. Providing feedback,
8. Employing punishment and rewards,
9. Setting a model.

According to McKnight (1979), original skills were derived from the principles of programmed learning which was popular at that time. These skills focused on teacher's behavior and were not related to teacher intentions and student achievement in learning. For example, enthusiastic teaching as a skill originated from a set of correlation studies but it failed to produce consistent results in different settings (Zumwalt 1983). Later process-product research attempted to relate teacher behavior to student achievement and teacher thoughts without consistency in findings.

Later Microteaching programs defined skills differently. For example, in some training programs teacher's pleasant smile, pleasant voice, establishing set and achieving closure were called teaching skills. Teachers learnt to imitate and use in their lesson presentations. Some skills were also derived from the analysis of teaching strategies. Independent study packages produced by the Microteaching unit at the University of Lancaster was an example of this type of skill. Some researchers created teaching skills by observing and recording skilled performance of teachers as described in Wragg (1984). Wragg (1984) suggested that skills represent teacher activities, which require skill, intelligence and sensitivity. Although researchers and teacher educators like me defined teaching skills in various ways, little was known about teachers' perception of teaching skills. This led me as a teacher trainer to gather and understand teaching skills from teacher perspective.

At that time many teachers training colleges, particularly in vocational education, taught teaching skills through Microteaching programs. Teachers were later expected to use these skills in classroom teaching in schools in real settings. The Hong Kong Technical Teachers' College and the Fiji Institute of Technology provided similar learning experiences to trainee teachers. The Microteaching programs included the following skills derived from the teacher evaluation instrument used in teacher training:

1. Opening a lesson;
2. Achieving closure;
3. Using questions effectively;
4. Stimulus variation: using visual aids in the clear presentation of content;
5. Demonstrating a skill.

The teacher 'classroom teaching evaluation instrument' used in these institutions included ten skills derived from a framework I designed to structure and present lessons adequately.

1. Opening a lesson.
2. Controlling the pace of a lesson to match student learning.
3. Obtaining pupil participation through questioning.
4. Providing a proper lesson structure.
5. Using clear verbal and non-verbal communication.
6. Use of visual aids to enhance the quality of communication.
7. Using sound Knowledge of subject matter.
8. Use of feedback in two-way communication.
9. Class management in all aspects.
10. Closing a lesson.

These skills were based on the assumption that in vocational and technical education in the Further and Higher Education Sector of education was basically the clear communication of the subject matter and helping students

to learn it. The content of the microteaching programme and the teacher classroom evaluation instrument had never been validated from teacher perspective. I had two objectives in this study:

1. To validate the content of the Microteaching programs and the 'teacher evaluation instrument' in teacher practice in real settings.
2. To capture teachers' perception of teaching skills used in direct teaching in classrooms.

2. Research methodology

I conducted two surveys of teachers' personal observations of effective teaching skills in classroom teaching, one at Hong Kong Technical Teachers' College and the other at F.I.T. These surveys were integral parts of teacher training programs to ensure validity of teacher training. The two surveys show remarkable similarities also a few dis-similarities in teacher reports.

Twenty in-service trainee teachers from Fiji and twenty-seven similar teachers from Hong Kong attending the Technical Teachers' Certificate Courses participated in this study. Most of these teachers came from technical institutes and they taught trade and technician courses with 1-5 years of teaching experience. The usual method of teaching in the institutions was frontal teaching in classrooms.

Each trainee teacher described a critical incident of effective teaching from his or her recent observations. I provided teachers with a copy of the semi-structured questionnaire in **appendix 9** to guide them in describing their observations. Three teacher reports are provided below.

In an afternoon lecture from 1-4 p. m., (22) engineering students were seated in a rather small, hot and stuffy room. The lecturer was a senior- lecturer with many years of experience. He walked into the room looking very fresh and joyful with a few pieces of chalk in his hand. His

appearance lifted the spirit of the entire class. He went through a 3-hour lesson and imparted almost four pages of information without referring to any textbook or handout. By entering looking fresh and joyful, he got the attention of the class. His layout of the class work and smoothness in his presentation kept the class attentive throughout the lesson.

subject matter Knowledge

Eight students in an English technical college were attending a 26-week course for Master Foreign Going Certificate in the merchant navy. The teacher had ten years of teaching experience. The teacher carried no notes or lesson plans but had remarkable knowledge of subject matter. He dictated all notes from his memory. Students admired his ability and classroom discipline was total. He was always ready to answer questions and never needed to refer to textbooks.

Use of visual aids

It was Technical drawing lesson with the first year craft students. The topic of the lesson was third angle orthographic projection of simple machine parts. The teacher was a trained teacher with 5 years of teaching experience. The teacher took out a perspex box and an angle plate. He put the angle plate inside the box. Then he asked a student to come out, gave the student a felt pen and then asked him to draw the outline of the object on the Perspex plate. His tactic impressed me very much because the students could see the outline of the angle plate. Student understood the principle very easily as he could visualize the concept.

Data Analysis

I synthesised the reported information in three ways. First, I made a list of all the skills (see **appendix 10**). Secondly, I classified skills on the list into three categories: subject matter knowledge, teacher personality and pedagogical skills. Generally as a teacher trainer I considered these categories essential for effective teaching. Thirdly, I compared these reported skills with those in Microteaching programs and teacher evaluation instruments (a rating scale) used at HKTTC & F.I.T.

The Reported Teaching Skills: A Summary

<u>Category of skill</u>	<u>Frequency F. I. T</u>	<u>Frequency H.K.</u>
Stimulus variation skills	9	17
Attention control	5	4
Knowledge of subject matter	2	2
Use of personality	2	0
Handling student misbehavior	2	1
Reinforcing skills	0	3

3. My interpretation of teacher reports

There is some evidence to support my personal experience and literature of that period that effective teachers successfully establish rapport with their students, possess and communicate their subject matter successfully to their students. In other words effective teaching depends on teacher's influential personality, knowledge of subject matter and his pedagogical skills.

From the Fiji Institute of Technology two teachers mentioned effective use of personality, two mentioned teachers' mastery of subject matter and sixteen of them reported the use of pedagogical skills including attention control, stimulus variation and handling student misbehavior. From the Hong Kong Technical Teachers' College two teachers mentioned expertise in subject matter and twenty-five of them reported pedagogical skills. The use of personality was not mentioned at all. I am aware of the difficulty of categorizing teaching skills in this way. These three categories are not mutually exclusive. However, this analysis was useful to me to examine the nature of teaching to develop a valid strategy for teacher training.

I interpreted that these results indicated the effects of teacher training, teacher values and contextual influence on their practice. For example, most teacher training programs do not attempt to change teacher personality and knowledge of subject matter. In the Further and Higher Education Sector teachers were recruited on the assumption that they knew their subject matter from previous training and industrial experience and that they had suitable personality for teaching. Most teacher-training programs concentrated on improving communication skills (pedagogical-content-knowledge).

A comparison of the pedagogical skills described by these teachers with those included in the Microteaching program showed that they mainly mentioned the use of visual aids for stimulus variation and to explain content clearly. Only one person from Hong Kong mentioned the use of discussion to open a lesson and two teachers from the Fiji Institute of Technology mentioned workshop

skills. They did not mention two important skills: closing a lesson with a synthesis and 'the use of questioning skill to achieve student involvement in a lesson. How could these results be explained?

My informal and formal observations of many teachers from the Fiji Institute of Technology showed that they rarely attended to proper openings and closures to their lessons. They attributed it lack of time to cover the prescribed content in prescribed syllabuses. As for the questioning skill, in both of these developing countries I found it very difficult to impart this skill to teachers. These teachers had two handicaps. Firstly, they had difficulty in asking questions in English. Secondly, in their cultures questioning was not the usual way to teach and learn in their cultures. I found that vocational teachers being more practical than theoretical people rarely found it difficult to learn workshop skills. Teaching related theory (knowledge) in a meaningful way was their main concern. They found visual aids useful to explain their content better. So these reports did not surprise me.

A comparison of the reported pedagogical skills with the content of the 'Teacher Evaluation Instrument' showed that several skills were missing. Use of feedback, pupil participation through questioning, two-way communication, lesson pace, clear verbal explanations and lesson closure were missing from their reports. One person from Hong Kong mentioned opening a lesson and one of them mentioned logical development of a lesson. Two people from each group reported knowledge of subject matter. One person from Hong Kong and two persons from the Fiji Institute of Technology mentioned class management problems. The rest of the descriptions were mainly about the use of teaching aids to present content clearly and to attract student attention. **So, presentation of content clearly with visual aids was the most frequently reported skill.**

I interpreted that these skills represented teacher's personal concerns in interactive teaching. I assumed that teachers selectively observed and

remembered those skills they needed to develop their pedagogical-content-knowledge . **The teachers in the two institutions seem to be mainly concerned about class management, expertise in subject matter knowledge and in clear presentation of subject matter.** They did not seem concerned about helping the students to learn through questioning, two-way communication, supervised class work, proper openings and closures to lessons. They do not seem to be concerned about the impact of their teaching (Fuller 1969).

I put the above interpretation to teachers from the Fiji Institute of Technology for their explanation. According to these teachers, due to lack of time and teaching materials in the Institute, most teachers were concerned about finishing their syllabuses in the available time and to teach lesson content clearly. They had no time to attend to students' learning difficulties. According to these teachers, environmental constraints prevented them from practicing all the skills taught in teacher-training programs. I was aware of the fact that this explanation may only be a partial explanation of the reality. For example, were these teachers capable of using these skills in ideal conditions? However, I later found from other teachers that most teachers in F.I.T. had difficulty in finishing their syllabuses due to lack of time, appropriate teaching materials and adequate training. So the study provided me with useful information to take action to improve practice.

4. Professional significance of the study for curriculum development and teacher training

It was interesting to find that teacher descriptions of teaching skills matched Wragg (1984) and my definition of teaching skill as a competency. Teachers conceptualised a teaching skill as a components of a lesson including knowledge, skills and affect. They did not learn just behavioural skills through drill and without associated knowledge and attitudes as conceptualized in Stanford University.

There were some mismatches between teachers' perception of important teaching skills and that of the trainers. For example, trainers at the Fiji Institute of Technology considered all skills important to conduct an effective lesson. However teachers involved in this study did not attach equal importance to all the skills taught to them. They seemed to place more emphasis on clear presentation of content and less emphasis on skills involved in being responsive to student learning. Use of visual aids for the clear presentation of content was the most popular skill with the teachers in this study. The study highlighted to me and the management the need to introduce educational technology in making course content more meaningful to students.

Teachers' and teacher trainers' conceptualised teaching goals differently. Teachers in real settings reported to transmitting content clearly to their students when the trainers prepared them to present content clearly and to guide students' in the achievement of learning objectives. The study clearly indicated that teachers were concerned with teaching subject matter, not with student learning due to contextual constraints. I learnt that to improve the existing situation the institute had to address the teachers' contextual problems to enable them to teach to achieve specific learning objectives.

This inquiry proved useful to develop a shared perception of teaching skills amongst stakeholders. More importantly, it enabled me as a consultant in curriculum and staff development to develop a shared vision of the curriculum development problem of FIT amongst teachers, the management and myself as an advisor.

Appendix 9

Teacher Perception of Teaching skills: The Questionnaire

From your recent experience think of the most skilful lesson you delivered or observed. Describe the most important skill or skills the teacher used to make a success of his lesson. Please use the following questions to describe your experience.

1. What was the situation?

2. How experienced was the teacher?

3. Exactly what did the teacher do?

4. What was the effect of his action?

5. What skill did he use to make a success of his lesson?

**Thank You
RSP**

Vocational Teachers' perception of Good Students at the F.I.T

According to the teacher reports in this study good students were interested in learning and they were participative in the teaching-learning process. They attached less importance to student intelligence and prior learning. This study supports the finding of my previous studies that teachers in FIT were concerned with the teaching process aimed at transmitting knowledge, skills and attitudes, not with the outcomes of the learning process.

1. Introduction

According to the teacher reports in the study of the lesson planning problems and the study of post-active evaluation of lesson plans, the success of a lesson plan depends upon a good teacher and a good student. This statement suggests that the value of teachers' lesson planning is curtailed when students are not prepared to learn. It is generally known amongst teachers that the achievement of student learning does not depend upon teachers' good teaching alone. It depends on good teaching and good learning. In this context I explored teacher perception of a good student or a student prepared for learning during their classroom teaching.

A group of trainee teachers participated in the study as an integral part of a training session. We did not define the term a good student for them. We

hoped that an image of a good student would emerge from this inquiry. There was little previous research with similar teachers to illuminate my inquiry problem.

According to Shavelson and Stern (1981), teachers attend to a variety of information about students in planning and carrying out instruction. They further reported that in the majority of the studies, mostly conducted in primary and secondary schools teachers attended to:

Student general ability or achievement, sex, class participation, self-concept, social competence, independence, class behavior and work habits were found to be important (p. 462).

Most of these traits seemed to be related to student personality, academic ability and classroom behavior and work habits. No previous studies had been reported in vocational education in the FE/HE sector to explore teachers' perception of a good student.

At that time the stakeholders in quality of the work of FIT felt that courses conducted at F.I.T. laid excessive emphasis on cognitive and psychomotor goals and affective goals had been neglected. However, very little was known about the affective goals useful for improving the quality of teaching in the Institute. I hoped that this inquiry might also be useful to provide useful information to solve this problem.

2. Research method

Twenty in-service trainee vocational teachers from F.I.T. participated in this study during a training session. Their academic qualifications varied from trade certificate to a degree in an appropriate technical field. Their teaching experience varied from 0-5 years and they mostly taught trade and technician

courses. They were attending the Technical Teachers' Certificate program at the Fiji Institute of Technology.

I collected the data in three stages. Firstly, each lecturer made a list of the qualities of a good student. I combined the Individual lists into a composite list with all the traits reported by the group and displayed the results on the chalkboard. This list is provided below under the heading of the good qualities identified by the group.

Next I asked the teachers to rearrange their lists according to the importance they attached to each item. The most significant item being number one and the least significant being number ten. As a group they identified three items as the most important. Next I took the frequency count for each item. The three items with their frequency counts are given under the next heading.

I was aware of the limitations of this method, which may have a low validity and reliability. To overcome this problem I thoroughly discussed the findings of the study with the teachers as the integral part of teacher training. And later validated the findings with other teachers in the Institute. Yamamoto (1969) had reported a similar methodology he used with student teachers to characterize an ideal pupil.

3. Results of the study

The results are presented in two lists. The first list provides all the qualities identified by the teachers in a random order. The next list offers three qualities with frequency counts identified as the most important by the group.

The qualities of a good student as identified by the group

1. Responsive to teaching.
2. Interested in learning.
3. Punctual in attending classes.
4. With pleasant personality.

5. Has integrity in dealing with others.
6. Shows initiative.
7. With good academic background.
8. With good academic performance.
9. Has willingness to work.
10. Has cooperative nature.

The most frequently reported qualities with their frequency counts

1. Interested in learning.	8
2. Punctual in attending classes	7
3. Responsive to teaching.	5

Interpretation of the data

The random list is very similar to the summary of findings from several studies reported in Shavelson and Stern (1981). This list includes traits about student personality, academic ability and student's class behavior and work habits. This group of teachers regarded classroom behavior and work habits as more important than student personality and academic background. These teachers seemed to be saying that good students were *"cooperative, possessed adequate academic background, but, most of all they had healthy work habits such as regular attendance of classes, interest in learning and participation in lessons."* These teachers were more focused on their classroom teaching and the teaching processes than the outcomes of student learning which were beyond their direct control.

These arguments seemed to be consistent with the researcher's own experience as a teacher and with the common staff room talk about students amongst teachers. Most teachers prefer students with average intelligence but with good work habits. They do not admire students with good academic background but with poor and lazy work habits.

4. Later Discussion on Findings

It was interesting and strange to me to find that these teachers did not attach significant importance to students' general ability, academic performance and academic background. However, during the discussion these teachers argued that students showed interest and cooperation in their lessons only when they were academically ready to learn. They also argued that students who possessed these qualities also performed well in examinations. They also argued that teachers should deliberately promote these traits amongst their students.

1. Implications of the study for practice

This inquiry provided all the stakeholders with useful information for student selection, teachers' teaching and teacher training. Firstly, the findings provided criteria for the selection of students for various courses conducted at the Institute. Secondly, it provided teachers a list of qualities, which might be inculcated in their students to enhance the quality of their learning. Thirdly, teacher trainers were better informed about the training needs of trainee teachers in motivating their students to learn.

This study indicated to me that the teachers in this study were mainly concerned with student cooperation in their teaching but were not concerned with students' achievement of specific learning objectives. Probably due to environmental constraints, learning had become the responsibility of students in the Institute.

The findings of this study were consistent with the findings of other studies indicating teachers' concerns with the teaching-learning process, not with the product of learning. This, pointed towards the likely gap in the teaching-learning process offered at the Fiji Institute of Technology and the expectations of the local industry.

On the whole the study achieved my primary goal of capturing teachers' perception of a good student in FIT. For the teachers involved in this study,

“good students cooperated with them in their teaching by attending classes regularly, showing interest in their learning and participating in their lessons”. It seems to be a very limited yet a practical image of student readiness to learn from a lesson.

