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TEACHERS AS CURRICULUM DEVELOPERS: PREPARING TO IMPLEMENT THE NEW GEOGRAPHY SYLLABUS AT SECONDARY 1 AND 2

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A teacher plays many parts, but in recent months a new role has apparently been officially added to the list of tasks a teacher in Singapore has to undertake. The Ministry of Education (MOE) guidelines for "Teaching the Normal Course" in the New Education System (Secondary) highlights principals and teachers as *curriculum developers*. Subject inspectors have emphasised this role in addressing trainee teachers at IE. Dr Tay Eng Soon, Minister of State for Education and the President, Mr C V Devan Nair, have both stressed the need to treat syllabuses as guidelines and to devise schemes of work which fit the needs of particular school situations and to take the initiative in devising programmes which suit the needs of particular groups of children.

The teacher as curriculum developer is, in one sense, not a new role. All teachers are engaged in curriculum development as they daily make vital decisions in the classroom about what is to be taught and how it is to be taught and evaluated. However, if you ask teachers if they see one of their primary functions to be that of curriculum developer they will quickly respond in the negative. Teachers see the MOE and CDIS as curriculum developers. What we need now is a shift from the centre – from the core to the periphery in organisational terms – and the establishment of a partnership in curriculum development. If the professional three I's for teachers are (as the President says) *independence, initiative and innovation* then teachers have to accept the challenge and the responsibility which go with them. This means, in curriculum development terms, more professional autonomy for individual teachers and greater support by principals and the MOE for the initiating, innovative teacher. Too often we conceive the teacher as a *technician*, implementing official syllabuses with mechanical efficiency and we fail to help them grow in professional insight and independence.

As long ago as 1904 John Dewey wrote that prospective teachers “should be given to understand that they not only are *permitted* to act on their own initiative, but that they are expected to do so and that their ability to take hold of a situation for themselves would be a more important factor in judging them than their following any particular set method or scheme”.

Current developments in Singapore tend to emphasise “teacher-proof” curriculum packages which may pre-select the tasks, content and strategies and even the time to be spent on each activity. This lends support to the notion of the teacher as a technician – a “mere mechanical component in the production process of schooling” (Tanner, 1980).

As curriculum developers, teachers need to propose and discuss with colleagues and subject co-ordinators solutions to a range of professional problems. After all, teaching can be conceived as a problem-solving activity. These problems are likely to focus around:

- 1 How centrally planned syllabuses and schemes of work can be modified and adapted to meet the varying aptitudes and abilities of groups of pupils both across years and within individual classes.
- 2 Which parts of the syllabus to retain and which to leave out if full coverage means inadequate learning by slow learners.
- 3 Which learning strategies are best suited for the brighter students and which for the slower learners.
- 4 How to prepare appropriate curriculum materials, select supplementary material and adapt texts for a variety of competence levels.
- 5 How to devise alternative strategies for remedial situations.
- 6 How to provide “curriculum as experience” – active student participation in the learning process rather than passive reception of secondhand information.
- 7 How to structure appropriate sequencing of concepts and skills.
- 8 How to implement new projects and curriculum packages.

The new Secondary 1 and 2 Geography syllabus will force geography teachers into the role of curriculum developers. This curriculum development is fairly unusual in so far as it

necessitates teachers to adopt both new content *and* new teaching strategies. The new conceptual framework of the syllabus requires a radical reappraisal of methodology; to retain traditional talk-chalk methods in the context of this approach to understanding concepts could prove disastrous.

There are well established routes to the acquisition of concepts but learning for understanding is based on teaching strategies which stress variety in approach and facilitate participation by students in the learning process.

Much of what we present to students in textbook form is derived from someone else's fieldwork and data search. What we have to do is provide opportunities for students:

- to understand these techniques and acquire the skills of data collection, storage and analysis, through first-hand experience;
- to use second-hand data as a resource for enquiry and guided discovery learning, and practical activities;
- to engage in problem-solving and decision-making exercises through group/class discussions, simulations and role playing experiences;
- to learn from a range of audio-visual aids;
- to begin learning from the realm of the student's own experiences, from the environments familiar to them and from concrete examples.

Together with all the new content – concepts and ideas – these teaching strategies combine to create a challenging curriculum development problem.

Teachers need not and should not have to face these problems on their own. Teamwork, co-operative efforts and sharing should be at the heart of the development process: "a problem aired is a problem shared", "two heads are better than one" – proverbial common sense is honoured more in its neglect than in its adoption.

The sharing process can be both personally and professionally threatening. It is not easy for some to express, in a group situation, difficulties, doubts or concerns regarding the teaching of a particular unit or topic.

It is equally difficult for some to share with others their own efforts, inspirations, thoughts and try-outs, feeling perhaps that their own ideas are unworthy of consideration by colleagues. Such should not be the case.

A sharing group need not be large; three or four colleagues within a school, or better still, a group of colleagues from neighbouring schools could meet. Someone needs to take responsibility for convening meetings on a regular basis, and it is essential that the objectives for each meeting are clarified at the outset, and a time limit set for each activity. First comes a careful diagnosis of problem areas; time spent clarifying actual areas of difficulty, and identifying the tasks that have to be tackled is time well spent and can save a great deal of frustration later on. The sharing process helps restore confidence as individuals become aware that they are not alone in their uncertainties, e.g. how can I develop an exercise to help my students differentiate between relative and absolute distance (Yr. 1, Unit 1); what does the syllabus mean by simple instrumentation and computation (Yr. 1, Unit 3); how can I help my group of slow learners develop the idea of stream networks or the concept of settlement growth (Yr. 2, Units 2 & 3)?

After problem diagnosis and clarification of immediate objectives the group is then free to generate ideas using the brainstorming approach – ‘dropping pebbles into the pool’. At this stage it is important to make *no* evaluative judgements on the ideas suggested – remarks like: “that’s a good idea” or “that won’t work” are ruled out of order! Ideas, however tentatively expressed, can spark off thoughts in others who in turn may generate new ideas or develop the original. Provided that there is an atmosphere of frankness, objectivity and co-operation and above all a commitment to contribute and participate by every member of the group, then the sessions should be constructive and productive.

A range of possible solutions will begin to emerge (e.g. similar exercises based on different sets of data; similar sets of data but different kinds of exercises; alternative activities for various levels of student competence; differing approaches to a simulation). Some ideas will be laid aside; others will begin to be adopted by the group for a variety of reasons – because of their apparent feasibility, simplicity, applicability, or because of the persuasive powers of individuals! It is a good idea to encourage

alternative solutions to be taken up at this stage by separate sub-groups; each alternative can then be:

- a) refined, developed or investigated further;
- b) tested out in appropriate settings;
- c) modified in the light of the pilot studies;
- d) brought back for the full group's re-appraisal.

Final solutions are then ready for dissemination in simple duplicated form to other geography teachers. It is helpful to acknowledge the source of the solution so that others can get in direct contact with the originators. There is perhaps a role here for the Geography Teachers Association or the Institute of Education or CDIS to act as a dissemination agent of these school-based curriculum developments. At a later stage it may be feasible to create Geography teachers' centres on a district basis where 'banks' of ideas and materials might be stored in schools.

These self-help workshops should not be too formally structured, but they must be task-orientated, problem-solving, and genuinely sharing groups, who have as their main aim producing the best curriculum solutions for the needs of *their* students.

At present too many teachers operate, in Tanner's analysis, at the 'Imitative-Maintenance' level of curriculum development (Level I); they are concerned with 'keeping the ship afloat', maintaining the status quo and established practice, operating mechanistically, routinely, adoptive rather than adaptive. At the 'Mediative' Level (Level II) teachers act more interpretively, try to improve established practice, are more adaptive, and capitalise on a greater range of resources for curriculum improvement. Self-help workshops fit the 'Creative – Generative' Level (Level III) which stresses diagnosis of problems and the formulation and testing of hypotheses to solve them, a level where teachers "experiment in their classrooms and communicate their insights to other teachers" (Tanner, 1980).

Within the framework of MOE syllabuses and CDIS packages and other published materials, teachers, if they are to regard themselves as professionals and not mere technicians, must exercise independent judgement in selecting curriculum materials and adapting them to the needs of their students.

Geography teachers also have access to a wider range of resources than just themselves. CDIS materials and other published textbooks, workbooks and handbooks, written for the syllabus, form a prime base for study. Curriculum developers in other countries have written material to help pupils learn the same range of geographical concepts and some of this is available at CDIS and IE. The Institute of Education has both textual and human resources available to help contribute to self-help workshops, and teachers who have undertaken the Geography in-service course at IE should now have additional resources to share with others. The Geography Teachers Association is anxious to serve the needs of teachers if their needs are made known to the Association's Secretary*. The CDIS has officers experienced in the production of curricular materials in Geography.

This article has tried to re-state established procedures to help teachers in all subjects (not just geography) achieve success in their role as curriculum developers. Working within the four walls of one's classroom can be a lonely experience – sometimes a frustrating one, sometimes invigorating. Sharing these concerns and these successes can help teachers grow in the confidence of their own abilities to solve curriculum problems. Teachers already have a greater degree of freedom in curriculum matters than they are often willing to acknowledge. That freedom could become a greater reality if teachers accept and adopt teamwork as a basis for self-help curriculum improvement.

* The Secretary of the Geography Teachers Association is currently Mr L Gomez of Raffles Junior College.

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