

6. Curricula & Examinations

(a) Why Costs are High

Under this heading, the main factors that make practical subjects expensive are:

- i) excessive choice of options within individual schools, which leads to low student numbers in particular subjects;
- ii) a mix of theory and manual work that makes poor use of expensive facilities;
- iii) a syllabus that requires schools to buy costly machinery and materials;
- iv) administrative overheads for public examinations that have to be spread over a small number of candidates; and
- v) an examination process that has to place strong emphasis on practical work, which in turn requires complex administration.

In the Caribbean context, the impact of the fourth and fifth factors can be seen by comparing unit costs for Caribbean Examination Council (CXC) subjects (Table 6.1). Only the large entry subjects such as bookkeeping, mathematics and English had reasonably low unit costs.

(b) How Cost-Effectiveness can be Improved

(i) *The Number of Subjects*

When deciding how many subjects to offer, the authorities have to balance two competing factors. On the one hand job opportunities, local relevance, and education in its broadest sense might demand a very broad curriculum with many subjects at all levels; but on the other hand the need to control costs may require some restrictions.

The first step in decision-making is for individual schools to work out costs for individual subjects. This requires estimation of workshop utilisation rates, teacher utilisation rates, and class sizes. All of these are fairly easy to survey.

Table 6.1: Unit Costs in CXC Subjects, 1985

Subject	Entries	Examiners	Direct Cost per Candidate
Bookkeeping & Accounts	12,442	42	\$35.05
Mathematics	28,873	139	36.46
English	37,817	211	38.11
Typewriting	5,362	40	52.20
Food & Nutrition	2,551	17	61.10
Technical Drawing	2,791	11	70.10
General Electricity	915	6	100.30
Woods	870	5	101.20
Home Management	817	4	103.00
Agricultural Science	2,035	19	110.40
Metals	716	5	118.40
Shorthand	545	2	133.70
Clothing & Textiles	718	6	140.00

Taking just the example of workshop utilisation rates, if the authorities found a pattern like Table 6.2, they would be worried. The classrooms and laboratories are well used, but the workshops are poorly used. To improve the situation, they could:

- adapt the workshops (as discussed in Chapter 4) to serve more than one subject, and/or
- try to increase overall student numbers in practical subjects, and/or
- restrict the range of the curriculum, to increase utilisation of workshops for individual subjects.

In this example, the authorities might not save much from *closing* workshops since the facilities have already been built and would probably lie idle. However, calculations can be done in reverse if the authorities are considering an increase in the range of subjects offered, and want to know whether to *construct* a room.

If, for example, they wanted to offer commerce, they would have to calculate (a) the demand that would exist for a specialist commerce room, and (b) the extent to which the new subject would *reduce* utilisation of the existing facilities. They would then be able to decide whether construction of a commerce room would be justified.

Table 6.2: Example of a School's Facilities Utilisation Rates

	Total subject periods in one week	Classrooms/ Workshops Required	Use Factor
Classrooms	167	6	93%
Laboratories	24	1	80%
Workshops:			
Automechanics	12	1	40%
Machine Shop	12	1	40%
Electrical Shop	12	1	40%
Dressmaking/Tailoring	12	1	40%
Food/Nutrition	12	1	40%
Home Economics	11	1	36%
Woodwork	11	1	36%
Metalwork	11	1	36%
Technical Drawing	6	1	36%
Agricultural Science	6	1	20%

Note: Use factors are calculated on the assumption that there are 30 periods in a week.

(ii) The Balance between Theory and Manual Work

If curricula are determined by central examination boards, individual schools have little scope for altering the balance between theory and manual work. However examinations boards themselves, and schools which are less constrained by public examinations, may find it useful to consider the balance.

Once again, authorities would have to consider two constraining forces:

- On the one hand, theory work can be done in a classroom and with larger student numbers. Also, it uses fewer raw materials (gas, electricity and practical materials). As such, unit costs can be lower than for manual work.
- On the other hand, there is a danger of too much theory defeating the whole purpose of the subject. Students *must* do adequate manual work to become properly skilled. Although some theory is essential, it cannot be allowed to become too dominant.

(iii) The Content of the Syllabus

Periodic scrutiny of the syllabuses of practical subjects is always necessary — both by individual schools and by examinations boards. For example, should home economics predominantly teach students how to operate a Western-style home (perhaps with an electric cooker), or should it emphasise local styles (using a charcoal or kerosene cooker)? The decisions taken affect not only the relevance of the curriculum but also its costs. The latter can be reduced if the syllabus emphasises cheap and locally available materials.

(iv) Examination Overheads

Examination boards have to take their own decisions about the breadth of subjects that they can offer. They have to balance the costs against the priorities of the nation. If the latter are sufficiently pressing, they may be able to get a subsidy from the government. If the government is unable to grant a subsidy, the boards may simply have to drop the subjects from their lists.

To avoid the latter, however, there are some ways to improve efficiency:

- small numbers of candidates may be grouped in a central institution for examination purposes;
- local assessors can be recruited to examine pupils in their own areas, and
- project work can be assessed in the schools themselves (and perhaps *by* the schools themselves), to avoid transportation to a central place.

Because practical examinations are costly to run, during times of financial stringency there is a danger of them being cut out altogether. This is clearly undesirable. Abolition of practical examinations might reduce costs, but it would severely damage effectiveness.

Two Examples of Caribbean Examinations Council Procedures

1. Agricultural Science

Amount of Practical Work Required: *School Based Assessment: 25%*
Final Exam: 10%

School Based Assessment:

a) *student performance in the field and laboratory on 21 skill objectives made over the 2-year period of the course.*

b) *3 aspects of Farm Record Books and 1 assessment on Practical Notebook at the end of the 5th term.*

Visiting Assessors: Specialists in agriculture informally moderate teachers' marks by periodically assessing candidates.

Visiting Moderator: A CXC-appointed specialist reassesses candidates' Farm Record Books and Practical Notebooks.

Practical Examination: A written examination. Ten displays are set up. Candidates required to identify specimens visually and to answer questions based on situations presented visually with the aid of photographs, diagrams or live specimens.

2. Shorthand & Typed Transcription

Amount of Practical Work Required: *School Based Assessment: 30%*
Final Exam: 70%

School Based Assessment:

During Term 4, students are given 5 assignments. Dictation and marking done by teachers according to mark scheme provided by CXC.

Teachers' marks and grades for candidates submitted to CXC. The work of a sample of candidates identified by CXC is used in the external moderation of teacher marks.

Marks are moderated against the candidate's performance in the final examination.

Practical Examination:

This is set in 2 parts: a) Dictation: 3 assignments varying in length and speed.
b) Transcription of the dictated passages.
