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DEVELOPING COURSES IN THE BEHAVIOURAL AND SOCIAL SCIENCES FOR MEDICAL STUDENTS: NEW PROSPECTS FOR AN OLD PROBLEM

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INTRODUCTION

Medical schools throughout the world are now including courses in the social and behavioural sciences for their students. These courses, like all others in the medical curriculum, vary qualitatively and quantitatively: some medical schools provide for an extensive and deep coverage of these subject-areas [2], beginning them in the first year and continuing them throughout the whole of undergraduate studies. Other medical schools make little more than a genuflection towards these subjects and attempt to do no more than provide "mini-courses" in, say, Psychology, Sociology and Anthropology.

One writer has captured the mood of the times quite clearly (*cf.* Bloom, 1965). He affirms, cogently in my view, that the early years of this century, particularly under the impact of the Flexner Report,

> saw the full wedding of the basic biological sciences to the medical curriculum. ... we are experiencing today a joining of the sciences of psychology and of social behaviour to medical education that compares with the events of sixty years ago (*Ibid.* : 15).

There is every reason to expect that this trend towards the inclusion of the social and behavioural sciences will accelerate, and this has and will continue to raise problems and difficulties for all the inhabitants of medical schools.

When a medical school makes a major alteration to its curriculum by incluiding a new course of studies, or changes its priorities governing the choice of course content – and the inclusion of the social/behavioural sciences implies both of these changes – then repercussive effects, questions and divisions of opinion will nearly always occur. Inevitably, questions such as the following will arise: "Why should we change the curriculum at all?" "What value are studies in these sciences for medical doctors?" "How much time and resources should be devoted to studies in these areas?" "Should we create a separate Department or graft them on to an existing structure?" And, possibly the most explosive, practical question of all: "Who is going to give up some of their curriculum – time — or are we proposing to lengthen the medical school course?"

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2) There is no universal agreement as to precisely which subjects are included in the concept of the Social & Behavioural Sciences, but I would certainly consider aspects of the sciences of Anthropology, Economics, History, Psychology and Sociology to be relevant to medical studies.

All of the above questions are generators of friction in a medical s
and they often generate (degenerate into ?) more heat than light. However,
are at our disposal methods of curriculum design which permit quasi-rat
(as opposed to *ad hoc* and random) decisions to be made. In recent years atte
have been made to state curriculum content in terms of "instructional ob
ives" (*cf.* Mager, 1962), and this approach is increasingly being applied t
context of medical education (*cf.* Blizard, 1976abc; Blunt, 1976; Hickie, 19

This paper will briefly describe the ideas inherent in the formula
of "instructional objectives", and will then explore some ways in which
approach to curriculum planning and design might fruitfully be applie
the design of curricula in the social and behavioural sciences for med
students. The principal aim of this paper is to help teachers perceive the n
to acquire some curriculum planning skills so that they are then in a posit
to develop *selective* and *relevant* courses in the social and behavioural scienc
for it is perfectly plain that it should *never* be our purpose to try to tea
medical students *everything* about Psychology, Sociology or Anthropology – t
would be as absurd as trying to teach them *everything* about Anato
Biochemistry or Paediatrics; and, if we cannot teach them *everything*, th
we have to be *selective*.

Instructional objectives have as one of their explicit purposes that
the development of a selective, relevant and integrated curriculum.

WHAT ARE "INSTRUCTIONAL OBJECTIVES"?

The available literature on instructional objectives is large[1] and threa
ening to become vast! Many aspects of the *construction*, and more significantl
the *uses* to which objectives can be put, remain unclear. Their philosophica
implications remain largely unexplored. But there are some crucial aspect
which are clear and explicit, and these can be put in terms of the followin
three propositions:

First: Objectives can be stated at a variety of levels varying from the "very
general" to the "quite specific", and, in general, the more specific
objectives are, the more helpful they will be. We can, for example state
objectives for the whole of a Faculty of Medicine: these, necessarily
will be general. We can also state objectives for a School or Depart-
ment: these too will be general, but less so than those for the whole
of a Faculty. Finally we can state objectives for particular aspects of a
course of studies within a school or a department – these should be
explicit and unambiguous.

Naturally there should be direct links between these three levels of
objectives. Those at the faculty level should guide the departments
in their choice of objectives: those at the departmental level should
provide an explicit framework for what both included in and excluded
from the curriculum.

1) See References for details.

d: Stating instructional objectives (at all three of the above levels) can be expected to yield a number of benefits in curriculum design, implementation and evaluation. Instructional objectives:

(i) Enable teachers to agree *in advance* as to the *basic skills* they wish to help students develop – and teachers can thus choose a curriculum which fosters these skills.

(ii) Can bring about the possibility that the teaching staff in a school or department are all proceeding in the same direction on the basis of known and explicit assumptions – but this can only occur if *all* staff are involved in the construction of the objectives in the first place.

(iii) Materially assist in the development of vertically and horizontally integrated curricula, since if all (or most) departments in a medical school have defined their objectives, then it is possible to see where the different components fit together and reinforce one another.

(iv) Finally, and of ultimate significance, statements of objectives *at their most specific level*, precisely because they enable teachers to develop *selective curriculum*, seem to enable students to learn *more effectively* (selectively?), to *retain* what they have learned for a longer period of time, and, possibly to apply what has been learned to the practice of medicine (*cf.* Blunt & Blizard, 1973; 1975)[1]. In sum: instructional objectives can, if carefully constructed and wisely used, bring a number of clear-cut advantages[2] to curriculum planning and to the processes whereby students acquire, retain and are able to use significant skills.

hird: Instructional objectives at their most specific level (*i.e.*, that of a part of a course of studies) should conform to a number of quite explicit criteria:

(i) They should reflect a *basic skill* which students need to acquire.

(ii) They should be stated in terms of *observable, measurable behaviour*, in order to enable teachers *and* students to determine whether, or the extent to which the skill has been acquired.

(iii) They should be *clear and explicit*, and ambiguity should be kept to a minimum or, better still, eliminated altogether.

(iv) They should be *relevant* (in this case to the practice of medicine), for there is little point in having an objective which is a "basic skill", is "observable and measurable", is "clear and explicit" but is not relevant to later performance.

(v) Finally, objectives should be *feasible* – *i.e.*, capable of being achieved by most students, given their abilities and the available facilities.

1) It is by no means clear whether it is the presence of instructional objectives which facilitates learning, or whether other equally important variables are at issue. It certainly seems highly probable that if the objectives are carefully stated, then this enables students and teachers to choose more *effective* and *relevant* methods of learning.

2) Statements of objectives also contain dangers and disadvantages. Sometimes they focus on the *trivial* to the exclusion of that which is significant (*i.e.*, relevant). Some dangers are briefly discussed later.

Thus far, the discussion has been largely academic, in that no actual examples of instructional objectives have been provided. Furthermore a number of rather important claims have been made on their behalf – *viz.*, that they enable staff to choose curricula content more rationally, and that they in turn enable students to acquire and retain what they have learned more effectively [1]. This omission will now be remedied and this approach to the planning of courses in the social and behavioural sciences for medical students will be considered [2].

THE POTENTIAL OF INSTRUCTIONAL OBJECTIVES IN THE PLANNING OF COURSES IN THE SOCIAL AND BEHAVIOURAL SCIENCES FOR MEDICAL STUDENTS

This section of the paper will attempt to clarify three important questions regarding the contribution of the social and behavioural sciences to the education of (future) doctors, and to the planning of those courses.

1) To identify some of the *basic skills* inherent in the social and behavioural sciences which are *also* basic skills for the practice of medicine.
2) To identify possible Departmental and Instructional Objectives in terms of these basic skills – here we aim to provide *examples* and not an exhaustive statement.
3) To bring out into the open some critical issues in the planning and design of courses in the social and behavioural sciences as these relate to the needs of medical students.

WHAT BASIC SKILLS ARE INVOLVED?

Two assumptions underlying this paper are that the social and behavioural sciences *can* help students develop basic skills, *and* that some of these basic skills are useful to (future) doctors. If either of these assumptions could be shown to be false then there would be *no* case for the inclusion of these studies in an already large medical curriculum. These assumptions will be tested against examples. In a recent study (*cf.* Blizard & Alexander, 1976), following on earlier work (*cf.* Price *et al.*, 1971) an attempt has been made to identify many of the basic skills required by a doctor who is destined to practice medicine in a "front-line" "low-technology" context. A similar approach has been taken to our present problem, and in TABLE 1, below, an attempt has been made to isolate some of the basic skills in the social and behavioural sciences and which are relevant to the practice or medicine.

1) Some evidence exists to show that courses based on explicit objectives enable students to learn and retain what has been learned for a longer period of time (*cf.* Blunt & Blizard, 1973; 1975). In addition another study has shown that courses in Physics and Chemistry, not based on clear objectives have a very low "half-life of retention" (*cf.* Blizard, Carmody & Holland, 1975).

2) The approach described in this paper could also be applied to courses in the social & behavioural sciences for Nurses, Physiotherapists, Occupational Therapists (etc.), though that has not been attempted.

TABLE 1.—Some basic skills required by doctors which can be assisted to develop through relevant studies in the social and behavioural sciences.

Section I : Clinically Useful Skills

1) Recognising and being able to respond effectively to emotionally & psychologically-induced illness.
2) How to secure information from a hostile, distraught, upset or uncooperative patient.
3) How to manage and help with the emotional difficulties of the very sick or dying patient, and the needs of that patient's family.
4) Skill and ability in adapting to and being at ease with persons who by behaviour or appearance are threatening (*e.g.*, some alcoholics, drug users, mentally ill persons etc.),
5) Skill in being able to understand, evaluate & alleviate patient's anxieties & apprehensions about illness and treatment.
6) Skill in being able to apply effective communication between people, verbal & non-verbal & to use these skills as a doctor.
7) Skill in understanding the social, cultural & behavioural factors which determine people's responses to the onset of illness, the presence of pain, & cooperation in treatment.
8) Comprehension of the social factors wich produce disease, & of the effects of disease on the processes of social behaviour in, say, the family.
9) Understand patient compliance & non-compliance and to bridge the gap between what the doctor instructs and whether patients follow those instructions.
10) How to, and the need for, sufficient sympathetic listening to a patient's problems *from the prespective of the patient.*

Section II : Managerial & Teamwork Skills

1) How to work & communicate effectively with others in the health team so as to secure their full cooperation.
2) How to enable doctors to work effectively with small groups of people in teaching, learning or research.
3) How to collect, analyse & evaluate statistical & epidemiological data in relation to the diagnosis of health problems in an area or a community.
4) How to use individual or aggregate clinical records as a tool in diagnosing *community health.*

Section III : Preventive Health Care

1) Methods of actively involving both individuals & the community to take more responsibility for their own health care.
2) Methods for helping doctors to understand the "lay" and "folk" definitions of illness, how these differ from "scientific" definitions, & to use these definitions in diagnosis & treatment.
3) Acquisition of a theoretical understanding of human behaviour as a basis for application to the management of illness in individuals or communities.
4) Ability to assist in the planning, design & implementation of programmes to cope with specific, preventable diseases.

TABLE 1.—Continued

5) How to identify "high-risk" individuals & groups living in the vicinity of a health centre.	6) How to identify the most appropriate "target-audiences" for a specific health education programme.
7) Understanding of selective aspects of how people's attitudes & behaviour change, *and* an ability to apply this to the provision of health education programmes.	8) Understanding of the factors which motivate people to change their behaviour in relation to the promotion of health & the prevention of illness.

The list of skills in TABLE 1 is not intended to be exhaustive, but illustrative. It is quite possible that other basic skills could be added to the list. In the next section we will *use* the contents of TABLE 1 to develop a possible set of Departmental Objectives, and illustrative instructional objectives, but before doing so one or two important disclaimers ought to be made.

It is certainly *not* claimed that our "hypothetical department of behavioural and social science in relation to medicine" could help all students to acquire *all* of the skills enumerated in TABLE 1 – some would have to be included and others left out, for that is what is meant by a "selective curriculum". In some cases even if it was decided to include a skill, student's ability in acquiring, retaining and using that skill would be far from complete for the very simple reason that understanding, in the behavioural sciences, is often at very crude and rudimentary level – a case in point would be our understanding of the nature of "human motivation" and its impact on health and the avoidance of illness. Neither is it being claimed that our "hypothetical Department" has the sole responsibility within the medical school for the development of the type of skills illustrated in TABLE 1. On the contrary, such a course of action should be explicitly *avoided*. In helping students, for example, to come to terms with, and effectively respond to hostility, aggression, defensiveness, fear and apprehension, in clinical situations it would be hoped that this was the *joint responsibility of all clinicians together with staff in the School of Social and Behavioural Sciences*.

In relation to the content of TABLE 1 readers are requested to ask themselves a series of fairly plain questions :

(i) Are the skills shown in that TABLE important for practicing doctors ?

(ii) Which of them are "important" and which of them "highest importance"?

(iii) In your present medical curricula are students assisted to acquire these skills in TABLE 1 which you think are important ?

(iv) Can social and behavioural scientists help students, in conjunction with others in the medical school, to acquire these skills ?

If the reader answers "yes" to these questions, then we have cleared up, at least to some extent, two important matters. We have established that the social and behavioural sciences *do have* an effective place in medical training. We have also started to *clarify and specify* what that place might be,

place might be, and this has been achieved by stating some basic skills inherent in the social behavioural scientists and needed by practising doctors. Let us now take the next step and see how these basic skills might be used as a framework for developing a coherent course (or set of courses) based on carefully – stated instructional objectives.

DEVELOPING DEPARTMENTAL OBJECTIVES, CHOOSING COURSE CONTENT, AND WRITING INSTRUCTIONAL OBJECTIVES IN THE SOCIAL AND BEHAVIOURAL SCIENCES WHICH ARE SUITABLE TO THE NEED OF MEDICAL STUDENTS

The preceding section of this paper identified (some of) the basic skills needed for the effective practice of medicine; some of these skills related to the practice of clinical medicine, some to the ability to work effectively as a member of a health team, and some to the ability to provide effective preventive medical care. It was then suggested that an understanding of aspects of the social and behavioural sciences might help students to acquire, retain and be able to use these basic skills. In this section we will "translate" these basic skills into a (possible) set of Departmental Objectives for a social/behavioural sciences' department within a medical school, and provide *examples* of the type of course content which would be needed to enable students to fulfil the departmental objectives: this course content will be stated in terms of observable, measurable and hopefully relevant instructional objectives.

DEVELOPING A SET OF DEPARTMENTAL OBJECTIVES : *All* the members of staff of a department should participate in the construction of "their" Departmental Objectives. This is so because all members of staff will be required to assist in the development of the teaching programme: and this teaching programme has to be based directly on the departmental objectives. The set of Departmental Objectives which finally emerges will help your department in three distinct ways :

(i) It will enable you to choose and select the most relevant course content – and this is very important in the area of the social and behavioural sciences since the volume of potential course content is immense, but only some will be relevant to the needs of future doctors.

(ii) It will provide for a unified sense of direction and purpose within Department – *i.e.*, all of you are proceeding towards *known and agreed objectives*. Again, this is of particular importance in the social and behavioural sciences because, often, these studies are spread over several years of the medical course, and as a consequence it is often difficult to coordinate the course content of one year of study with that of subsequent years. The aim should be to develop a course which is *cumulative* in its impact.

(iii) These objectives should enable you to integrate your curriculum with that of other subjects to which it is closely related. This potential benefit is also of particular importance to studies in the social and behavioural sciences, because these studies will "feed into" many other aspects of the medical school curriculum. Ideally, as noted, the teaching of the social and behavioural sciences should be a collaborative venture, parti-

cipated in by most members of the medical faculty. It goes without saying that the Departmental Objectives should be as realistic and as practical as possible. It is with these considerations in mind that the following set of Departmental Objectives (TABLE 2) is suggested:

TABLE 2.—A possible set of Departmental Objectives in the social & behavioural sciences as related to the need of medical students.

At the conclusion of courses in the Social and Behavioural Sciences, medical students should be able to:

1) **Comprehend** selected basic consepts in the social and behavioural sciences, in order to apply this to the diagnosis and management of illness in individuals, to the prevention of illness in individuals and groups, and to the promotion of health in the community.

2) **Demonstrate** that they have acquired a capacity to respond effectively ands ensitively to the biophysical, social and emotional needs of individual patients under their care.

3) **Display** an understanding of the social and cultural factors which affect an individual's responses to the presense of illness in order to apply this to:

   (i) The analysis of the behaviour of sick persons from different social, cultural, religious and educational backgrounds;

   (ii) An understanding of the impact of illness in an individual and its effects on the family;

   (iii) An understanding of the willingness of individuals, and groups of individuals, to take responsibility for improving their own health.

4) **Develop** a frame of reference for understanding the processes of "medical socialisation" whereby a 'person' is converted into a 'doctor' in order to be able to apply an understanding of the 'role of a doctor' to:

   (i) Assisting individuals and groups to become more health-conscious;

   (ii) Helping individuals and groups to be more self-reliant concerning the prevention of illness and the promotion of health;

   (iii) Diminishing undesirable "passive-compliant" behaviour by patients; and

   (iv) Comprehending the key differences between "lay" and "scientific" definitions of health and illness, in order to provide for more effective management of patients urder his care.

5) **Display** a capacity to work effectively with other members of the health care team, and with patients and their families, in the povision of curative care, preventive care, or the promotion of health.

6) **Recognise** the often tentative nature of evidence and conclusions in the social and behavioural sciences, and demonstrates a capacity to make decisions on the basis of limited evidence and under conditions of uncertainty.

TABLE 2.—Continued

7) **Demonstrate** a familiarity with some of the outstanding contemporary unresolved problems in the social and behavioural sciences as these relate to:

   (i) The organisation and delivery of effective medical care;

   (ii) Hospitals as "social institutions"; and,

   (iii) The changing roles of professionals in the health sciences.

It would not be desirable to discuss this set of objectives (or each one individually) in any detail. They have in any event only been presented as an *illustrative example* of what a *possible* set of objectives might look like. However two relevant comments can be made, not about the objectives themselves, but their formulation. *First,* it should be made quite explicit that a set of Departmental Objectives represents a set of *value judgements* – in this particular case they represent the value judgements of the writer, and others he has spoken with, concerning the "most significant" contributions that the social sciences might have for the preparation of doctors. Not merely do they represent a set of value judgements, but they also represent a set of priorities – *i.e.,* some (possible) objectives are thought to be more important than are others, thus they have been included and those of lesser importance excluded. *Second,* with particular reference to the set of objectives in TABLE 2 an effort has been made to indicate where a "theoretical aspect" of the social sciences might help medical students – thus the objective was not formulated as to "display an understanding of the social and cultural factors which affect an individual's responses to the presence of illness" (No. 3), but explicit guide-lines were then added as to how this understanding might then be applied. These additions make the statement of Departmental Objectives a little more complex to write, but they at the same time help teachers to be more selective regarding subsequent choice of curriculum content. Let us now take the next step, and see how a set of Departmental objectives might help in choosing a selective curriculum, and stating that curriculum in terms of instructional objectives.

CHOOSING COURSE CONTENT AND CONSTRUCTING INSTRUCTIONAL OBJECTIVES: The necessary sequence of operations in choosing course content & working Instructional Objectives can be rather simplistically seen as falling into three parts:

(i) *Choose* the course content needed to help implement each of your departmental objectives – because of ready familiarity (by teachers) it is probably convenient to state this content in terms of "topics of study".

(ii) *Express* each topic of study in terms of one (or more) "General Instructional Objectives", and an associated set of "Specific Instructional Objectives" (*cf.* Blunt, 1976; Gronlund, 1970).

(iii) *Carefully select* those methods of learning which are likely to be most useful to students in helping them to achieve the objectives; in this section we shall look at the first two of these steps primarily. This

will be done by taking one of our Departmental Objectives, identifying the "topics of study" that might properly fall within the compass of that objective – and, once again, we cannot choose *all the possible* topics, but have to be selective.

Following this procedure one of these topics will then be expressed in terms of sets of illustrative objectives. Some comments on the formulation of instructional objectives, and some difficulties which might be encountered, will then be offered.

TABLE 3, below, re-states one of the Departmental Objectives, identifies a possible set of "curriculum packages" or "topics" of study, and then takes one of these "curriculum packages" and expresses it in terms of a General Instructional Objective (G.I.O.) and an associated set of Specific Instructional Objectives (S.I.Os.); in presenting the data in this way it is hoped that readers are able to appreciate the descending linear arrangement, which moves from a general statement – the Departmental Objective – and gradually becomes more specific.

TABLE 3.—Departmental Objectives, a set of curriculum packages, and illustrative examples of instructional objectives for aspects of a course in social & behavioural sciences for medical students

Departmental Objective:

"DISPLAYS" an understanding of some social & cultural factors which affect an individual's responses to illness, in order to apply this to . . . (No. 3, TABLE 2).

Possible curricular content (*i.e.*, curriculum packages):

a) Commonalities & differences in child rearing across selected cultures.

b) Differences in permissable social interaction between cultures.

c) Changes in the demography of illness among migrants.

d) Health practices and "at risk" status, among different groups in community.

e) Culturally-determined conceptions of health & illness.

f) Cultural differences and responses to "pain" and the onset of illness.

g) Difficulties in interviewing persons from different socio-cultural groups.

h) "Educational status" as a variable in connection with health & illness behaviour.

i) "Illness" and alterations in social perception.

j) Personality factors & causality of "delay in treatment seeking" behaviour.

General objective package (g):

COMPREHENDS some of the major sources of difficulty in interviewing persons from different cultures, of different social groups in order to develop an effective repertoire of responses to minimise these difficulties.

TABLE 3.—Continued

SIOs:

a) STATES types of miscommunication and misunderstanding that may arise through differences in language, level of education, and cultural origin, between doctors and patients.

b) PROVIDES as to the social, cultural and psychological origins of misunderstanding and miscommunication between doctors and patients.

c) PREDICTS the difficulties in communication & understanding which might arise with:

(a) A newly-arrived female Batak migrant primigravida and her Obstetrician ;

(b) Counselling two Indonesian-speaking, poorly educated parents concerning the managements of their intellectually-handicapped child ;

(c) Counselling two English-speaking, university trained parents regarding the management of their newly-born first child who is diagnosed as being "Down's Syndrome" ;

(d) Advising an non-Indonesian speaking, well-educated male, regarding his continued management for hypertension.

d) STATES the strategies that he would use to minimise the difficulties in communication enumerated in SIO (c) above.

e) IDENTIFIES ways in wich he might help the patients described in SIO (c) to communicate more effectivelly with doctors as to their medical and emotional needs.

The examples of Curriculum Packages and Instructional Objectives are, like the Departmental Objectives which were described earlier, regarded as *illustrative* and not, of course, as *prescriptive*. Once again it is not proposed to comment on either the packages or the set of objectives in any detail, but it is of importance that some brief comments on these objectives (and some of the difficulties involved) should be offered. These involve the following considerations:

First: The reader is asked to look carefully at each of the SIOs in TABLE 3 and ask himself the following questions:

(i) Is each of the behaviours stated *as clearly and as explicitly as possible?*

(ii) Is each SIO stated in terms of *observable behaviour?* Can students' performance be accurately assessed *and measured?*

(iii) Is each of the SIOs *relevant* to the student's *subsequent practice of medicine?* Are the examples of patients in the SIOs "too esoteric"? Could *more apt and commonly-occurring examples* of culturally-determined "miscommunication" between doctors and their patients have been chosen instead?

(iv) Is it *feasible* to expect students to achive these objectives?

If the reader can be fairly confident regarding a positive answer to these four questions then an appropriate set of specific instructional objectives has been produced?

Second : The set of specific instructional objectives in TABLE 3 is not, of course, exhaustive – that is, no attempt has been made to include all possible forms of culturally – determined miscommunication and misunderstanding between doctors and their patients, neither is it necessary to attempt an exhaustive list. Your sets of SIOs – like the Departmental Objectives, the General Instructional Objectives, and the Curriculum Packages – should all be selective. The departmental objectives, packages and GIOs *limit the width* of the curriculum and the SIOs establish *a limit on the depth of treatment* of a particular package, for there is little point in being selective as to "width" or extent of coverage, if one is not at the same time equally selective as to depth of coverage. As regards the question of "how many" SIOs should there be for a General Instructional Objective no completely satisfactory answer can be given, but two guide–lines might be appropriate.

(i) The "more important" (basic ?) the curriculum package the greater the depth of coverage that will probably be required.

(ii) It may be helpful to conceive of a set of SIOs as constituting "overall evidence of a general competency".

Thus, having constructed the GIO, the teacher would then ask a rhetorical question – *viz.*, what, in the aggregate, are the competencies that I would expect students to display to demonstrate that they have met the requirements of the General Objective at a *minimally* acceptable level of performance ? These competencies would then constitute your set of Specific Instructional Objectives.

Third : Having constructed your Specific Instructional Objectives, the task is not yet finished. You still have to select optimal ways of helping students to acquire the skills – that is, you have to *choose methods of teaching and learning* (the latter being far more significant than the former) *relevant* to the objectives. Taking the instances cited in TABLE 3, what types of experience might be relevant to helping students to "*State* and explain common forms of miscommunication", or "*Predict* the specific types of communication occuring under certain stated circumstances" or "*Counselling* patients as to ways of minimising particular types of miscommunication" (etc.) ? The possibilities are virtually limited only by one's imagination, but would probably include :

(a) Reading books, articles and other relevant background information ;

(b) Making and using video–tape recordings of doctors in interaction with patients from cultural or social groups other than their own ;

(c) Discussions and interviews with practising doctors as to the difficulties they experience, and the ways in which they go about resolving or reducing the impact of those difficulties – particularly as they relate to accurate diagnoses, and an ability to explain to patients the "Why's", "How's" and "Wherefore's" of their medication and treatment ;

(d) Practice interviews, using role–playing, by students with either other medical students, or with students from other faculties who come from different social and cultural backgrounds. These are only a few of the possibilities, and I am sure that readers can think of others that are equally, or of superior relevance. *Relevance* is the key point in choosing learning strategies – they should be those most relevant to the development of a predetermined set of specific skills.

Fourth : Stating Specific Instructional Objectives is probably more difficult in some subjects than others. In Gross Anatomy, for example (*cf.* Blunt, 1976) the task is a very challenging one, but also in some respects it may be a simpler one. The information base in Gross Anatomy is both *known* and *more precisely identifiable.* Thus, in relation to a General Objective which calls for the student to "*Comprehend* the disposition of the peritoneum in relation to the viscera and body walls", appropriate specific instructional objectives might be :

(a) *Depicts* the disposition of the peritoneum in the saggital section and in the horizontal sections through the hilus of the spleen, the epiploic foramen and the pylorus ; or,

(b) *Defines* the differences between the modes of innervation and pain sensibility of visceral and parietal peritoneum (etc.) (*cf.* Blunt, *Ibid.* p. 9).

The social and behavioural sciences, obviously, are not nearly as well mapped as is Gross Anatomy ; the data base of the social sciences is much less well–understood ; the quantum of information (and misinformation !), the predictive capacity of theories which are currently in use, all testify to vast areas of ignorance. It seems to the writer quite likely that there will be a very direct relationship between the volume of certain knowledge available in a field of scientific enquiry and the subsequent ability to identify genuinely specific instructional objectives – and, as much to the point, instructional objectives which are of a significant and not of a trivial nature. In the areas of the social and behavioural sciences this makes the task more difficult, but at the same time more challenging.

In this section of the paper I have attempted to move down from the general and rather rarified atmosphere of Departmental Objectives, and have concentrated attention on how sets of curriculum packages might be developed, and then devoted some attention to a set of examples of Instructional Objectives, both general and specific. This process of constructing the Instructional Objectives would then need to be undertaken in relation to all of the curriculum packages that go to comprise the course(s) in the social and behavioural sciences' curriculum. Finally some attention has been devoted to the need to then identify appropriate ways by which students might be assisted to reach these objectives, and to one of the principal difficuties in formulating objectives in the social and behavioural sciences. Now, in the final section of this paper we will examine a few of the critical issues that seem to arise in relation of social and behavioural sciences' courses for medical students. These comments will be brief as this is an area of thought that has already received a great deal of attention in the last few years (*cf.* Olmsted & Kennedy, 1972).

SOME CRITICAL ISSUES CONCERNING THE TEACHING OF SOCIAL AND BEHAVIOURAL SCIENCES TO INDONESIAN MEDICAL STUDENTS

The previous sections of this contribution have sought to identify content areas in the social and behavioural sciences which might be thought to be relevant to the needs and interests of future medical practitioners in the Indonesian context. While it is true that there are a number of "critical issues" surrounding the choice of course content, that by no means exhausts the range of problems that have to be confronted. Some of the problems in the Indonesian context are those which to a greater or lesser extent afflict all developing countries; other problems relate to the methods of teaching and learning which are used; others concern the need to integrate the content in the social and behavioural sciences with other aspects of the medical school curriculum. In this section I have *not* set out with the intention of both identifiying and attempting to suggest relevant solutions to all of the problems which arise when a medical school is planning the introduction of a new set of course in a medical curriculum. Instead I have merely tried to identify the more immediate and important problems as I presently see them. These are as follows:

First: Obviously it is necessary to develop courses in the social and behavioural sciences from an adequate data-base. In practice this mean ensuring:

(a) That adequate reading materials are available concerning the key theoretical and practical aspects of Psychology, Sociology, Anthropology, etc.

(b) That studies are based on research data which are relevant to the Indonesian context.

Neither of these requirements exist at present: reference materials in the social and behavioural sciences are (almost without exeption) poor-and in relation to their application to Medicine, virtually non-existent; very little locally-based research is being carried out.

The latter point is, of course, quite crucial. While it is quite feasible to "import" course content in, say, Anatomy, Physiology and Paediatrics – this is a much more hazardous and risky procedure in the social and behavioural sciences, precisely *because* they deal with culturally – determined variations in human behaviour. There is no short-term solution to this problem, since you can hardly generatea a valuble body of locally-relevant material in a short period of time. One long-term measure that would be useful would be to centre a considerable volume of the content of courses around the *collection* of locally-relevant data, around the analysis of these data and systematic testing of hypotheses. The preceding set of Departmental Objectives will immediately suggest some of the priority targets for local research. In this way it would be possible over, say, a ten-year period to develop a useful body of information. It would have the added advantage of providing both teachers and students with practical research experience as opposed to the "second-hand" experience gained from books and journals.

Second: It will be imperative to develop ways and means of *integrating the teaching of the social and behavioural sciences* with other aspects of the medical curriculum (both vertically and horizontally), with the needs of the community, and ultimately, to integrate the training that medical students receive in these areas with the training that students in the para-medical sciences receive. These three facets of integration all pose their own difficulties.

Curriculum integration is currently in "high focus" within Indonesian medical education, both within individual medical schools and on a national basis: because of this there is some reason for hoping that content in the social and behavioural sciences could be inter-digitated with other, relevant features of the curriculum. Once again the earlier statement of Departmental Objectives suggests a number of immediate possibilities - *i.e.*, in relation to health education concerning preventable paediatric, dental, ophthalmic and obstetrical diseases and disorders; in relation to the doctor-patient relationship; in relation to the acquisition of skills in the area of Public Health and Community Medicine.

Community-based integration poses challenges which are currently being faced by many other department in Indonesian medical schools. Partly as a result of recent changes in Government policy medical education is now seeking to re-fashion a curriculum which emphasises *prevention* as well as treatment, which emphasises common as opposed to esoteric diseases, and which emphasises the delivery of effective medical care to the "rural many" as opposed to the "urban few". In practical terms this means that the content of such courses as Paediatrics, Obstetrics and Gynaecology, Ophthalmology – indeed all of the clinical subjects – will be emphasising the social and preventive aspects more than has been the case so far. In this sense now would be a very appropriate climate in which to also introduce the social and behavioural sciences, since it would be equally evident that they too need to take the community as their starting point. This of course is implicit within the previous remarks concerning the need for local research.

Inter-professional integration also poses its own set of challenges. In many Western countries it is now common to find nurses, medical students and other health professionals educated together. This is still quite uncommon in Indonesia (and possibly in other developing countries), probably because of the differences and status-gaps existing between the health professions. It should be readily evident that the social and behavioural sciences have a great deal to contribute to the effective functioning of, say, a health team; but this promise can only be translated into reality if various members of the health teams receive at least some of their professional training together.

The three aspects of "integration" refered to above each require urgent attention, and each pose special problems for staff and students in medical schools.

Third: It is necessary to spend a great deal of effort and time at working out a selective, integrated and relevant curriculum. But this effort of itself is not sufficient. That curriculum then has to be implemented. Students have to be assisted to develop, to retain and to be able to use the basic skills wich have been indentified (*cf.* TABLE 1).

This means, in practice that teachers in Indonesian medical schools have to be helped to select the most effective methods of teaching and learning–methods which are geared towards the acquisition of these skills. There is a (rapidly accumulating) body of information concerning those conditions under which learning is likely to be enhanced. These conditions would include :

(i) The provision of sets of carefully-stated objectives which are both *relevant,* and *realistically related to students' abilities* ;

(ii) The implementation of this curriculum needs to emphasise and be based on *"active methods of learning"* ;

(iii) The regular provision of *feedback* to students concerning their progress, an analysis of the difficulties they might be having, and methods by which they might overcome these difficulties ;

(iv) The choice of learning situations which are as *close to reality* as possible. For example, if the basic skill concerns the ability to "respond effectively to hostile, upset and distraught patients" then students will be unlikely to acquire this skill by "reading about how to respond effectively to emotionally upset patients" (though advance reading may of course be helpful), instead teachers would elect to use either active methods of simulation which were as "close to the real thing" as possible, and, of course, provide students with the opportunity (under professional guidance) of actually trying to *respond effectively* to emotionally upset persons. Currently in the Indonesian context a great deal of effort is being put into the development of local resources which will make students' learning as effective as possible. As in other countries this effort is seen as a longterm process.

In this quite brief section I have merely sought to identify three of the more pressing practical problems which are posed to medical educators when they decide to expand the medical curriculum so as to include selective aspects of the social and behavioural sciences. These three problems-*i.e.*, the need for a relevant data base ; the need to integrate these courses with the community, with other courses and with other health professionals ; and the need to choose effective methods of teaching and learning–will not be solved easily. Perhaps it is sufficient in the present context that they have been brought in to the open for discussion.

CONCLUSION

This paper has briefly described the values and methods of constructing instructional objectives. This approach to curriculum planning was then applied to the task of constructing a course in the Social and Behavioural Sciences for medical students in Indonesia. In this context an attempt was made to identify some of the "basic skills" which students might be helped to

acquire as a result of studies in the social and behavioural sciences, and to also state a set of relevant Departmental Objectives. These data are regarded as *illustrative* of this approach to curriculum planning and design, and are not intended to provide an exhaustive set of basic skills or departmental objectives. Finally an attempt has been made to bring out into the open some of the specific problems and difficulties in the Indonesian context of introducing the social and behavioural science into the medical curriculum.

SUMMARY

This paper described methods which can be used to construct "behavioural objectives" at the level of a Department of Social and Behavioural Sciences within a Faculty of Medicine, and also in the choice of Specific curricular content. An attempt is then made to :

(i) Identify the *basic skills* that studies in the social and behavioural science might seek to develop in medical students ;

(ii) Develop a set of Departmental Objectives which arise out of these basic skills, so that courses in these areas are as realistic and as practical as possible ;

(iii) Extend this approach and show how it might be used as a method for developing a specific and measurable curriculum in the social and behavioural sciences ;

(iv) Identify some basic practical problems arising from a decision, by a Faculty of Medicine, to incorporate aspects of the social and behavioural sciences into the curriculum.

For illustrative purposes each of the above tasks has been applied to the Indonesian context. It may thus be expected to have direct practical application to other, similar developing countries ; but, of course, the approach to curriculum design will have more widespread application.

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