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ABSTRACT

The System for the Classroom Observation of Teaching Strategies (SCOTS) is described. The schedule requires a higher level of inference by the observer than many researchers may find acceptable. The paper argues that inference can be controlled within acceptable limits and that issues of objectivity and subjectivity are very complex. The SCOTS schedule attempts to reduce observer bias by concentrating on 43 separate variables believed to be parts of a teacher's teaching style or strategy. The observer places the teacher under observation on a defined continuum for each variable. Each continuum consists of five points, thus making each variable a multiple choice item for the observer. The items cover such topics as teaching skills, feedback and individual aid, pupil interest and motivation, development of responsibility, grouping practices, efficiency of management, authoritarianism and coercion, class control, and relationships with students. Appended are the complete SCOTS schedule by John T. Powell and Mabel N.G. Scrimgeour (1977 Revision) as well as items of a summative version that differ from the classroom version. (DWH)

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Objectivity, Subjectivity, and Value Judgements in the Context
of Classroom Observation of Teaching Styles.

ED268121

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In addition to the 'low-inference' classroom observation instruments, of which larger numbers have been produced in recent years, there is a need for instruments capable of producing data on a large number of variables simultaneously without disturbing the normal functioning of classes by the use of video recording. It is argued that a) the subjectivity can be controlled in the latter, despite the higher inference levels involved, and b) that the level of subjectivity involved in 'low-inference' instruments is far greater than is generally acknowledged. The case is illustrated with reference to the author's SCOTS schedule.

In its seeking after accuracy of measurement, so much of the vast amount of research based on classroom observation concentrates attention on very narrow spheres of activity. Useful as such studies are, there is a need also for studies that can take a more broadly-based view of classroom activity, ones that can look at a large number of variants at one and the same time.

One approach to this problem is of course to make video recordings of classroom activity and to subject the recordings to repeated analysis using any number of available systems for measuring with some precision each of a wide range of variables. But all such work is open to the limitation that the making of the video-tape in itself creates an abnormal classroom situation, whether the video equipment be taken into an ordinary classroom or the students be brought into a studio setting.

If multi-faceted recording of classroom activities is to be undertaken in ordinary classrooms with nothing more than the presence of an observer to affect the normality of the situations, quite different observational techniques are required. Such techniques for use in the primary school have been developed by the present author in Scotland in an observation schedule known as The System for the Classroom Observation of Teaching Strategies (SCOTS) - see Appendix A.

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As can be seen in Appendix A, the SCOTS schedule calls for higher levels of inference on the part of the observer than many researchers may find acceptable. It is the function of this paper to argue that inference can be controlled within acceptable limits, and that the issues of objectivity and subjectivity in observational instruments are more complex than is generally acknowledged.

It is only too easy to suppose that because a measurement in itself is clearly objective - as when, for instance, the identity of the person initiating an oral interaction is noted as each interaction occurs, or as when type of activity for a number of individuals is recorded at short but regular time intervals - that the conclusions drawn are necessarily objective. In some cases, of course, they are, but since most of the questions researchers seek to answer require data more complex than these measures are able to provide directly, these measures are commonly related one to another - by the calculation of ratios, for instance. As soon as such second-order procedures are adopted, subjectivity has crept in (over and above that which is involved in any case through the choice of what to measure). The more complex the inferential procedures, the greater the subjectivity of the interpretation.

It is no part of the case being put forward in this paper that such use of subjective judgement is in any way reprehensible. It is, on the contrary, clearly essential. What is being stressed is that any worth-while conclusions of other than the very simplest nature require the use of inference. It is the basis of anything that we may presume to call understanding.

In the case of inferences based on data collected in a highly objective way - we have already instanced the recording of who initiates an interaction - the researcher makes his inferences away from the scene where the data were collected, or at least at a different time. He does not, therefore, in making his judgements, have the advantage of a wide range of contextual information that could with advantage affect how he draws his inferences. The observer who draws inferences live 'at the scene of action' has - particularly if he is a skilled and trained observer - the potentiality of being able to reach conclusions based on a far wider range of factors.

There is, of course, the obvious risk of bias, conscious or unconscious, on the part of an observer drawing inferences 'live'. A high inference observation schedule such as SCOTS does however seek to provide a controlling frame-work to minimise bias while still permitting the use of human interpretative skills.

The risk of bias is clearly greatest when judgements are wide-ranging. Accordingly the SCOTS schedule concentrates on 43 separate but partly overlapping variables believed to be constituent parts of a teacher's over-all teaching style or strategy (see Table 1). The task of the observer is to place the teacher being observed on a defined continuum for each variable. (Such points - usually five in number - are defined in fairly general terms but supported by examples and a good deal of 'case law' built up over time by the observers in consultation.) The

Table 1
SCOTS SCHEDULE: ANALYSIS OF ITEMS

Items relating to:

- | | |
|----------------------------------|---|
| a) Teaching Skills: | 4) Variation of treatment according to student needs
10) Integration of knowledge
11) Teaching for memorisation/understanding
12) Encouragement/promotion of difference
13) Mode of cognitive questioning
14) Clarity of exposition of basic principles
15) Variety and inventiveness of explanation |
| b) Feedback and Individual Aid | 16) Nature and frequency of contacts with the individual students
17) Feedback to students |
| c) Pupil Interest and Motivation | 18) Stimulativeness/dullness of teaching (or teaching situation)
21) Extrinsic/intrinsic motivation
22) Competition
39) Negative/positive approach |
| d) Development of Responsibility | 6) Directness of control of pupil learning activities
7) Pupil responsibility for managing own work
9) Teacher pressure to secure work
20) Fostering a sense of responsibility
34) Encouragement/prevention of inter-student co-operation
35) Constraint on student movement
36) Freedom of access to resources |
| e) Level aimed at | 5) Teacher objectives (relating to cognitive outcomes) |
| f) Grouping Practices | 2) Used number of difficulty levels for arithmetic
3) Used number of difficulty levels for English
31) Variation of treatment according to student needs
32) Size of teaching groups for arithmetic
33) Size of teaching groups for English |
| g) Efficiency of Management | 25) Student application to work/work avoidance
27) Student under-employment
28) Time-lag between activities |

- | | |
|----------------------------------|--|
| | 29) Mode of performing administrative functions. |
| | 30) Extent of teacher's attention to class |
| h) Authoritarianism and coercion | 8) Authoritarian/democratic practices
24) Teacher mode of exercising control |
| i) Class Control | 37) Teacher overt anxiety/calmness
42) Teacher hostility
43) Degree of teacher control achieved |
| j) Relationship with Students | 19) Teacher sensitivity to student self-confidence
40) Teacher-student social relationship
41) Apparent teacher attitude to class |
| k) Miscellaneous | 1) Visible differentiation by ability
23) Teacher use of rational argument to support commands
26) Pupil talk
38) Noisy/quiet teacher |

An Item from the SCOTS Schedule

20) FOSTERING A SENSE OF RESPONSIBILITY

- 1) Pupils have no responsibility for their actions (eg, teacher himself may even count pencils, rulers, etc, daily.) Teacher also supervises all aspects of school life. If pupils are given any duties to perform (eg, giving out jotters), these are given as chores rather than responsibilities and the teacher closely supervises their execution.
- 2) As '1', except that a selected minority of pupils is trusted to perform chores without direct supervision. Even these pupils, however, are subject to the teacher's checking (usually by asking) that assigned duties have in fact been carried out.
- 3) Pupils given duties to perform are not closely supervised but are expected to perform them well and responsibly. On the other hand, teacher makes no attempt to foster responsibility, duties being allocated only to those showing signs of wanting them or thought likely to perform them well. Any pupil found not to have acted responsibly is, however, 'written-off' for at least a considerable time.
- 4) Teacher makes an effort to make pupils responsible individuals. For this reason duties and responsibilities are widely spread throughout the class. (A rota is likely for all main duties.) Jobs are not, however, deliberately matched to pupils' interests and abilities, the teacher being less sensitive to such matters than in '5'. Consequently some pupils are likely to find themselves with responsibilities they do not wish to have.
- 5) The teacher, apparently effortlessly, allocates to virtually all pupils duties well-matched to their interests and capabilities and guides them unostentatiously. Even the most unpromising pupils get something appropriate to do. All appear to be trusted.

observer is aided in so doing by his carefully noting during the observations (of which there are usually five, each extending for a quarter of a school day) the events, sayings, etc that he recognises as having a bearing on the coding of one or more of the variables. Provisional codings are made at the end of each observation and final ratings are based on these. Some of these ratings have to take cognisance of differences that arise from different types of class activity used by the same teacher.

Let us take item 20 of the schedule as an example (Figure 1). Like most of the other items in the schedule, it has five options and is thus, for the observer, a multiple choice instrument. To a degree, the options are behavioural descriptors, but underlying those for each item is a single dimension. In the case of item 20 this dimension is the degree to which the development of responsibility is fostered and it extends from virtually none in the case of option 1 to the most that can reasonably be expected in the case of option 5. The descriptors serve to define and/or exemplify what one may expect to observe at each of the five levels, but allow for the fact that there will be variation in the behavioural manifestation of each level. The observer has to make the best match he can between what he is observing on any occasion and one of the descriptors, bearing in mind as he does so the underlying dimension of variation. He has therefore to look for equivalence between, on the one hand, what is observed and, on the other, one of the options, rather than for any detailed behavioural match. Thus, for instance, a teacher correctly coded as '2' on item 20 may have on occasion 'written-off' a pupil for behaviour deemed irresponsible, despite the fact that such 'writing-off' is part of the descriptor for a coding of '3'. Equally a teacher coded as '3' may not have been observed 'writing-off' any pupil, though doing so would be wholly in accord with his/her behavioural pattern in respect of giving pupils experience in exercising responsibility. The fundamental point is that there is in the item an underlying continuum, and the observer's task is to place the teacher in question at an appropriate point on that continuum. Initially an observer's decision on this matter may be tentative and a provisional coding may for instance be placed on the borderline between two categories. Only after the last of the five observations does a final decision on category have to be made.

Of course not all items relate to teacher characteristics that remain fairly constant on all occasions. Where they do not, the summative coding made after the final observation has to take account of the variation that has occurred and accordingly a special 'summative' form of the item is used for such items. Thus, for instance, practices such as the number of activities occurring simultaneously (item 33) may vary from time to time, and in order to take cognisance of this there is a special summative form of this item. (All items that have summative forms that differ from those given in Appendix A have their summative forms shown in Appendix B.)

For item 10, the observer simply notes the relevant evidence when it occurs (see Appendix A, item 10) and makes a one-of final assessment in the light of these notes (see Appendix B, item 10). This takes account

of the fact that integration of subject matter was found to be infrequent even amongst the teachers who did attempt some integration.

Item 17, which deals with feedback, has two parts, A and B, relating to 'concurrent' and 'retrospective' feedback. Since, however, these may be regarded as complementary and to some degree mutually compensating, final codings for each are combined following the system shown in Appendix B. Item 16 deals with an area that would be best dealt with by time-interval recording. Since making such records is, however, incompatible with the rest of the observer's task, a less exact quantitative method has to be employed. (See Appendices A and B for item 16).

It would of course be disturbing if the codings for a teacher were to depend to any significant extent on who undertakes the observation - on the observer's prejudices, individual interpretive framework, or whatever - but it has been shown that, when a trained team of observers who have worked together over a period of time carry out the observations, a very high level of inter-observer agreement can be achieved. Table 2 shows the number and extent of disagreements between each pair of observers when three observers were paired in each of the three possible ways and each pair undertook the usual set of five observations for each of eight teachers.* (See Table 2). Certain things have to be particularly

* These observations constituted about 20% of those carried out in respect of 128 teachers in 1977/78.

noted. In the first place, certain categories of certain items were amalgamated where unacceptable disagreements were found to occur. (What these amalgamations were can be seen in Appendices A and B, where all amalgamated categories are bracketed together. Table 2 shows the situation after these amalgamations had been effected.) In the second place, the number of disagreements in all cases diminished in the course of the year (ie, the later observations gave rise to even fewer disagreements than the earlier ones.) The reason for this improvement is almost certainly the fact that after each observation, once their individual codings had been recorded, the observers were permitted to discuss their differences and to endeavour to agree on what the correct coding should have been and, if necessary, to discuss problems not previously encountered with a third observer and the project leader (the author), for, in these ways, refined criteria (or 'case law') were developed and subsequently applied. (It does, of course, follow from this that data from independently operating teams would not be fully comparable because of the likelihood of each having built up its own basic interpretations and case law.)

Some have argued that where high levels of inter-observer agreement - ie, 'reliability' - have been established, the data can be said to be 'objective'. Such a notion does, however, have to be questioned in the light of an analysis of what inter-observer agreement really

TABLE 2

SCOTS Schedule, 1977/78 Reliability Data : Agreements/Disagreements for 43 Items
 (The figures for agreements etc. represent the situation after the amalgamations of categories in Appendix A had been implemented)

Observer/ Observations	Agreements			Disagreements by 1 Category			Disagreement by 2 Categories		
	1 and 2	2 and 3	1 and 3	1 and 2	2 and 3	1 and 3	1 and 2	2 and 3	1 and 3
1st Observation	28	23	34	10	18	9	2	2	0
2nd "	29	31	35	14	11	8	0	1	0
3rd "	35	25	28	6	18	14	0	0	1
4th "	38	28	33	5	14*	10	0	0	0
5th "	36	33	34	7	9	9	0	1	0
6th "	35	33	35	8	9	8	0	1	0
7th "	37	32	38	6	11	4	0	0	1
8th "	<u>31</u>	<u>33</u>	<u>35</u>	<u>11</u>	<u>10</u>	<u>8</u>	<u>1</u>	<u>0</u>	<u>0</u>
Mean	33.63	29.75	34.0	9.00	12.50	8.5	0.37	0.63	0.25

* There was one further disagreement where one observer used a zero coding and one attempted a positive coding.

indicates. It does not mean that some form of objective 'reality' has been established, but rather that uniform criteria have been applied to phenomena jointly observed. The criteria applied are themselves the product of decisions to note particular features of the situation observed and to apply certain predetermined interpretations to them. Both of these decisions may reasonably be called subjective. The 'objectivity' of the observers is in fact a shared subjectivity.

A charge that may be levelled against the SCOTS schedule is that it has value judgements built into it. This is denied, for, although it is possible for anyone, the observer included, to regard as best any particular category of any item and although there may be widespread agreement on the matter, it is possible for different people to come up with value judgments that differ. Thus, for example, in the case of item 20, people may differ about the need to develop a sense of responsibility in pupils and about the best ways of achieving it. The value judgements rest with the individual and are not inherent in the schedule. Where the observer's judgement comes into play is not in respect of values. He uses judgement where he sees the significance of particular behaviours normally interpreted one particular way as meriting a different interpretation because the situation in which they occur has changed their meaning or significance. Training and a developed 'case law' help observers to apply such judgements in a common way.

Conclusion

The case argued in this paper points to the need to look more searchingly at the concepts of objectivity and subjectivity as applied in the field of classroom observation, at the danger of under-exploiting the interpretive skills of observers where broad criteria are provided, and at the possibility of providing in a single set of observations (unincumbered by video and sound recording apparatus) a wide-ranging and acceptably accurate record of a teacher's teaching style. It opens up opportunities in a number of areas including both pre-service and in-service training of teachers.

Note: The SCOTS schedule has been used in SCRE's now completed Teaching Strategies in the Primary School project. A report on the data collected in respect of 128 primary school teachers of students aged 8-11 is contained in Powell, J L, The Teacher's Craft, Edinburgh, The Scottish Council for Research in Education (forthcoming, due Summer 1984.)

APPENDIX A

SYSTEM FOR CLASSROOM OBSERVATION OF TEACHING STRATEGIES (SCOTS)

(1977 Revision)

JOHN L POWELL and MABEL N G SCRIMGEOUR

NOTES

- 1) Where item options are combined after the use of schedule in 1977/78, this is shown, together with all necessary item re-numberings.
- 2) The five columns to the right of all items are for recording the observer's codings for each of five observations extending for approximately one quarter of a school day. Where the letter T appears at the head of one of those columns, it indicates that information concerning the item is to be sought from the teacher at the end of that observation.
- 3) Where the symbol (S) appears above an item, it indicates that there is a distinct form of the item for summarising the codings from the five observations. (These summative forms are given in Appendix B).
- 4) The figures in the left-hand margin are the frequencies for each option in 1977/1978 when 126 teachers were observed. It must be stressed that these figures relate to final summative codings, not to provisional, intermediate ones recorded during a single observation. (It is for this reason that the frequencies for items marked (S) are given in Appendix E).

I ITEMS REQUIRING INFORMATION FROM BOTH TEACHER AND OBSERVATION**

1) VISIBLE DIFFERENTIATION BY ABILITY/ACHIEVEMENT

- 4
- 1) Pupils seated in rank order in accordance with test results or teacher's current assessment of each pupil's relative merit OR as '2', but that the status of the individual strongly underlined by the teacher either by prominent promotions/reinforcements or by regular pejorative references to particular groups.
- 48
- 2) Pupils seated for most of the time in ability groups whose composition does not change from subject to subject. (Transfer from group to group may occur from time to time in view of teacher's assessment of performance.)
- 25
- 3) Pupils seated in ability groups for at least a significant part of the time but with membership of groups varied according to subject OR as '4', but with the relative status of the groups regularly and strongly underlined by the teacher.
- 27
- 4) Work undertaken in ability groups for at least some subjects, but these groups have no intentional correspondence with seating groups.
- 14
- 5) No intentional correspondence between seating position and ability/achievement AND no regular work undertaken in groups of identifiable ability level.

Observer's Notes:

Observation 1)

.....

Observation 2)

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Observation 3)

.....

Observation 4)

.....

Observation 5)

.....

** Columns marked 'T' indicate the observation at the end of which enquiries should be addressed to the teacher. Wherever possible the observer should clarify/confirm the teacher's statements by recalling for discussion relevant instances that have been observed.

2) USUAL NUMBER OF WORK DIFFICULTY LEVELS FOR ARITHMETIC/MATHS

- 27
- 1) One work level for class.
- 40
- 2) Two work levels for class.
- 47
- 3) Three or four work levels for class.
- 3) Five or more work levels for class (excluding situation described in '5').
- 11
- 5) Multiplicity of work levels, such that work is allocated mainly on an individual basis.

T

42

3) USUAL NUMBER OF WORK DIFFICULTY LEVELS FOR ENGLISH (EXCLUDING READING PRACTICE)

- 48
- 1) One work level for class.
- 31
- 2) Two work levels for class.
- 3) Three or four work levels for class.
- 4) Five or more work levels for class (excluding situation described in '5').
- 5) Multiplicity of work levels, such that work is allocated mainly on an individual basis.

T

73
74
75
76
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84
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97
98
99
100

4) VARIATION OF TREATMENT ACCORDING TO PUPIL NEEDS

- 1) No variety of treatment amongst pupils (level of work may vary but approach is identical for all pupils.)
- 2) Some variety of treatment, but for low OR high ability pupils only.
- 3) Treatment varies for the extremes of low AND high ability pupils from that used for class in general.
- 4) Treatment varies with instructional groups.
- 5) Treatment varies with individual pupil need.

Observer's Notes:

Observation 1)

.....

Observation 2)

.....

Observation 3)

.....

Observation 4)

.....

Observation 5)

.....

5) TEACHER OBJECTIVES (RELATING TO COGNITIVE OUTCOMES)

- 47*
- 1) Teacher aims to have all pupils, including the most able, reach the highest level of which they are capable. Work is differentiated accordingly in both level and breadth.

75

 - 2) Teacher aims to have all pupils (save the very weakest) attain a common basic standard. Pace of basic work is therefore that of the middle group. Those who can proceed faster are not permitted to undertake work at a higher level, though they may be permitted to broaden their work (at the same level) or undertake additional peripheral work.

6

 - 3) Work is geared to a low level so that most of the weaker pupils can cope with the work. Additional work may be given to some more able pupils.

NOTE:

If the teacher's response cannot be accurately represented by one of the above three categories, a brief explanatory note should be appended below. Any relevant information derived from observation should also be recorded.

II DIRECTION/CONTROL OF WORK

6) DIRECTNESS OF TEACHER CONTROL OF PUPILS' LEARNING ACTIVITIES

12
12

12
16

14

26

18

1) Control of pupils by teacher is entirely direct; pupils show no sign of training in managing work activities.

2) As '1' save that in some limited contexts a significant proportion of the class operate in ways showing a lesser dependence upon the teacher.
(Note: merely repeating an operation a number of times without further instructions should not be taken as evidence of lesser dependence.)

3) Although the teacher intervenes substantially to maintain the operation of the working system, pupils also show a substantial competence in work management. Most pupils show themselves able and willing to sustain even non-routine work for at least a short while in the absence of the teacher or in the absence of teacher support.

4) As '5', save that the role of the teacher in keeping the wheels turning is rather more apparent. In particular the teacher apparently finds it necessary to intervene from time to time - eg, because pupil work operations are seen as faltering. (Note: class lessons and class discussions should not be regarded as teacher-intervention.)

5) There are very few signs of direct teacher-control of pupils' work activities (other than basic instructions infrequently given, concerning work to be undertaken) and yet nearly all pupils work purposefully, clearly knowing how to operate the system in use. (Work is typically unaffected by the absence of the teacher. The teacher is usually consulted only when significant problems of comprehension arise. Such consultations normally involve pupils taking an active role.)

7) PUPIL RESPONSIBILITY FOR MANAGING OWN WORK

- 4.1
- 5.2
- 11
- (1)
- 1
- 7) PUPIL RESPONSIBILITY FOR MANAGING OWN WORK
- 1) Pupil has no control of own work. Tasks are almost always instructed by the teacher singly. The time spent is controlled entirely by the teacher, as is the way in which the work is undertaken.
 - 2) As '' save that, at least sometimes, more than one task is instructed by the teacher at a time. When more than one task is instructed, the pupils have to do them in a given sequence and the teacher often intervenes to ensure that time spent on each task is that intended. (Control may not be exercised by the teacher in a minority of subject areas that the teacher considers peripheral." 'Filler' tasks may also be uncontrolled.)
 - 3) Most work is instructed by the teacher as in '1' or '2'. Pupils are however sometimes given responsibility either over a short period (up to approximately one quarter of a school day) for allocating time to each of a small number of tasks and for determining their sequence or for a longer period (up to a whole day) for allocating time to tasks but not controlling their sequence.
 - 4) Pupils are given a programme of work to be covered over a period of time (usually $\frac{1}{2}$ day or 1 day.) The distribution of time is left to the pupils save that the teacher may intervene whenever a pupil is thought to be devoting too much time to any one activity with the result that the amount - and quality - of work in other areas is suffering. The intervention normally takes the form of direct instructions as to what the pupil is to do.
 - 5) As '4', save that teacher intervention is infrequent and different in type. Thus the teacher does not intervene until there is evidence available (eg, from a pupil's own work record) that a pupil's work is suffering through failure to allocate time satisfactorily. Typically, however, the intervention will take the form of indicating to a pupil the nature of the failure and of a request to ensure that it does not recur. (More direct and more frequent intervention as described in '4' may, however, be applied to a small minority of pupils who have proved unable to respond to the normal type of intervention.) Despite the low level of intervention, the teacher is likely to devote time to advising pupils, before they start working, of the standards to be met.

* Usually art and projects, but this may when necessary be checked by asking the teacher obliquely.

8) AUTHORITARIAN/DEMOCRATIC PRACTICES

- 41
- 1) Teacher totally authoritarian: the work to be undertaken is determined by the teacher without even a semblance of consulting pupil wishes or allowing pupil choice (save in 'fill-in' activities.)
- 65
- 2) As '1', save that limited degree of pupil choice may be permitted in very limited contexts (eg, projects, art, selecting work-card from a prescribed set.)
- j/
- 3) Practice varies: whereas some children are treated as in '4' (or even '5'), approximately as many are treated as in '2' (or even '1').
- 10
- 4) Children are encouraged to express preference for work topic and/or work mode (even though choice may be from a restricted range of options and may be very limited in material effect.)
- 6
- 5) As '4', save that children often make suggestions that are taken up by teacher and that have an effect on the work of the class that is more than nominal.

9) TEACHER PRESSURE ON PUPILS TO SECURE WORK

- 3
- 1) Teacher constantly drives pupils, seeking to secure effort and/or high work standards.
- 18
- 2) Teacher presses pupils to secure effort and/or high work standards, but not constantly. Pressure tends to be applied selectively. However, lapses in pupil effort are seldom allowed.
- 55
- 3) Teacher presses pupils from time to time to secure effort and/or high work standards. However, lapses in pupil effort do occur and go unchallenged. Demand for high work standards is less strong than in '1' and '2' (but slipshod work is not tolerated.)
- 49
- 4) Most pupils are not pressed to secure effort and work standards, but such pressure as there is is likely to be directed at those whose activity is falling off OR at a minority who, experience has apparently shown, do not work satisfactorily unless regularly reminded.
- 25
- 5) There is little sign of pressure on any pupil though activity may be encouraged in the inactive. The teacher is, however, likely to be available to respond to children's needs.

10) INTEGRATION OF KNOWLEDGE

Note all signs of integration of work across subject barriers, carefully distinguishing between the superficial and the profound. In each case the subjects and/or work activities should be noted.

Observation 1

Observation 2

Observation 3

Observation 4

Observation 5

11) TEACHING FOR MEMORISATION/UNDERSTANDING

- 1) The emphasis is almost entirely on rote-learning (eg, of tables, spelling, etc) and on the acquisition by pupils of mechanical competence. The focus is on obtaining the correct answer, and there is little sign of any attempt to discover whether any understanding of the underlying principles and concepts is being acquired.
- 2) As '1', save that sporadic attempts are made to ascertain whether understanding of underlying principles and concepts is being acquired.
- 3) Some emphasis is laid on pupils' acquiring an understanding of the principles and concepts relating to the areas of competence with which their learning is concerned. Nevertheless rote-learning (eg, of tables, spelling, etc) and the acquisition of mechanical competence is also prominent.
- 4) The emphasis is predominantly on the acquisition of understanding of principles and concepts. Nevertheless, rote-learning (eg, of tables, spelling, etc) does occur to some extent, and 'rule of thumb' procedures, designed to avoid accidental mechanical errors in the application of understood principles, may be found.
- 5) The main emphasis is on the acquisition of understanding of principles and concepts. There is no rote-learning since the pupils are expected to look up required necessary facts and to memorise these simply through familiarity in usage. Failure to establish the correct answer is treated as less important than demonstration of understanding of how to obtain it. 'Rule of thumb' procedures are accepted only when the pupil can demonstrate understanding of the principle underlying the rule or when the alternative would be total failure (ie, neither mechanical performance nor understanding of principle.)

12) ENCOURAGEMENT/PREVENTION OF DIFFERENCE

- 1) The work of the class is characterised by conformity to the teacher's dictates. In consequence, inventiveness, discovery, and doing things differently are prevented or strongly discouraged. Suggestions from pupils not welcomed and not used.
- 2) Suggestions children are listened to and kindly dealt with but rarely, if ever, used. Teacher seems to be paying 'lip service' to idea of participation but in fact shows why his ideas are better without permitting children to find this out for themselves. Thus, in practice, the pupils have to follow the teacher's dictates.
- 3) The work of the class is characterised by a fair degree of conformity in that the teacher, while not preventing, rarely encourages inventiveness, discovery, or doing things differently. Difference is therefore able to occur but is unlikely to manifest itself often or in many pupils but may possibly give substantial encouragement within one or two subject areas, probably ones thought peripheral.
- 4) Teacher encourages children to suggest ideas for work and ways of carrying out work. Inventive individuals are encouraged to try out their ideas and consider the appropriacy of them. Teacher does not always insist on conformity of work and work method - however teacher normally suggests basic approach to work so that those devoid of ideas may participate. Likely to be marked by teacher showing pleasure at good ideas.
- 5) The work of the class is characterised by very little conformity and the teacher strongly encourages curiosity, discovery, and inventiveness, and differences in learning mode are commended if at all sensible.

NOTE: By discovery is meant finding things out for oneself.

By differences in learning mode is meant difference in approach to work, in arriving at answers, etc.

13) TEACHER'S MODE OF COGNITIVE QUESTIONING

- 1) Unless a correct answer is obtained instantly, the teacher either abandons the question he has posed or personally provides the answer. Alternatively the first partially correct answer is accepted. (The questions thus functionally constitute shallowly disguised teacher-statements.)
- 2) Teacher is concerned to get the correct answer as quickly as possible from any pupil. (No individual pupil is pressed for an answer.) If no correct answer is obtained, the first partially correct answer is accepted - though a better answer may then be offered by the teacher.
- 3) The teacher is concerned to get an answer from the pupil to whom any question has been addressed (ie, the questions are intended to find out what the pupils know/think/can deduce), but if the pupil fails to respond the teacher soon gives up and either directs the question to another pupil or provides his own answer.
- 4) Teacher is concerned to get correct answer and/or to get the child (or possibly children) questioned to make an effort to think about what the answer should be. To this end he repeats the question, though without significant variation, until the required answer is obtained or until he eventually finds it necessary to provide the answer himself or direct the pupil(s) to a source from which an answer can be obtained.
- 5) As '4', but when the question is pursued it is re-presented in many different ways in order to lead pupils to reason out a correct answer. In the last resort an answer is provided by the teacher or by consultation of a written source.

14) CLARITY OF EXPOSITION OF BASIC PRINCIPLES

- 1) When explaining any point*, the teacher presents facts in such a way that the underlying principles will not be apparent to anyone not conversant with them already. Irrelevant facts may be brought in and essential ones omitted.
- 2) When explaining any point*, the teacher relates facts presented to underlying principles to some degree, but the stress is on either the practical/mechanical or the superficial rather than the basic principles. Examples of other applications of the principles are wholly lacking and consequently the opportunities for the pupils to generalise or to transfer the 'training' to other areas are minimal.
- 3) When explaining any point*, the teacher presents the facts in a clear logical order so that the underlying principles are made readily apparent or alternatively presents principles and applies them to cases so that the nature of the principles is made apparent. However, the teacher shows signs of underestimating the difficulties many of the pupils have in grasping key intermediate steps.
- 4) As '3', save that the teacher is sensitive to the types of difficulties experienced by many pupils and appears to be able to pin-point most of the areas of difficulty experienced by individual pupils and to deal with these simply, clearly, and appropriately.
- 5) Insufficient exposition to permit coding.

* This variable covers any explanations, whether in initial teaching, in revision, or in dealing with any misunderstanding or failure to understand. These explanations may be directed to individuals, to groups of pupils, or to a complete class. Even when a group or class is being instructed, there may be a 'target population' within the class/group to which the teacher is primarily directing his effort at that time. The clarity of his exposition must, therefore, be judged in terms of each 'target population' observed.

15) TEACHER VARIETY AND INVENTIVENESS IN EXPLANATION

14

- 2 If initial explanation is unsuccessful the teacher repeats the original explanation; no sign of trying a different approach.

95

3

- 2) Most points are explained in only one way, but there are occasional cases of an alternative explanation or mode of exposition.
- 3) Teacher explains most points in more than one way to aid pupil comprehension, but no great inventiveness displayed, the types of explanation are fairly stereotyped.
- 4) Teacher uses a variety of ways of explaining most points, endeavouring to overcome most of the failure of comprehension; these ways are characterised by considerable inventiveness.
- 5) Teacher uses a great variety of ways of explaining, endeavouring to find some way of overcoming every difficulty experienced by pupils; these ways are characterised by great inventiveness.
- 0) No instances of teacher explaining anything.

14

5

NOTE: This variable applies equally to teaching of class, group, or individual. It relates exclusively to cognitive activities.

16) NATURE AND FREQUENCY OF TEACHER CONTACTS WITH INDIVIDUAL PUPILS

S

- 1) Individual or quasi-individual instruction given but in no great depth: simply the making of a few simple points (or even one simple point.)
- 2) Substantial individual or quasi-individual instruction going beyond making a few simple points and almost certainly extending over a period of time.

NOTE: The observer should endeavour to note the extent of the occurrence of '1' and/or '2', but should supplement this in the notes he takes.

a) Concurrent

- 1) There is virtually no significant concurrent feedback to pupils. There are no self-correcting facilities and teacher's responses to pupils' questions about the work they are currently doing are minimal.
- 2) Limited feedback is provided by teacher and/or through self-correction facilities. Thus pupils can find out, perhaps after some delay, whether their work is right. However, guidance to those in difficulty is brief and at a superficial level or restricted to very few pupils. If lessons on faults observed by the teacher are given to the class (or groups), these occur only after the faults have been occurring for some time.
- 3) Every effort appears to be made to give individuals on-going guidance and comment. However, organisation is not equal to the demands of the pupils. The result is delay, with some pupils getting more help than others. Lessons to class/groups on frequently observed faults are given more promptly than in '2'.
- 4) Through selective and economical use of his own time, and through such measures as the careful scheduling of class-work to spread the load on himself, the teacher provides an optimised system of concurrent feedback unimpaired by personal over-involvement. Help for pupils who cannot provide it for themselves is thus provided with minimal delay.

Observer's Notes:Observation 1)
.....Observation 2)
.....Observation 3)
.....Observation 4)
.....Observation 5)
.....

b) Retrospective

- 1) Written work that has not been already adequately marked concurrently is frequently left unmarked. When marking is undertaken, it resembles that described in '2'.
- 2) Although written work that has not been already adequately corrected concurrently is normally marked, it is examined and assessed so cursorily that pupils lack specific guidance. Typically ticks and/or marks and/or very general comments (such as 'poor' or 'good') are the only writing by the teacher on pupil's work. Oral follow-up with individuals is not found. Class and/or group instruction may, however, be given on errors etc found to be prevalent in pupils' work.
- 3) Written work that has not been already adequately marked concurrently is subsequently marked with care. Explanations of errors (if any) are terse and pupils have to make of them what they can. Oral follow-up with individuals and/or the requesting of pupils to do further work to demonstrate their understanding of errors marked are observed rarely, if at all. Class and/or group instruction, may, however, be given on errors etc found to be prevalent in pupils' work.
- 4) As '5' ...e that the explanation of errors (whether written or oral) are much less fuli.
- 5) Written work that has not been already adequately marked is subsequently marked with care. Explanations of pupils' errors, corrections etc are either given fully and clearly in writing, or pupils subsequently are given substantial help in overcoming their difficulties through individual, group, or class instruction. The teacher thus does not confine his attention to commonly experienced errors/difficulties.

Observer's Notes:Observation 1)
.....Observation 2)
.....Observation 3)
.....Observation 4)
.....

Observation 5)

IV. MOTIVATION, CONTROL, AND DISCIPLINE

18) TEACHING (OR TEACHING SITUATION) STIMULATIVE/DULL

- 2
18
61
41
5
- 1) Teaching/teaching situation dull and unstimulating: teacher apparently bored, weary, or uninterested in task or class.
 - 2) Teaching/teaching situation evokes only occasional interest in pupils; pupils unlikely to sustain concentration and effort.
 - 3) Teaching/teaching situation evokes fairly consistent interest in most pupils for much of the time but the pupils' enthusiasm is not aroused.
 - 4) Teaching/teaching situation is bright and interesting; teacher's interest and enthusiasm is communicated to the class.
 - 5) Teaching/teaching situation is outstandingly bright, interesting, and challenging; a high level of enthusiasm is communicated to the class, most of whom become deeply involved in the work.

NOTE: The alternative, teaching/teaching situation, is used so as to cover both teacher-centred and non-teacher-centred situations.

1
13
51
41
14

19) TEACHER SENSITIVITY TO PUPIL SELF-CONFIDENCE AND/OR SELF-ESTEEM

- 1) Teacher shows gross insensitivity to the feelings of at least some pupils such that there are clear signs of pupils' self-confidence and/or self-esteem being undermined.
- 2) Teacher lacks any significant sign of sensitivity, but there is much less sign than in '1' of pupil self-confidence and/or self-esteem being undermined. Nevertheless, effects on pupils are more than slight and almost certainly more than temporary.
- 3) Teacher shows no marked signs of sensitivity or lack of it; his/her effect on the self-confidence and/or self-esteem of pupils is slight OR, if more than slight, of short duration.
- 4) The teacher shows clear signs of sensitivity and there is no indication of any undermining of pupils' self-confidence or self-esteem; any forthrightness etc on the teacher's part is off-set by a generally high level of rapport with pupils.
- 5) Teacher shows great sensitivity in all contact with pupils; any work or action that might genuinely threaten a pupil's self-confidence and/or self-esteem does not occur.

20) FOSTERING A SENSE OF RESPONSIBILITY

- 1) Pupils have no responsibility for their actions (eg, teacher himself may even count pencils, rulers, etc, daily.) Teacher also supervises all aspects of school life. If pupils are given any duties to perform (eg, giving out jotters), these are given as chores rather than responsibilities and the teacher closely supervises their execution.
- 2) As '1', except that a selected minority of pupils is trusted to perform chores without direct supervision. Even these pupils, however, are subject to the teacher's checking (usually by asking) that assigned duties have in fact been carried out.
- 3) Pupils given duties to perform are not closely supervised but are expected to perform them well and responsibly. On the other hand, teacher makes no attempt to foster responsibility, duties being allocated only to those showing signs of wanting them or thought likely to perform them well. Any pupil found not to have acted responsibly is, however, 'written-off' for at least a considerable time.
- 4) Teacher makes an effort to make pupils responsible individuals. For this reason duties and responsibilities are widely spread throughout the class. (A rota is likely for all main duties.) Jobs are not, however, deliberately matched to pupils' interests and abilities, the teacher being less sensitive to such matters than in '5'. Consequently some pupils are likely to find themselves with responsibilities they do not wish to have.
- 5) The teacher, apparently effortlessly, allocates to virtually all pupils duties well-matched to their interests and capabilities and guides them unostentatiously. Even the most unpromising pupils get something appropriate to do. All appear to be trusted.

21) EXTRINSIC/INTRINSIC MOTIVATION

- 1) The incentives to work provided by the teacher are all extrinsic - marks, points, rewards, etc. The teacher fails to indicate that work may be satisfying in itself. Work is, either explicitly or implicitly, presented to pupils as a pain rather than a pleasure.
- 2) Extrinsic incentives are used no less extensively than in '1', and indeed receive considerable emphasis, but the teacher reveals that some of the work may be interesting. He may, for example, indicate that some of the pupils will want to do a particular piece of work because it is especially interesting. In contrast much of the work is presented as a chore that it is necessary to stick at.
- 3) Extrinsic incentives are used and, although they play a much less prominent part in the life of the class than they do in '2', they are given sufficient emphasis to show that they are part of the teacher's individualised system. There is a tacit assumption that the work will be generally interesting to pupils but indications that pupils don't like particular tasks are accepted as natural.
- 4) Extrinsic incentives (if any) are no more than a formality. Little time is devoted to them, and the pupils show little interest in them. On the other hand, pupils are, at least, very willing to undertake work. Their motivation is therefore presumably intrinsic.
- 5) No extrinsic incentives employed and, since signs of any motivation in the pupils is notably lacking, it would be unwise to assume that there is any intrinsic motivation either.

22) COMPETITION

- 1) Competition amongst children is intense and of a 'cut-throat' nature. It pervades almost all the work of the class, and, except for pupils who 'opt out', the struggle is constant. At least some of the children may, nonetheless, appear to enjoy the competition.
- 2) Competition amongst children is a prominent feature of the class, but it is less 'cut-throat' than in '1'. Children may spontaneously indulge in 'races' with others in the class (if only with immediate neighbour(s). Though there is so much effort to be 'better' than others (in work, speed, or behaviour), it is friendly and enjoyed by most children.
- 3) Competition is marked but 'criterion-referenced' - not 'cut-throat'. The emphasis is on all attaining a 'good' standard (relative to ability): the teacher is anxious to see as many as possible do well rather than to see some reach a higher standard than others.
- 4) Competition such as that described in '3' is a feature of only a few activities OR, from time to time, of most activities.
- 5) No sign of any competition (other than in games.)

23) TEACHER USE OF RATIONAL ARGUMENTS TO SUPPORT COMMANDS/REQUESTS

- 1) Teacher never supports commands or requests with any form of explanation or argument.
OR
Teacher supports commands or requests only by claiming them to be of long-term advantage to the pupils (eg, 'You'll need to be able to do this when you're grown up'); otherwise no support given.
- 2) Teacher only very occasionally supports commands or requests with reasoned argument relating to the present or immediate future; otherwise teacher either gives no explanation or makes dubious claims of the long-term advantage of compliance.
- 3) Teacher quite often supports commands with carefully and validly reasoned arguments relating to the present and immediately future situation. (More dubious claims of the long-term advantages of compliance may also be used.)
- 4) Teacher habitually supports commands or requests with carefully and validly reasoned arguments relating to present and immediately future situations. (Dubious claims of long-term advantages of compliance are NOT used.)

NOTE: This variable covers exhortations relating to work etc as well as to discipline.

24) TEACHER'S MODE OF EXERCISING CONTROL

- 6
- 28
- 59
- 26
- 9
- 1) Teacher coerces pupils; control is almost entirely by deterrence.
 - 2) Although control is generally exercised by coercive means, some pupils (probably the better behaved or more co-operative ones) are influenced by persuasive means.
 - 3) Neither coercion nor persuasion predominates. (The teacher may, however, display a wide repertoire of control techniques.) Which technique is employed on each occasion probably represents what the teacher expects or hopes to be effective. The ways of treating pupils (or groups of pupils, or the complete class), are not necessarily mutually consistent.
 - 4) Although coercion is applied to a minority of pupils (or even to most pupils occasionally), persuasion and reinforcement are the dominant modes of control.
 - 5) Teacher encourages self-control by pupils. When pupils have been thoughtless or their behaviour has fallen below the standards expected of them, the teacher encourages the pupils to assess the consequences of their actions; good behaviour and thoughtfulness are however reinforced by the teacher.

25) PUPIL APPLICATION TO WORK/WORK AVOIDANCE

- 1
- 5
- 12
- 15
- 65
- 1) Lack of application to work is a prominent feature of the classroom. There are some very obvious examples of pupils not attempting prescribed work.
 - 2) Some evidence of intent to work but work is slow to start at outset of sessions and/or falls away rapidly as time proceeds. Most of those completing tasks seem unenthusiastic about additional work (other than fill-in activities such as drawing.)
 - 3) Class fairly evenly divided between '1' and '5' situations in terms of numbers.
 - 4) As '5', except that EITHER there is a distinctive minority of the class that does not conform to the pattern and tends to avoid the work prescribed OR the general level of industry, enthusiasm etc is somewhat lower.
 - 5) General air of industry. Pupils tackle all available work and appear to be not only satisfied with their work but enthusiastic about commencing new tasks. (Isolated exceptions should be disregarded.)

26) PUPIL TALK

- 48
- 1) Class works silently except for communication with teacher.
 - 2) Class works silently though some talking may develop towards the end of an assignment or a period of work

59
OR

Talking occurs though not when teacher is addressing class or when it is necessary for pupils to work alone (eg, during test).

16

- 3) Talking occurs almost all the time though not necessarily at unrestricted volume. Occasionally, however, there may be complete silence for a special purpose.
- 4) Talking occurs almost always although not necessarily at unrestricted volume.

5

V. ORGANISATIONAL VARIABLES

27) UNEMPLOYMENT & UNDEREMPLOYMENT OF PUPILS

- 9
- 77
- 48
- 47
- 1) Much pupil time is wasted through systems of working that either leave pupils with nothing to do or compel them to waste time (eg, queueing for a long time waiting for attention). This time-wasting is a major feature of the life of the class.
 - 2) As '1', but less extreme in degree.
 - 3) The systems of working are such that although a total lack of work to do (as in '1' or '2') is not common, pupils tend to experience a low level of demand on them, and fill-in activities that serve little purpose other than to keep pupils occupied are a recurrent feature of the scene. ('Fill-ins' near the end of a work-period should be weighted more lightly.)
 - 4) Situation approaches that in '5', but the organisation of pupil work does at times leave pupils with insufficient work to keep them well employed.
 - 5) Organisation of pupil work, whatever its nature, ensures that pupils always have plenty to do. (Any under-employment or non-working by pupils therefore represents a deliberate rejection of work opportunities - for whatever reason.) N.B. - Relaxed effort at times chosen by the teacher is not inconsistent with '5'.)

28) CLASSROOM ORGANISATION - TIME-LAG BETWEEN ACTIVITIES

- 1) Lengthy gaps tend to occur between tasks, such that pupils engage in self-selected activities. (These gaps may arise either from inadequate organisation or from organisation that clearly does not have continuity of work amongst its aims.)
- 10
- 2) Gaps between activities are shorter/less frequent than in '1' and may be totally replaced by periods of uncertainty. (This may arise from indecision on the teacher's part and/or from his permitting 'digressions', or when individual pupils or groups of pupils control the sequencing of their own work, from failure to give pupils an appropriate response to queries or adequate guidance/support in self-management.)
- 21
- 3) Although pupils normally know promptly what they should do next, they from time to time find themselves impeded, (eg, by the lack of availability of materials that the teacher does have or can readily obtain)
- 61
- 4) Pupils are able to pass smoothly, and normally quickly, from one activity to another and materials are always to hand. There are, however, minor hold-ups such as a requirement to consult with the teacher before changing to a new activity.
- 34
- 5) Transitions from one activity to another, whether at class, group, or individual level occur outstandingly smoothly. (Organisation and pupil training are both likely to be major factors in producing this situation.)
- j
- 6) Changes of activity occur only at natural breaks (eg, morning intervals or lunch-time.)

* 'Self-selected activities' does not relate to work specifically allocated to be undertaken by those who finish early.

29) MODE OF PERFORMING ADMINISTRATIVE FUNCTIONS

- 6
- 1) Administrative functions receive great emphasis, 'ritualised' procedures being used rather than purely functional ones. Time spent on them tends to be considerable.
 - 16
 - 2) Administrative functions are not ritualised but are conducted with such care as to be often time-consuming. Normal work is held up while they are performed.
 - 27
 - 3) Administrative functions hold up normal work but are completed briskly and without ceremony, thus taking up a minimum of time.
 - 25
 - 4) Administrative functions are performed inconspicuously, often without any interruption of normal class work. Interference with class work is therefore minimal.

30) EXTENT OF TEACHER ATTENTION TO CLASS

- 3
- 1) Teacher tends to be pre-occupied for substantial period with activities that divert his attention from the bulk of the class. Whenever this is so he demonstrates, at best, only occasional awareness of what is happening elsewhere in the room.
 - 14
 - 2) As '1', save that the pre-occupation is far more spasmodic and consequently periods of low-awareness are frequently interspersed with periods in which teacher is alert to behaviour throughout the class.
 - 54
 - 3) For most of the time the teacher appears to be alert to what is happening throughout the class. Nevertheless, at times he appears to fail to notice individuals behaviour to which he normally reacts.
 - 57
 - 4) Teacher demonstrates a high degree of alertness such that he appears to seldom "miss a thing". This alertness is maintained even when he is engaged with individuals, groups, or private work.

NOTE: This variable is concerned with awareness of pupils' progress with work as well as of misbehaviour.

31) SIZE OF TEACHING GROUPS FOR ARITHMETIC

- 64
25
111
11
8
- 1) Class taught as a single group.*
 - 2) Class taught in two groups.*
 - 3) Class taught in at least 3 groups with an average size of 8 or more pupils.*
 - 4) Class taught in at least 3 groups with an average size of 6-7 pupils.*
 - 5) Pupils taught in groups with an average size of 5 or less or receive instruction individually only.

* In arriving at a coding discount very small groups and individuals taught separately on account of low ability, difficult behaviour, recent absence, physical handicap, etc.

NOTE: This variable is concerned with the size of group receiving instruction, not with the number of groups.

78
27
14
7
11

32) SIZE OF TEACHING GROUPS FOR ENGLISH

- 1) Class taught as a single group.*
- 2) Class taught in two groups.*
- 3) Class taught in at least 3 groups with an average size of 8 or more pupils.*
- 4) Class taught in at least 3 groups with an average size of 6-7 pupils.*
- 5) Pupils taught in groups with an average size of 5 or less or receive instruction individually only.

* In arriving at a coding discount very small groups and individuals taught separately on account of low ability, difficult behaviour, recent absence, physical handicap, etc.

NOTE: This variable is concerned with the size of group receiving instruction, not with the number of groups.

33) VARIETY OF ACTIVITIES

S

- 1) One activity only for class.
- 2) Two activities for class.
- 3) Three or four activities for class.
- 4) Five or six activities for class.
- 5) Seven or more activities for class.

NOTE: Activities within the same subject area but relating to different aspects of a subject should be regarded as separate activities for the purposes of this dimension, but activities differing ONLY in difficulty level should be treated as a single activity.

34) ENCOURAGEMENT / PREVENTION OF INTER-PUPIL CO-OPERATION

- 57
- 1) Teacher seeks to prevent co-operation amongst pupils; there is a sustained insistence on working alone (save possibly in PT, Art, some project work, and similar activities) OR pupils show no sign of attempting to co-operate.
 - 2) As '1', save that the total ban is not sustained OR teacher tolerates pupil co-operation but prevents it if it exceeds modest limits. (In some cases the teacher may allow a small minority greater freedom and/or totally inhibit co-operation amongst members of another such minority.)
 - 3) As '2', but from time to time co-operation is encouraged explicitly or implicitly.
 - 4) Teacher frequently gives implicit or explicit encouragement of co-operation. Nevertheless restrictions are imposed for some activities.
 - 5) Teacher encourages implicitly and/or explicitly pupil co-operation whenever this is possible.
 - 0) Not applicable (eg, because of testing or work that would be invalidated by co-operation.)

(N.B. '0' is not needed in summative.)

NOTE: For the purposes of this variable, minimal co-operation such as borrowing an eraser should be disregarded.

35) CONSTRAINT ON PUPIL MOVEMENT

- 3
28
74
17
1
- 1) Most pupils not allowed to leave seats unless instructed by teacher.
 - 2) Most pupils free to move to teacher or for assigned functions, but no other voluntary movement allowed.
 - 3) Most pupils free to collect required materials.
(May include borrowing from other pupils in class.)
 - 4) Most pupils free to move to co-operate with other pupils or to work in other areas of room.
 - 5) Most pupils free to visit areas outwith the classroom for task-related purposes (eg, to measure playground, or consult books in school central library.)

34
8
34
13
3
41
12
451

36) FREEDOM OF ACCESS TO RESOURCES

- 1) Pupils have access to no materials other than those specified (or laid out) by the teacher for the immediate task. Requests for additional materials are usually not granted.
- 2) In addition to those materials specified (or laid out) by the teacher for the immediate tasks, pupils may, on request, be allowed additional materials if the teacher is satisfied of a genuine need for them. (There is likely to be, however, considerable stress on economy with all materials.)
- 3) Teacher tends to specify the basic materials required for each task but responds readily to reasonable requests for additional ones and/or permits free access at all times to a limited range of additional items. (Scarce materials are, however, carefully shared and economy is expected with most of the materials.)
- 4) A wide range of materials is in regular use and is freely available to pupils. However, there are certain materials and/or storage locations that may be accessed by pupils only when specifically instructed by the teacher.
- 5) Pupils have free access to all communal materials, although they may be instructed as to how and when scarce materials should be used. (Specific restrictions on access and use may be imposed in respect of dangerous items that the teacher wishes to be used only under supervision.)

VI. TEACHER PERSONALITY AND RELATIONSHIPS WITH PUPILS

37) TEACHER OVERT ANXIETY/CALMNESS

1) Teacher habitually shows very marked signs of anxiety or insecurity.

2) Teacher usually shows some signs of anxiety or insecurity.

3) Teacher normally at least fairly calm, but liable to show tension occasionally.

4) Teacher normally calm and never more than momentarily ruffled by events.

5) Teacher is habitually calm and unruffled in all situations observed.

38) NOISY/QUIET TEACHER

1) Teacher's voice heard loudly in all parts of the room whenever he/she speaks, even to individuals privately.

2) Teacher's voice audible in all parts of the room whenever he/she speaks, even to individuals privately.

3) Teacher clearly audible to those he/she is addressing but scarcely audible to class when speaking to individual or group.

4) Teacher speaks quietly but audibly when addressing class such that all individuals must attend in order to hear him/her. Speech to groups/individuals even quieter.

5) All speech to class at such an extremely low level that the class must strain to hear. Exchanges with individuals and groups are whispered.

39) NEGATIVE/POSITIVE APPROACH

- 1) Teacher emphasises error and wrongdoing. Praise is almost completely absent; even when pupils produce good work the smallest defect is picked on.
- 15
- 2) Teacher emphasises error and wrongdoing, and although praise is given it tends to be grudging, half-hearted, or casual.
- 71
- 3) There are no strong indications of a positive or a negative approach OR both are approximately equal.
- 36
31
- 4) Teacher tends to praise rather than blame. The general atmosphere is supportive but the use of praise is less systematic than in '5'. (Negative instructions/Comments may be converted into positive ones, but less regularly than in '5'.)
- 4
- 5) Teacher seeks opportunities to praise good or improved work/conduct and emphasises what has been achieved. Criticism and prohibition are almost completely avoided, positive comments/instructions being substituted.

NOTE: Praise that is indiscriminately and cursorily conferred (eg, without even looking at what is praised) should be weighted lightly.

40) PUPIL/TEACHER SOCIAL RELATIONSHIP

- 1) Teacher is reserved and creates distance between herself and the pupils such that pupils are dissuaded from making any avoidable approach.
- 1
- 2) Teacher distant but approachable within the constraints of teacher-imposed formal procedures.
- 52
- 3) Teacher approachable, being neither distant nor friendly.
- 64
- 4) Teacher approached on social as well as school topics; friendly but not treated as an equal.
- 2
- 5) Teacher very friendly with pupils - relationship approaching one of equality.

41) APPARENT TEACHER ATTITUDE TO CLASS

- 5
57
58
8
- 1) Teacher usually shows a strong dislike to class, being short-tempered, easily roused, and prone to engaging in altercations with pupils.
 - 2) Teacher seems unable to like class, being listless, dejected, and unenthusiastic about the teaching undertaken.
 - 3) Teacher usually shows neither particular pleasure nor particular displeasure in teaching class. The teaching may be characterised by professional and business-like behaviour.
 - 4) Teacher appears to enjoy teaching class; his/her behaviour is likely to be characterised by smiling, sympathetic interest in pupils, and/or a restrained/controlled enthusiasm.
 - 5) Teacher usually shows an ebullient enthusiasm for teaching class; his/her approach and reactions to class likely to be dynamic.

6
2
9
117

42) TEACHER HOSTILITY

- 1) Teacher seeks confrontations with pupils and responds to hostility with hostility.
- 2) Teacher does not seek confrontation with pupils but nevertheless is not slow to respond to at least some children with marked hostility.
- 3) Hostility exists between teacher and one or two children, but relationship with rest of class is good; save towards the minority of one or two, the teacher never displays animosity - though annoyance may sometimes be shown.
- 4) Teacher does not show hostility (even when provoked) and is skilled at disarming pupil hostility, if any.

NOTE: If teacher is never observed showing hostility or being subjected to hostility, '4' should be coded.

43) DEGREE OF TEACHER CONTROL ACHIEVED

- 1) Whole or substantial part of class refuses to accept any form of teacher control; teacher, being impotent, has given up serious attempts to control recalcitrant pupils.
- 2) Whole or substantial part of class refuses to accept any form of teacher control; teacher in effect impotent, but still striving to retrieve situation.
- 3) Teacher apparently unable to control effectively noise-level etc, but still manages to implement a programme of work, though perhaps a circumscribed one.
- 4) The teacher manages to maintain control of class and implement his programme of work; nevertheless his time and energies are taken up to such an extent that his teaching and/or the operation of the class's work is almost certainly to some degree impeded.
- 5) Although a certain effort in maintaining control is apparent, the implementation of the programme of work is not hindered significantly, if at all.
- 6) Class is controlled easily and effectively, thus allowing work programme to proceed with a minimum of friction or disturbance.

APPENDIX B

**SCOTS SCHEDULE
(Summative Version)**

**NOTE: This appendix contains only those items
of the summative version that differ from
those in the classroom version (Appendix A)**

- 87
- 1) There is no significant integration; nor is indication given that knowledge from one area of study/knowledge may be valuable in another; each area of learning is treated wholly separately or, if there are any links at all made between areas, they are at so superficial a level as to provide no genuine illuminations of either area.

- 28
- 2) Teacher sometimes draws pupils' attention to significant links between areas of study/knowledge but fails to make these links explicit. pupils have therefore to draw inferences for themselves, if they can, and consequently there can be no assurance that many pupils (if any) will find any genuine illumination of either area..

- 12
- 3) Significant links are established explicitly between areas of study/knowledge, but the practice of establishing these links is less pervasive than in '4'. The level of illumination of one subject area by another is such that pupils' depth and width of understanding is likely to be enhanced.

- 4) Integration and cross-referencing of knowledge is a regular feature of classroom life. Whenever an appropriate occasion arises, significant links between areas of study/knowledge are established, usually explicitly, such that pupils are given every chance to see all knowledge as one and at times at least, the depth and width of their understanding in specific areas is likely to be enhanced. Alternatively, this degree of integration may be attained by means of a project very carefully designed to provide links in depth with a number of subject areas in the curriculum.

NOTE: Coding of Category 3:-

In the course of five observations, there are likely to be only a few instances of integration for teachers who should be coded in this category. The degree to which areas of work are integrated on the occasions observed is the criterion that should separate this category from '2'. Even one instance of very thorough integration may be taken as justification for coding '3'.

16) NATURE OF TEACHER CONTACTS WITH INDIVIDUAL PUPILS

- 1) No '1s' or '2s'

- 18) 2) No '2s', only a little of '1'.

- 3) No '2s', but '1s' occur often.

- 57) 4) Some occurrence of '2' (almost 'certainly' accompanied by '1s').

- 21) 5) '2s' occur often (almost certainly accompanied by '1s').

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17) FEEDBACK TO PUPILS (CONCURRENT AND RETROSPECTIVE)

	(a)	(b)
5 3	1) OR 2)	'1' '1' '2'/'3'
	3)	'2' OR '3'
63 4	4) OR OR	'1' '3' '2'/'3'
	5)	'4' OR OR
	6)	'1'/'2' '2'/'3' '1'
25	7)	'4' OR '2'/'3'
29		'5' '4' '3'/'4'
6		'5'

NOTE: This table enabled observers to combine their separate final codings for concurrent and retrospective feedback. Its aim sought to allow a higher level on the one to compensate to some degree for a lower level on the other.

Interpretation of summarised schools:

26	1. More than one activity observed on no occasion (five points)	
60	2. Almost certainly a maximum of three to four activities and generally two or less (six to nine points)	
39	3. Minimum of three activities at least once <u>OR</u> two activities every time (ten to fourteen points)	
3	4. Generally at least three activities and possibly up to six on occasions (fifteen to seventeen points <u>OR</u> seventeen + points with no 'five')	
0	5. Generally a large number of activities, with at least seven on at least one occasion (seventeen + with points, with a 'five')	

NOTE: The number of simultaneous activities observed to occur often varied considerably from one observation to another. To take account of this points were allotted for each observation - a coding of category 1 scored one point, of category 2, two points etc. How final, 'summative' codings were derived from these points is shown above. The text constitutes an interpretation of these points totalled - one that takes into account the various ways in which those totals might be secured.