A SURVEY OF TEACHING PRACTICES IN THE JUNIOR GRADES OF IRISH PRIMARY SCHOOLS

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A questionnaire to investigate their teaching practices was sent to a representative sample of teachers in junior grades (junior infants, senior infants, first class) in Irish primary schools. Completed questionnaires were received from 581 teachers in 245 schools. In the language area, reading was the activity that received most attention in all three grades. Most children were introduced to a reading scheme within a few months of their initial entry to school and were expected to make fairly rapid progress through the stages of the scheme. Teachers across the three grades devoted progressively more attention to 'formal' number activities. Although groups for instructional purposes were formed by most teachers, whole-class teaching was the most favoured teaching strategy employed. Teachers' opinions about issues and objectives in junior-primary education revealed a discrepancy between what teachers thought should happen in classrooms and what actually happened.

In recent years, the appearance of empirical studies of what takes place on a day-to-day basis in primary classrooms in Ireland (3, 4, 5, 6, 7, 14) has contributed greatly to the stock of information needed to mount an informed debate about primary education. Yet, there remain a number of areas about which little information is available. One such area is the period covering the first three years of pupils' experience of school. The absence of empirical information can be seen in a number of both popular and academic debates which have taken place in recent years, all of which are marked by the paucity of empirical evidence available to support contrasting claims about what takes place in junior-primary ('infant') education and, by extension, how education at this level might be characterized.

The fact that early childhood education in Ireland is provided for the most part within the context of the primary-school system is unusual by international standards (see 15, 16) and has, from time to time, given rise to

public debate about the appropriateness of the early educational experiences of Irish children (see, 12, 13)

Contributors to the debate on early education in Ireland seem to adopt widely varying views about what happens in classrooms Suggestions that 'formal' rather than 'playschool' approaches typify teaching at the early stages of primary schooling (e g , 18) contrast with images depicted by a government policy document

> The work done in the primary school is designed as a continuum from the more informal work in the Infant Classes to the more formal work in the subsequent years   The usual infant cycle in primary schools today takes in the years of pre-compulsory education During the years in Infants, children's personalities are further developed through learning by doing They learn through play, through interaction with their environment, through group teaching and by individual learning There is a carefully structured programme of informal work and play activity designed so that certain objectives may be achieved (13, p 5)

However, even while maintaining this position, the 'official' view acknowledges that 'while the programme may be informal the circumstances in which it is taught are not always so, particularly in the many schools where an individual teacher has responsibility for teaching a number of standards together' (12, p 10) Extremes of view concerning the nature of early education within the primary-school system and its effects on pupils appeared also in contributions to parliamentary debates on the age of entry to primary schooling (see 10)

The existence of official curriculum handbooks (11) does not help resolve these evident uncertainties about the exact nature of early education in Irish schools While the philosophy and general orientation of the handbooks are those which one might associate with an informal approach, the specific aims and activities listed include references to fairly high levels of skills in relation to reading, writing and, to a lesser extent, number

The survey described in the present paper was undertaken to provide empirical information about teaching practices of teachers of the first three grades of primary school (junior infants, senior infants, first class) Similarities and differences between the teaching practices used at each of

the three levels are examined. In the light of this information, we evaluate the accuracy of competing views about the nature of education in the lower classes of Irish schools. In particular, we ask whether such education is more properly characterized as formal or informal. While consensus on the distinction between formality and informality in the empirical research literature of the last ten years (e.g., 1, 2, 5, 6, 8) is not much more evident than it is in the more public arena discussed earlier, the reality of the distinction in the minds and in the discourse of teachers cannot be denied (6).

For the purposes of the present paper, formality and informality in teaching practices are operationally defined in terms of contrasts along two dimensions: the kinds of skills promoted and the nature of the teacher-pupil interaction that takes place. With regard to the kinds of skills promoted, the contrast is between specific skills in reading, writing, and mathematics (formal) and general cognitive, linguistic, affective, and social skills which are thought of as prerequisites of specific skills (informal). With regard to teacher-pupil interaction, informality and formality are contrasted in terms of the emphasis given to group and individual work (including pupils' freedom to select and organize aspects of their own work) (informal) and the emphasis given to whole-class teaching (formal). Teachers' more general orientations towards the formality/informality distinction are examined using data on their opinions about a number of issues related to infant education and about the relative appropriateness of several possible objectives for such education.

METHOD

Sample

The target population for the study was the population of infant (junior and senior) and first-class teachers in primary schools in the Republic of Ireland during the school year 1980-81. It was estimated that this population numbered approximately 6,809 teachers (Table 1). The sampling design used to select a representative sample of teachers may be classified as a stratified simple one-stage cluster sampling procedure (9). Schools (clusters) were chosen with equal probabilities and all teachers of the relevant grades within each school were chosen. This procedure was designed to yield a self-weighting sample of teachers (17, pp. 146-148). It was decided to seek a target sample of 10% of the population of infant (junior and senior) and first-class teachers.

TABLE 1

NUMBERS OF TEACHERS AND SCHOOLS, RESPONSE RATE, AND ACHIEVED
SAMPLING FRACTION

	Teachers	Schools
	N	N
Population	6,809*	2,913
Target Sample	1,051*	345
Effective Sample	581	258
Response rate	581 / 1,051* = 55	
Achieved sampling fraction (f)	581 / 6,809* = 09	

*These figures are estimates since only data on the total number of teachers in each school were available An estimate of the number of junior infant, senior infant, and first class teachers in a school was obtained by dividing the sum total of pupils at these three levels by the mean class size for that school

Using a Department of Education computer listing of primary schools which included data on numbers of teachers, 345 primary schools were selected so as to yield, allowing for an anticipated non-response of 40% of teachers, an approximate effective sampling fraction (n/N) of 1 of the population of teachers (Table 1) Sampling incorporated three stratification factors school type (junior primary cycle only or complete primary cycle), gender of pupils attending the school (boys, girls, mixed), and school size (2-3, 4-7, 8-12, and 13 + teachers) This stratification design yielded 24 cells While the sampling fraction used was constant over all cells, cell numbers were 'topped up' whenever the sampling fraction yielded less than seven schools per cell Some population cells actually included fewer than seven schools, in these cases, all the schools in the population cell were selected

Altogether, 581 teachers from 245 schools returned completed questionnaires The achieved sampling fraction for the study was approximately 09 or 9% of the population of teachers The response rate was 55 The respondents to the survey included 239 (41 1%) teachers of mixed-grade classes These teachers were excluded from consideration in the analyses described in this paper since many of their responses were qualified for the particular mix of grades they taught

Procedure

Questionnaires were sent to the principals of the schools of the teachers selected for inclusion in the sample. Formal approval for the study was sought from each principal using a cover letter which also contained instructions for the distribution of the questionnaires to all infant and first-class teachers who agreed to participate. The principals were also requested to return a data-sheet showing the number of teachers of the relevant grades in the school and the number agreeing to participate. Each participating teacher received a cover letter, a questionnaire, and a stamped-addressed envelope, although not all of the teachers who accepted questionnaires from their principals actually returned them.

Questionnaire Data

The teaching practices of teachers are examined under four headings: language teaching, mathematics teaching, classroom organization, and issues and objectives in infant education.

Language teaching. The data on language teaching consist of teachers' estimates of time spent on various language-teaching activities (e.g., reading, writing) and teachers' reports of aspects of their the use of English-language reading schemes. Aspects of reading-scheme use considered included the number of schemes used, the proportion of reading-teaching time devoted specifically to use of schemes, the timing of pupils' introduction to reading schemes, and the number of reading-scheme stages to which pupils were exposed during the school year.

Mathematics teaching. Three aspects of mathematics teaching were examined. The first was the teachers' preference for one or other of two approaches to the teaching of mathematics: (i) the development of computational skills and (ii) the development of mathematical concepts. The second aspect was the teachers' ranking of seven types of mathematics-teaching activities in terms of the relative emphasis given to each in the teachers' own classrooms. The seven types of activities were: exploration of materials (e.g., sand, water), sorting and classifying, relations between people and objects, ordering of shapes, ordering of numbers, counting in sequence, and simple computation. These types of activities were drawn from the mathematics section of the official curriculum handbook for teachers (11) or from teachers' descriptions of their mathematics programmes which had been obtained by one of the authors in an in-service course for teachers of

infant classes The third aspect of mathematics teaching considered was the teachers' use of tables as part of their mathematics programme, specifically whether they expected pupils to learn tables and, if so, what sort (addition, subtraction, multiplication)

Classroom organization Data on classroom organization included information on teachers' grouping practices number of groups used, use of separate groups for different subjects, frequency of group changes, rationale or basis for forming groups, month of group creation, and time spent working with groups In addition, information on pupils' freedom in the classroom was obtained in relation to specific issues (seating arrangements, movement around the class, conversation among pupils)

Infant education Issues and objectives The final heading under which teachers' practices were examined dealt with (i) the extent of teachers' agreement/disagreement with a number of issues relating to infant education and (ii) the relative emphasis they would put on several proposed objectives for infant education

RESULTS

Language Teaching
Teachers at each grade level were asked to estimate the amount of time they devoted each week to each of several language-teaching activities The total time devoted each week to language teaching was computed by summing the times allocated to the component activities A gross index of the formality of language teaching was then calculated by expressing the weekly time allocated to activities defined as formal language activities as a proportion of the total weekly time allocated to language teaching Teachers' estimates of time spent on various language activities are summarized in Table 2, which also includes estimated aggregates for total language time, time on formal and informal language activities, and values for the index of formality of language teaching

Within-grade comparisons using matched-pairs t-tests indicated that formal language activities were given significantly more time than informal language activities at each of the three grade levels (Table 2) Junior-infant teachers gave proportionately less time to formal activities than senior-infant or first-class teachers

TABLE 2

TEACHERS' TIME ALLOCATION (HOURS PER WEEK) TO LANGUAGE-TEACHING ACTIVITIES, BY GRADE

| | Grade | | | | | | Analysis of variance | | |
| | Junior infants (JI) (N:115) | | Senior infants (SI) (N:98) | | First class (FC) (N:88) | | | | Scheffé contrasts |
Language teaching activity	M	SD	M	SD	M	SD	F	p	(.05)
Total	9.8	4.2	10.3	4.6	8.5	3.9	4.5	.05	SI > FC
Formal	5.2[a]	2.5	6.2[a]	2.5	5.4[a]	2.5	4.3	.05	JI < SI
Reading	3.1	1.7	3.5	1.5	2.9	1.5	3.1	.05	-
Writing	2.0	1.2	2.2	1.3	1.7	1.0	4.3	.05	SI > FC
Spelling	0.1	0.2	0.5	0.5	0.8	0.5	-	-	-
Informal	4.6	2.7	4.2	2.9	3.1	2.1	8.6	.001	JI/SI > FC
Reading stories	1.3	0.7	1.2	0.8	0.9	1.1	6.5	.01	JI > FC
Promoting oral language	1.7	1.4	1.6	1.4	1.4	1.0	1.6	NS	-
Other	1.5	1.7	1.4	1.7	0.8	1.2	6.0	.01	JI/SI > FC
Formal as proportion of Total	.54	.13	.61	.12	.65	.12	23.3	.0001	JI < SI/FC

[a] Formal time vs. informal time within grade:

Junior infants:	$t = 2.2$; $p < .05$
Senior infants:	$t = 6.7$; $p < .001$
First class:	$t = 9.4$; $p < .001$

When the individual language activities were examined more closely, a number of interesting points emerged (Table 2) Reading was the main language-teaching activity used by all teachers, regardless of grade Approximately one-third of language teaching time at each grade was devoted to reading, no between-grade differences in time devoted to reading were evident It was also clear that writing, the second of the activities designated as formal, received a good deal of attention On the other hand, the amount of time devoted to the teaching of spelling was not large — less than an hour per week in all cases However, there was evidence of increasing emphasis on spelling over grade level Virtually all first-class teachers taught spelling while the figure for senior-infant teachers was 68%, in contrast, only 15% of junior-infant teachers taught spelling In view of the almost non-existence of spelling teaching in junior-infant classes, it is noteworthy that the time spent on reading and writing together took up almost all the formal language activity time at this grade level

With regard to the individual activities designated as informal, it is clear that the reading of stories by the teacher was a moderately popular activity at all grade levels, significantly more so in first classes than in junior-infant classes The time devoted to story telling was proportionately similar at all three grade levels

Use of Reading Schemes While it is clear that reading instruction was an important feature of the infant curriculum, the nature of the reading instruction remained unclear from the time data alone To overcome this, data were examined which shed light on one way in which reading might be taught The focus was on the teachers' use of graded reading schemes, specifically English-language reading schemes

Between-grade differences in the number of schemes used were observed $(\chi^2 = 12\ 85,\ df\ 2, p < 01)$ More first-class teachers (71%) than junior or senior–infant teachers (50% and 48% respectively) used only one scheme The remaining teachers indicated that they used two or more reading schemes

A measure of the importance of the reading scheme(s) as an aspect of the teaching of reading was given by the proportion of total time allocated to teaching reading which was devoted to the reading scheme Using a closed-question format, scheme users were asked to indicate which of five

percentage intervals approximated best to the percentage of total time allocation to reading which they devoted to working with reading schemes. The teachers' responses indicated that graded reading schemes formed a substantial part of the approach to teaching reading of many teachers (Table 3). This was true even though between–grade differences existed in the

TABLE 3

PERCENTAGE OF TIME SPENT TEACHING READING DEVOTED TO READING SCHEME(S), BY GRADE

	Junior Infants (N:115)	Grade Senior Infants (N:99)	First Class (N:87)
Time spent teaching reading:			
Percentage devoted to reading scheme(s)	%	%	%
Up to 20%	12.2	7.1	14.9
21% to 40%	31.3	16.2	13.8
41% to 60%	32.2	38.4	29.9
61% to 80%	19.1	31.3	31.0
81% to 100%	5.2	7.1	10.3

response distributions ($\chi^2 = 18.4$; df: 8.4; $p < .05$). The latter differences showed comparatively more junior-infant teachers as allocating less reading time to the reading schemes.

One of the issues with which we were chiefly concerned was the extent to which teachers were willing to postpone the introduction of formal reading. A question was included to determine the month of introduction for 'weak', 'average', and 'good ability' groupings; the results are presented in Table 4. To facilitate presentation, the response options (i.e., month in the school year) were grouped into three approximate school terms.

There were some contradictions in the teachers' reports regarding their timing of the pupils' introduction to formal readers. According to 88% of junior-infant teachers, the 'weak' pupils in their classes had been introduced to a formal reader sometime before leaving the junior-infants class. Only 59% of senior-infant teachers, however, timed their 'weak' pupils' introduction to

TABLE 4

PERCENTAGES OF TEACHERS WHO INTRODUCED READING SCHEMES AT DIFFERENT
TIMES IN THE YEAR, BY GRADE AND ABILITY LEVEL OF PUPILS

Grade and ability level of pupils

	Junior infants (N 113)			Senior infants (N 91)			First class (N 84)		
	Weak'	'Average'	'Good'	'Weak'	'Average'	'Good'	'Weak'	'Average'	'Good'
Time of introduction	%	%	%	%	%	%	%	%	%
Before entry	1	1	1	59	82	88	89	96	98
September December	13	35	59	32	13	11	10	4	2
January March	43	50	35	4	3	1	1	0	0
April June	31	12	4	2	1	0	0	0	0
In next grade	12	2	1	2	0	0	0	0	0

a formal reader as before entry to senior infants. Similar discrepancies in the junior-infant and senior-infant teachers' reports existed for the 'average' and 'good' pupils, while the pattern was repeated in the reports of senior-infant and first–class teachers for the 'weak–ability' group. These latter discrepancies, however, were relatively minor.

In relation to their use of graded reading schemes involving several stages or levels of readers, the teachers were also asked to indicate the particular levels of their chosen schemes to which pupils were exposed. As with the previous question, teachers were asked to differentiate between their 'weak', 'average', and 'good'-ability pupils. The teachers' responses, presented in Table 5, show a steady progression through the levels of the reading schemes associated both with grade level and with pupil-ability level within grade level. If use of a reading-scheme level with at least one group of pupils by at least two-thirds of teachers is adopted as indicative of a reading limit for each grade, it can be seen that the first, second, and fourth levels respectively form limits for junior infants, senior infants, and first class. It is apparent also that the usage patterns of reading-scheme levels by grade overlap across grades. The modal number of reading-scheme levels used with each ability group in each grade was two, except with the 'weak' pupils in junior-infant classes (Mode = 1) (Table 6). The information presented in Tables 5 and 6 represent normative data on reading-scheme use with pupils of varying ability for the three grades surveyed.

Mathematics Teaching
The contrast between formality and informality in relation to the teaching of mathematics is probably best seen in the relative emphasis given to the acquisition of specific computational skills and knowledge and to the development of mathematical concepts. Teachers were asked to indicate the approach to which they devoted most attention. They were then asked to rank seven mathematics activities in terms of the relative emphasis each received in their classrooms.

Approaches emphasized in the teaching of mathematics. Teachers' emphasis on approaches to mathematics teaching changed with grade level. The direction of this change was increasingly towards 'formality' of teaching. Of the junior-infant teachers surveyed, 85% placed the emphasis on the development of mathematical concepts rather than on the development of computational skills (11% placed emphasis on skills). This marked

TABLE 5

PERCENTAGES OF TEACHERS USING ENGLISH-LANGUAGE READING SCHEME LEVELS, BY GRADE AND ABILITY LEVEL OF PUPILS

	Grade and ability level of pupils								
	Junior infants (N 113)			Senior infants (N 91)			First class (N 84)		
	Weak'	Average'	Good'	Weak'	'Average	'Good'	'Weak'	'Average'	'Good'
Scheme level used	%	%	%	%	%	%	%	%	%
No level used	18	4	4	5	2	2	6	3	3
Primer	81	90	91	54	30	30	13	7	7
Level 1	31	74	78	79	78	72	46	13	11
Level 2	0	3	11	43	80	85	63	52	34
Level 3	0	0	3	1	18	34	49	84	80
Level 4	0	0	2	0	1	6	14	36	67
Level 5	0	0	0	0	0	1	2	4	16
Level 6	0	0	0	0	0	0	0	1	1

Note As each teacher may use none some or all of the levels the columns in this table are not frequency distributions (i e , they do not sum to 100%)

TABLE 6

PERCENTAGES OF TEACHERS USING DIFFERENT NUMBERS OF ENGLISH-LANGUAGE
READING SCHEME LEVELS, BY GRADE AND ABILITY LEVEL OF PUPILS

	Grade and ability level of pupils								
	Junior infants (N 113)			Senior infants (N 91)			First class (N 84)		
	Weak'	Average'	'Good'	'Weak'	'Average'	'Good'	'Weak	'Average'	'Good'
Number of levels used	%	%	%	%	%	%	%	%	%
None	18	4	4	5	2	2	6	3	3
One	51	28	22	31	24	19	31	26	20
Two	31	65	64	45	46	43	39	50	48
Three	0	3	7	19	23	25	19	16	21
Four	0	0	1	0	5	10	6	4	4
Five	0	0	2	0	1	1	0	0	2
Six	0	0	0	0	0	1	0	0	0
Seven	0	0	0	0	0	0	0	0	0

difference in the relative emphasis given to these two approaches to mathematics teaching had disappeared by first class where similar proportions of teachers emphasized each approach (47% emphasized computational skills, 48% mathematical concepts) An intermediate position was taken by senior-infant teachers, 38% of whom gave more emphasis to the development of computational skills while 57% emphasized the development of mathematical concepts Approximately 4% of teachers at each grade level reported that they placed equal emphasis on the two approaches even though this option was not provided for in the question format A chi-square analysis indicated highly significant differences in group-response distributions (χ^2 = 39 35, df 4, p < 0001)

Teachers were also asked to rank seven types of mathematics activities in terms of the relative emphasis each received in the teachers' own classrooms The activities ranked by the teachers are listed in Table 7 and roughly define a scale of increasing degree of formality, with 'exploration of materials' as the least formal activity Table 7 also presents mean rankings of the emphasis given in the classroom to the seven mathematics activities and the results of several one-way analyses of variance, the between-grade differences identified in the latter analyses are more readily discernible in Figure 1 These data show clearly junior-infant teachers' preference for the more informal activities There were grade differences in emphasis for five of the seven activities Activities dealing with 'relations between people and objects' (M = 4 9, SD = 1 9) and 'ordering of shapes' (M = 4 9, SD = 1 7) were given similar emphasis across the three grades (A ranking of '1' indicates the activity getting the most emphasis, '7' indicates the activity getting the least emphasis)

Scheffé tests of paired contrasts were performed for the five activities yielding significant F-ratios For three activities, there were significant differences between each of the groups 'Exploration of materials' and 'sorting and classifying' got relatively more emphasis in junior infants than in either senior infants or first classes while the senior-infant teachers emphasized both these activities more than first-class teachers For 'simple computation', this pattern was reversed, less emphasis was given by junior-infant teachers than by teachers of the other grades while senior-infant teachers also placed significantly less emphasis on this activity than first-class teachers

TABLE 7

MEAN TEACHERS' RANKINGS OF EMPHASIS GIVEN TO VARIOUS MATHEMATICS ACTIVITIES, BY GRADE

| | Grade | | | | | | Analysis of variance | | |
| | Junior infants (JI) (N:128) | | Senior infants (SI) (N:108) | | First class (FC) (N:90) | | | | Scheffé contrasts |
Mathematics activity	M	SD	M	SD	M	SD	F	p	(.05)
Exploration of materials	2.9	2.2	4.7	2.5	5.6	2.2	40.5	.0001	JI > SI > FC
Sorting and classifying	2.3	1.5	3.8	2.2	5.2	2.0	62.2	.0001	JI > SI > FC
Relations between people and objects	4.7	1.9	4.9	2.0	5.1	1.9	1.4	NS	.
Ordering of shapes	4.6	1.6	4.9	1.7	5.1	1.7	2.2	NS	.
Ordering of numbers	3.5	1.6	2.7	1.4	2.7	1.7	12.5	.0001	JI < SI/FC
Counting in sequence	4.1	1.7	3.7	1.9	3.0	1.4	10.7	.0001	JI/SI < FC
Simple computation	5.5	1.9	3.2	2.2	2.3	1.8	80.4	.0001	JI < SI < FC

FIGURE 1

TEACHERS MEAN RANKINGS OF MATHEMATICS ACTIVITIES BY GRADE

MATHEMATICS ACTIVITIES
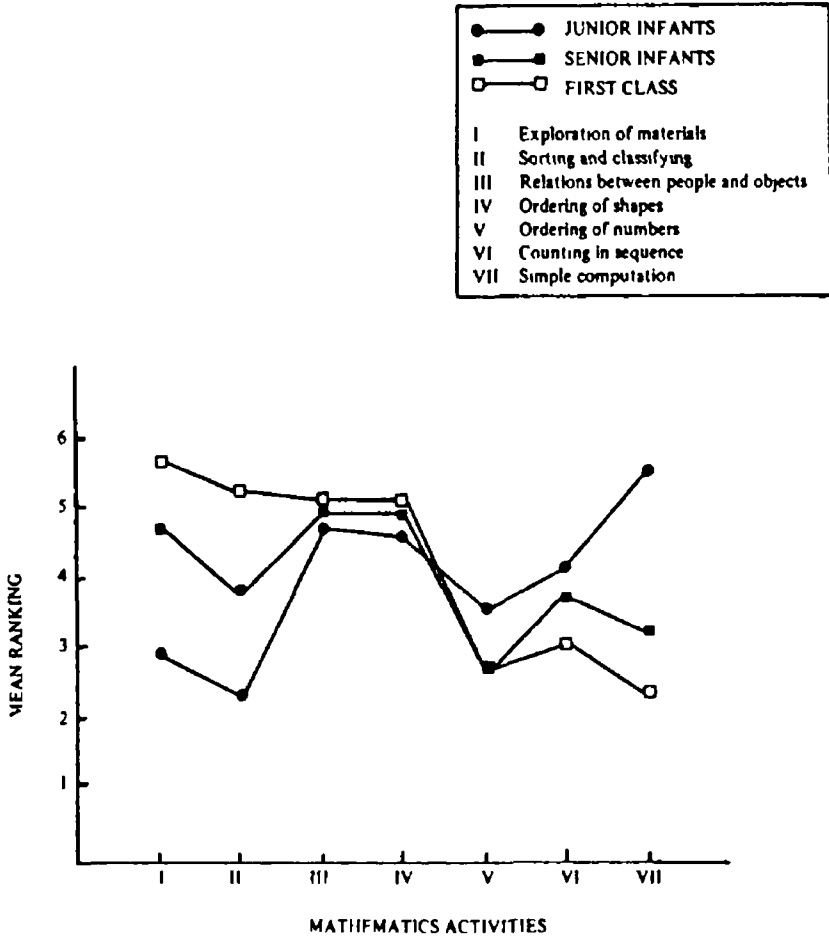
The steady change in emphasis given to the latter three activities over all three grades was not repeated for the two remaining activities ('ordering of numbers' and 'counting in sequence') Junior-infant teachers placed significantly less emphasis on the former activity than either of the other groups of teachers who placed similar levels of emphasis on the activity For the latter activity ('counting in sequence'), junior-infant and senior-infant teachers were grouped together in that they both gave it less emphasis than did first-class teachers

The Inclusion of Tables

In keeping with their instructional emphasis on the development of mathematical concepts, the vast majority (95 5%) of junior-infant teachers did not expect their pupils to learn tables In contrast, only 18% of first-class teachers did not expect their pupils to learn tables, while senior-infant teachers occupied an intermediate position, 65% of them did not expect tables to be learned A chi-square analysis over the three groups of teachers yielded an approximate chi-square value of 148 which, with two degrees of freedom, had an associated probability value of less than 0001

Of those teachers who expected their pupils to learn tables, all the senior–infant teachers and all but one of the first–class teachers expected their pupils to learn addition tables Subtraction was dealt with by only five senior–infant teachers (15% of those teaching tables), but by 65% of first–class teachers Only 9% of first–class teachers expected their pupils to learn multiplication tables

Classroom Organization

The aspects of classroom organization which were particularly pertinent were the extent to which teachers divided their classes into groups, the basis, nature, and rigidity of within-class groupings, and the extent to which teachers engaged in work with groups as opposed to working with individual pupils or with the class as a whole

The majority (88%) of teachers divided their classes into groups for teaching purposes Only small (statistically non-significant) between-grade differences were apparent between the proportions of teachers who group

Respondents who indicated that they grouped were subsequently asked to indicate whether they created separate groups for different subjects, the

number of groups into which the class was divided, the frequency of group changes, the rationale or basis for forming the groups, and the month the groups were first created

For all teachers, the mean number of groups into which the class was divided was 3 6 (n = 251, 95% CI 3 43-3 75) The between- grade variation in the number of groups used was not statistically significant Significantly fewer junior-infant teachers (71%) than either senior-infant (88%) or first-class teachers (89%) created separate groups for different subjects (χ^2 = 13 68, *df* 2, *p* < 01) Of the teachers who grouped, 54% supplied numerical estimates of the frequency of changes in group composition over the school year For these teachers, the mean number of estimated group changes per year was 4 2 As with the data on the number of groups used, there was no evidence of between-grade variation in the number of changes made to the groups over the school year Non-numerical estimates of the number of group changes over the school year were given by a further 38% of teachers who grouped These estimates indicated that 31% of the teachers changed their groups 'very often' while 7% did so 'an odd time' The former response had been suggested as a response option to teachers who made frequent changes but who felt unable to give a numerical estimate of the number of group changes

No significant between-grade differences were evident in reply to a request to select one of several statements as the most appropriate descriptor of the basis used for grouping pupils (Table 8) Grouping was carried out predominantly on the basis of an ability or attainment differentiation among groups (e g , 'good' groups, 'weak' groups) Altogether, 80% of the teachers who divided the class into groups did so to define groups which were relatively internally homogeneous on some index of ability or attainment A further 10% also grouped on the basis of pupil ability or attainment, but with the different objective of defining groups which were relatively internally heterogeneous (e g , some 'weak' and some 'good' pupils in each group)

Teachers of junior-infant classes divided their classes into groups later in the school year than teachers in the more senior classes By the end of October, only 24% of junior-infant teachers had introduced grouping, compared with 73% of senior-infant and 74% of first-class teachers (Table 9) Thus, while groups were used by the majority of teachers and while groupings tended to be similar in extent and stability across the three grades,

TABLE 8

PERCENTAGES OF TEACHERS REPORTING DIFFERENT BASES FOR CREATING
WITHIN-CLASS GROUPINGS

		All respondents (N 294)	
Basis for grouping		%	95% CI
1	Grouping on the basis of ability or attainment good pupils in one group, weak pupils in another	80	75 — 85
2	Grouping on the basis of ability or attainment good and weak pupils evenly distributed among groups	10	07 — 14
3	Grouping designed to keep all trouble makers together	0	—
4	Grouping designed to distribute trouble makers among groups	3	01 — 05
5	Grouping on no particular basis (e g , random assignment)	4	02 — 06
6	Grouping on the basis of some mixture of 1, 2, 3, 4, and 5	1	00 — 03
7	No explanation for grouping given	2	00 — 03

TABLE 9

PERCENTAGES OF TEACHERS WHO HAD INTRODUCED WITHIN-CLASS
GROUPINGS BY A PARTICULAR MONTH BY GRADE

	Grade		
	Junior Infants (N 112)	Senior Infants (N 97)	First Class (N 85)
Month of introduction	Cum %	Cum %	Cum %
September	8	29	34
October	24	73	74
November	57	89	93
December	64	94	93
January	94	96	97
February	98	98	97
March	100	98	98
April	101	99	98
No response	101	100	99

TABLE 10

MEAN PERCENTAGES OF TEACHERS' CLASS TIME GIVEN TO SEVERAL
CLASSROOM ACTIVITIES

	All respondents (N 326)	
Clasroom activity	M	SD
1 Teacher teaching class as a whole	45	16 1
2 Pupils working together in groups on work prescribed by the teacher	23	14 3
3 Pupils working together in groups on work of their own choice	4	6 5
4 Pupils working individually and at their own pace on work prescribed by teacher	22	14 5
5 Pupils working individually at their own pace on work of their own choice	7	7 7

Note   The data in this table are based on all respondents regardless of whether they indicated
that they grouped or did not group

junior-infant teachers tended to postpone the introduction of grouping This
contrasts with the practice of senior-infant and first-class teachers for whom
grouping seemed to form a much more integral part of their teaching

Although the existence of groups was obviously a very prominent feature
of infant classrooms, it appears that teachers spent relatively little time
working with groups This can be seen from Table 10 which shows responses
to a question which asked teachers to estimate the amount of time they spent
on each of five activities Only 27% of teaching time was devoted to group
work Most of this time (i e , 23% of the total time) was given to pupils
working in groups on work prescribed by the teacher During the remaining
time (4%) spent on group work, the pupils were allowed to choose the work
for their own groups In contrast with the amount of time spent on group
work, an average of 45% of total class time was allocated to teaching the class
as a whole There was negligible between-grade variation for each of the five
teaching activities listed

An index of the amount of freedom afforded to children to choose their own work was calculated by combining the third and fifth categories listed in Table 10 (i.e., 'pupils working in groups on work of their own choice' and 'pupils working individually at their own pace on work of their own choice'). The overall sample average on this index was approximately 11% and was also consistent over the three grades.

Further information on the freedom afforded to pupils was obtained from questions about seating arrangements, movement around the class, and conversation among pupils.

A majority of teachers in all grades did not allow their pupils to choose where they sat in the classroom. However, there were differences between first-class teachers, on the one hand, and junior- and senior-infant teachers on the other hand. Approximately four-fifths (81%) of first-class teachers did not allow free choice of seats while approximately two–thirds of junior–infant (69%) and senior-infant (65%) teachers did not allow choice ($\chi^2 = 7.3$; df: 2; $p < .05$). Of those teachers who did allow free choice, almost five out of six permitted pupils to choose their own seats for only some subjects. Only 5% of all teachers allowed free choice of seats for all or most subjects.

Pupil movement around the class was permitted 'sometimes' by 83% of teachers. Only 3% never allowed their pupils to move around the classroom. The remaining 14% of respondents indicated that they 'usually' permitted movement. The response distributions of the teachers in the three grades showed remarkable similarity. Nine out of ten teachers, regardless of grade, also indicated that they sometimes allowed their pupils to talk quietly to each other during class.

Infant Education: Issues and Objectives
All of the data presented so far deal with teachers' reports of what typically transpires in their own classrooms. The final set of findings to be presented are derived from a section of the questionnaire in which teachers were given an opportunity to express their views about the state of infant education and how it might be improved. Two approaches to this task were employed in the questionnaire. The first involved the presentation of several contrived statements and required the teachers to indicate on a five-point scale the extent of their agreement with each statement: '1' for strongly agree, '2' for agree, '3' for uncertain, '4' for disagree, and '5' for strongly disagree. The

TABLE 11

MEAN LEVELS OF TEACHERS' AGREEMENT AND PERCENTAGES OF TEACHERS AGREEING AND DISAGREEING ON ISSUES IN INFANT EDUCATION

Issue in infant education	M	SD	All respondents (n 295)	
			% Agreeing*	% Disagreeing*
1 Children should not be admited to school until they are at least six years old	3 8	1 3	23	70
2 Children should continue to be admitted to school at age four but the academic content of the infant programme should be replaced by a preschool/nursery school type approach	2 2	1 4	69	22
3 Children should continue to be admitted to school at age four but the length of the school day should be shortened	2 7	1 4	52	31
4 The middle infants standard should be reintroduced	2 0	1 2	68	15
5 The new curriculum does not place enough emphasis on basic skills at the infant and first class levels	3 4	1 4	31	56

*Figures for the percentages agreeing represent aggregates of those agreeing and strongly aggreeing, figures for the percentages disagreeing represent aggregates of those disagreeing and strongly disagreeing

second approach required teachers to rank seven possible objectives of infant education

The results obtained using the first approach are presented in Table 11 in the form of means and standard deviations The table also includes for each statement the percentages of teachers 'agreeing' or 'strongly agreeing' and the percentages 'disagreeing' or 'strongly disagreeing' Perhaps the most noteworthy findings are those in relation to the second and fifth statements which indicate that over two-thirds of teachers would favour a more informal programme than that currently in place and that over half of the teachers

disagreed with the statement that 'the new curriculum does not place enough emphasis on basic skills at the infant and first class levels' With regard to the other statements, only a minority (less than a quarter) of teachers indicated support for a proposal that the age of school entry be raised to six, slightly more than half the teachers indicated support for a shortening of the school day, while a larger majority (68%) expressed themselves in favour of the introduction of a middle-infants standard, by way of an extension of the 'infant' stage of primary education (comprising currently junior and senior infants) to three rather than the present two years

TABLE 12

TEACHERS' MEAN RANKINGS OF SEVERAL PROPOSED OBJECTIVES OF INFANT EDUCATION

	All respondents (n 331)	
Objectives of infant education	M	SD
1 To foster the social and emotional development of the child	2 2	1 5
2 To help the child develop a more positive attitude towards learning	3 4	1 7
3 To give children an understanding of the world in which they live	3 4	1 9
4 To foster the creative abilities of the child	4 3	1 6
5 To give the child a grasp of basic reading and number skills	4 3	1 7
6 To promote the moral development of the child	4 3	1 9
7 To prepare the child for later academic work	6 0	1 4

Note The objectives are listed in order of teachers' judged importance The scale used runs from '1' for most important to '7' for least important Thus, low numbers indicate a high-ranking for an objective Tied rankings may occur when teachers judge two or more objectives to be of equal imporance

Table 12 gives the average rank assigned by teachers to the seven
alternative objectives of infant education described earlier It is perhaps
significant that what might be termed 'academic aims' (items three and five)
received relatively little support The objective which was regarded according
to these data as most important was the one dealing with social and emotional
development This objective clearly falls at the informal end of the
formal/informal continuum

DISCUSSION

The main purpose of the study reported in this paper was to provide
descriptive information about what goes on in the classrooms of junior-infant,
senior-infant, and first-class teachers in Irish primary schools We focused
on two aspects of classroom life the content of the programme (i e , the skills
and knowledge emphasized by teachers) and the instructional strategies used
by teachers (i e , the nature of the interactions between teachers and their
pupils) in the teaching of mathematics and language We also considered
data on teachers' opinions on issues and objectives in infant education

The data on mathematics indicate an increasingly academic orientation
as one moves up the three grade levels The vast majority of junior-infant
teachers regarded the development of mathematical concepts as a more
important objective than the acquisition of specific computational skills In
contrast, first-class teachers reported placing approximately equal emphasis
on both objectives Senior-infant teachers occupied a position approximately
midway between junior-infant and first-class teachers The tendency of
teachers in the lowest grade to postpone formal academic work in the area
of number received further support from the finding that less than 5% of
junior-infant teachers, compared to over 80% of first-class teachers,
expected their pupils to learn tables Senior-infant teachers again occupied
an intermediate position (35%) On the other hand, classification and
seriation activities and exercises to do with the exploration of materials which
played an important part in the work of junior-infant classrooms received
less emphasis in senior-infant classes and little or none in first class

The willingness of teachers to postpone formal academic work in the
teaching of mathematics is far less evident in the teaching of language
Although senior–infant and first–class teachers reported spending more time
on formal language activities than junior–infant teachers, formal activities

were given significantly more time than informal activities at all three grade levels.

The language activity which received most attention was reading. Teachers, regardless of standard, devoted about a third of language teaching time (between three and four hours per week) to this activity. The importance assigned to the teaching of reading can also be seen in data on the use of reading schemes. The vast majority of pupils were introduced to a reader during the first or second term of the junior-infant year and were thereafter expected to make fairly rapid progress through the stages of the scheme. It is possible that the data on reading schemes actually underestimate the extent of reading-scheme usage. In counting the levels of the reading schemes used, a level is considered used if either the reader, or its extension, or both, are used. Underestimates of use occur, therefore, when both reader and extension are used. Further, no account is taken of any supplementary reading material which may have been used.

The instructional strategies of teachers as reported in questionnaires were also an admixture of formal and informal approaches. The division of classes into groups for teaching — a characteristic often associated with informality — was pervasive. The vast majority of teachers at each grade level formed pupil groups using as their criteria the pupils' perceived academic ability and/or attainment. Yet membership of groups tended to be rather rigid in the sense that promotions to or from a group were rare. Moreover, although grouping was clearly a prominent feature of instruction, group work took up less than 30% of total class time, while whole-class teaching occupied 45% of available time. This finding, coupled with the fact that very little class time (11%) was devoted to situations in which pupils selected their own activities, suggests that, although less didactic and formal than more senior classes (5), the junior classes in Irish primary schools are, to a large extent, teacher-directed and 'traditional'.

In addition to the items dealing with teachers' reports of what happened in their classrooms, teachers' personal opinions and preferences were also sought in the questionnaire. In their responses, teachers expressed a strong preference for greater informality. For example, they strongly agreed that the existing academic content of the programme in the junior classes of primary school should be replaced by a programme of the type found in preschools or nursery schools. Furthermore, when asked to rank a series of possible

objectives for education at this level, the teachers clearly favoured objectives that were informal rather than formal

Findings on teachers' opinions and preferences suggest that some of the more formal aspects of teaching practice noted earlier may not have been wholly the result of professional decisions on the part of teachers themselves It may be that external pressures from parents or teachers of senior classes as well as pressures to implement particular school policies (e g , teachers being required to cover set readers) influenced practice (see 10, Columns 1103-1104) Furthermore, factors such as class size, unsuitability of accommodation, and absence of suitable materials may have made the implementation of a more informal approach difficult Whatever the reasons, it is clear from the data on teachers' practices that infant education is a good deal more formal than teachers would, in general, seem to wish It might be expected, therefore, that attempts at reforming infant education in the direction of increasing informality would be greeted sympathetically by those most directly involved, though whether or not such a move would be regarded as desirable more generally is another matter

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