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ABSTRACT

Judgments on content emphasis reflect on the commitments that teachers have to course content, their attitudes toward teaching certain areas of the curriculum, and teacher's assessment of their own competence in teaching these areas. Three questions were considered: (1) What relationship, if any, is there between an internal factor and the actual choices teachers make with regard to time and content?; (2) What is the content profile for the whole day, given certain response levels on internal factors?; and (3) If time allocations in the school day affect each other, are there consistent trade-off patterns between content areas? Six elementary classrooms were observed and questionnaires administered to the teachers. The findings show clear and interesting patterns of association among (subject matter specific) variables such as attitude and competence and time allocations in the school day. (Authors/JD)

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THE SCHOOL DAY AND CONTENT COMMITMENTS

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Abstract

When teachers make judgments on content emphasis for their classrooms, they are influenced by social and institutional, or external factors. Judgments on content emphasis, however, also reflect the commitments that teachers have to content, their attitudes toward teaching certain areas of the curriculum, and teacher's assessment of their own competence in teaching these areas. In looking at the effects of internal factors on the school day, three questions were considered. First, what relationship, if any, is there between an internal factor and the actual choices teachers make with regard to time and content? Second, what is the content profile for the whole day, given certain response levels on internal factors? Third, if time allocations in the school day affect each other, are there consistent trade-off patterns between content areas? The data analyzed stem from an observational study of six classrooms and from questionnaires administered to teachers in the same study. The findings show clear and interesting patterns of association among (subject matter specific) variables such as attitude and competence and time allocations in the school day.

The School Day and Content Commitments[1]

Margret Buchmann and William H. Schmidt[2]

When teachers make judgments on content emphasis for their classrooms, they are influenced by social and institutional, or "external," factors (Lundgren, 1972, 1977; Floden, Porter, Schmidt, Freeman, & Schwille, in press; Porter, Schwille, Floden, Freeman, Knappen, Kuhs, & Schmidt, in press). But judgments on content emphasis may also reflect the commitments that teachers have to content, their attitudes toward teaching certain areas of the curriculum, and teachers' assessment of their own competence in teaching these areas. How do these internal factors influence what is taught during the school day? This is the question that motivated our research.

Human behavior has multiple determinants that are rooted both in the person and in the situation. As Mischel (1977) puts it,

> One of the most impressive--and obvious--lessons from the history of personality measurement is the recognition that complext human behavior tends to be influenced by many determinants and reflects the almost inseparable and continuous interaction of a host of variables both in the person and in the situation. (p. 246)

Dewey (1931) already recognized that even context-oriented inquiries have to be selective. Since there exists one line of research that focuses on the influence of external factors on teachers' content choices, we have concentrated our inquiry on the influence of factors related to the teacher

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[1] Paper presented at the annual meeting of the American Educational Research Association, Boston, 1980.

[2] Margret Buchmann is a senior researcher with the Language Arts Project and an assistant professor of teacher education. William H. Schmidt is co-coordinator of the Language Arts Project and a professor of educational psychology.

as a person. We have considered teachers' "phenomenology of subject matter," and the influence of thoughts and feelings specific to content areas on what is taught. This research on internal factors represents a partial picture of processes that lead to teacher decisions about content; it is complementary to research on the influence of external factors.

The Significance of Content Commitments

Teachers differ in character, habits of mind, and background; they have different "personal realities" (Greene, 1978). Part of a teacher's personal reality can be a commitment to a certain area of the curriculum. Vivid and telling examples of teacher content commitments can be drawn from the empirical work of Carew and Lightfoot (1979). These researchers reject the view of the teacher "as an automaton manufacturing a standardized child product" (p. 232). They conclude that the four teachers they observed "varied strikingly in their valuing of academic, personal, and social development as educational objectives" (p. 235). Their four case studies indicate that teachers' content commitments and their view of themselves, children, and parents have influence on what is taught.

In the classroom of Ms. Allen, a teacher who believed in the supreme importance of reading for her pupils, Carew and Lightfoot found, for instance,

> That 85 percent of Ms. Allen's interactions with her first graders took place in academic contexts, 75 percent specifically in reading-activity contexts, and 66 percent in small reading groups. The academic orientation of Ms. Allen's class and her management efficiency are also indicated by the finding that 70 percent of her interactions with individual children had an academic task as their topic and only 18 percent were focused on procedural matters. (Carew & Lightfoot, 1979, p. 121)

Ms. Allen's content commitment had a thematic nature. She believed that the personal and social growth of young pupils crystalize around the momentous achievement of learning to read. Pride in self and a sense of competence were educational goals for this teacher. But she approached these goals through the medium of an "academic" content commitment.

Academic content commitments are the focus of this study. As mentioned above, there are other important educational goals. But commitments to areas of the curriculum such as mathematics, reading, science, and social studies have implications for the distribution of opportunities to learn. Thus, these teacher commitments are relevant to the issue of equality of opportunity for academic achievement in classrooms.

Internal Factors and the School Day

In looking at the effects of internal factors on the school day, we had three questions in mind. First, what relationship, if any, is there between an internal factor and the actual choices teachers make with regard to time and content? Second, what is the content for the whole day given certain responses on internal factors? Third, if time allocations in the school day affect each other, are there consistent trade-off patterns between content areas?

We asked these questions considering three variables related to teachers as persons: judgments of content emphasis specific to the teacher's current classroom, the attitude of the teacher toward teaching a content area, and the teacher's assessment of his or her own competence in teaching this area.

The data we employed stem from an observational study of six classrooms (Roehler, Schmidt & Buchmann, 1979) and from questionnaires administered to teachers in the same study. For the actual time allocations we used the average amount of time allocated to a certain content to the typical child on a typical day in each classroom. This is our basic datum. The tables contain minutes of time allocated to content, averaged over all teachers who responded at the same level to questions about content emphasis, content-specific attitudes, and perceptions of competence. The questions are detailed below.

Content Emphasis

Judgments on the degree of emphasis that should be given to an academic area will reflect a teacher's larger content commitments. We asked teachers how much emphasis they felt should be given in their current classrooms to mathematics, social studies, science, and reading.[3] This ecogologically oriented approach (Gibbs, 1979) takes the contextual constraints of the scenario in which the teacher is immersed explicitly into account. Data on judgments about content emphasis for mathematics, social studies, science, language arts, and reading and average daily time allocations are summarized in Table 1.

Content emphasis in mathematics. We found a clear relationship between the amount of emphasis teachers think should be placed on mathematics and the amount of time they allocate to mathematics in their classrooms. Those teachers who felt a great deal of emphasis should be given to mathematics (Response Level 1) spent the most amount of actual

[3] We have defined content emphasis as a judgment variable and not as a measure of the degree of content coverage as Porter and his collaborators (Porter et al., in press) have done. These researchers see content emphasis as being manifested in part by time, whereas we think that teachers' judgment on content emphasis in a given classroom influences the allocation of time to content.

Table 1

The Relationship of Content Emphasis
To Time Allocations in All Subject Matter Areas

Content Emphasis	Subject Matter Areas	Degree of Emphasis: A Great Deal	More Than Average	Average	Below Average
Mathematics	Language Arts	40.62[2]	40.65	64.44	--[3]
	Reading	72.72	50.47	20.21	--
	Mathematics	47.72	31.08	31.37	--
	Science	5.62	23.38	1.69	--
	Social Studies	2.04	18.73	36.82	--
	Other[1]	60.21	45.09	76.41	--
Social Studies	Language Arts	34.92	64.77	47.70	42.84
	Reading	75.09	40.13	40.68	79.79
	Mathematics	28.21	36.27	31.46	61.20
	Science	47.05	13.51	4.50	9.02
	Social Studies	31.11	16.85	16.38	0.
	Other	22.44	38.70	69.82	61.49
Science	Language Arts	34.92	--[3]	50.14	--[3]
	Reading	75.09	--	48.39	--
	Mathematics	28.21	--	38.37	--
	Science	47.05	--	7.21	--
	Social Studies	31.11	--	13.20	--
	Other	22.44	--	61.93	--
Reading	Language Arts	46.57	49.68	--[3]	--[3]
	Reading	55.44	47.65	--	--
	Mathematics	40.12	29.79	--	--
	Science	8.59	24.37	--	--
	Social Studies	7.29	33.97	--	--
	Other	58.31	49.32	--	--

[1]Other subject matter includes music, art, crafts, and physical education.

[2]Figures given are the average amounts of time spent in each subject matter area by the typical child on the typical day.

[3]No teachers rated the content in this category of emphasis.

time in mathematics per pupil on a typical day. For the teachers who selected either of the other two response levels--more than average (Response Level 2) and average (Response Level 3)--the amounts of time spent in mathematics were not distinguishable. But the amount of time allocated in classrooms where the teachers felt a great deal of emphasis should be placed on mathematics was over 50% more time per pupil than in the other classrooms.

As response levels of the variable declined, differences in content patterns for the whole school day were revealed. We identified a clear and consistent trade-off pattern in the case of social studies and mathematics. The trade-off pattern between social studies and mathematics approximated an "either-or" relationship. That is to say, time allocated to mathematics appeared to affect time allocated to social studies and vice versa: the more mathematics, the less social studies. For the one teacher who felt that social studies should receive below average emphasis, no time was devoted to social studies, but 60 minutes each day were allocated to mathematics.[4]

Content emphasis in social studies. Teachers who felt that social studies should be emphasized a great deal in their classrooms allocated the largest amounts of pupil time to that area. There were no appreciable differences between the amount of time allocated by those teachers who felt that an average or more than average amount of emphasis should

[4] A similar pattern emerged in science. The teacher who felt a great deal of emphasis should be placed on science spent almost seven times as much time on science than did the teachers who felt that science should receive an average amount of emphasis. The actual magnitude of this difference, however, may reflect a pattern idiosyncratic to the teacher with the high response level.

be given. However, the teachers who regarded average (or more than average) emphasis of social studies as appropriate allocated 50% less time on the average than did the teachers who felt that a great deal of emphasis should be placed on social studies.

Content emphasis in reading. Teachers regard reading as a central part of the elementary school curriculum. In our study, teachers felt that reading should receive either a great deal of emphasis or more than average emphasis. None of the teachers responded that reading should receive average or less than average emphasis in their classrooms. Some differences in time allocation were associated with the two levels of response. Teachers who felt less emphasis should be placed on reading tended to provide about 16% less time per pupil than teachers who felt that reading should receive a great deal of emphasis.

There was a pattern of give and take between language arts[5] and reading. That is to say, as time allocations to language arts went up, time allocations to reading went down, and conversely. In whatever fashion time was distributed between language arts and reading, the sum of both areas tended to be about 100 minutes of the school day. The overall amount of time pupils spent in language-related activities, hence stayed about the same. This makes the trade-off pattern less significant than the pattern we discussed for the case of mathematics and social studies.

Our data thus suggest that teachers' judgment on the emphasis that different content areas should receive in their classrooms are

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[5] Language Arts comprises skill areas such as spelling, information gathering, oral communication, and writing.

predictive of what teachers will actually do in their classrooms. This was born out for all the areas of the elementary school curriculum that we examined. On the basis of the cases over which we averaged we can say that the more emphasis teachers feel should be given to an area, the more time in the school day will be allocated to that area.

To examine the influence of two other internal factors we looked at the variation of time allocations associated with different response levels for the variables of enjoyment and competence in teaching the areas of language arts, reading, mathematics, social studies, and science.

Attitude Toward Content Area

The data presented in Table 2 show the average amount of time allocated for the typical pupil on a typical day in each of the classrooms for different responses to the question of enjoyment. The levels of response were: "I thoroughly enjoy teaching this curricular area"; "I enjoy teaching it for the most part"; "I don't particularly enjoy it"; and "I don't enjoy teaching this curricular area at all".

It is noteworthy that only the two higher response levels were chosen by the six teachers for the areas of reading and language arts. As can be seen in Table 2, the more teachers enjoy to teach reading and language arts, the more time they tend to allocate to these areas.

For mathematics and social studies, teachers also responded at the level of "no particular enjoyment." In the case of science alone teachers stated that they did not enjoy teaching this curricular area at all.

Table 2

The Relationship of Teacher Enjoyment
To Time Allocations in All Subject Matter Areas

Area of Enjoyment	Subject Matter Areas	Degree of Enjoyment: Thoroughly	For Most Part	Not Particularly	Not At All
Reading	Language Arts	39.3[illegible]	55.8[illegible]	--[3]	--[3]
	Reading	63.[illegible]	[illegible]	--	--
	Mathematics		[illegible]	--	--
	Science		[illegible]	--	--
	Social Studies		[illegible].25	--	--
	Other[2]	52.09	58.01	--	--
Language Arts	Language Arts	49.45	38.39	--[3]	--[3]
	Reading	50.28	65.65	--	--
	Mathematics	37.16	34.24	--	--
	Science	16.17	2.23	--	--
	Social Studies	18.60	4.09	--	--
	Other	54.63	58.93	--	--
Mathematics	Language Arts	38.72	40.26	64.61	--[3]
	Reading	73.15	36.20	30.17	--
	Mathematics	41.22	28.77	33.82	--
	Science	19.43	9.58	7.60	--
	Social Studies	11.43	8.24	26.84	--
	Other	47.62	74.13	57.56	--
Social Studies	Language Arts	36.66	52.35	53.81	--[3]
	Reading	70.37	28.20	59.96	--
	Mathematics	31.23	30.07	48.74	--
	Science	24.64	5.64	11.27	--
	Social Studies	17.60	22.53	8.43	--
	Other	40.69	75.27	50.10	--
Science	Language Arts	34.92	41.55	51.58	64.44
	Reading	75.09	57.99	52.89	20.21
	Mathematics	28.21	44.99	35.26	31.37
	Science	47.05	9.30	7.87	1.69
	Social Studies	31.11	4.12	10.47	36.82
	Other	22.44	67.81	48.82	76.41

[1]Other subject matter includes music, art, crafts, and physical education.

[2]Figures given are the average amounts of time spent in each subject matter area by the typical child on the typical day.

[3]No teachers rated their enjoyment of the content at this level.

Enjoyment in teaching mathematics and social studies. Teachers who said that they thoroughly enjoyed teaching mathematics provided about 40% more time per pupil for mathematics than teachers responding at either of the other two response levels. The pattern was not so clear for social studies. However, the time provided by teachers who were more positively oriented toward social studies was clearly more than that provided by teachers who didn't particularly enjoy teaching social studies.

The "disjunctive" relationship between mathematics and social studies also obtained for the attitude variable. Teachers who thoroughly enjoyed teaching mathematics gave about 40 minutes a day to mathematics and only 11 minutes to social studies. This relationship held also for the teachers who stated that they did not particularly enjoy teaching social studies: they allocated eight minutes to social studies, and nearly 50 minutes to mathematics.

Enjoyment in teaching science. Pupils in classrooms where the teachers did not enjoy teaching science at all were taught the least amount of science time of all the pupils we observed: an average of two minutes per day. Pupils who received the most science time--nearly 50 minutes per day--were in classes where their teachers responded at the higher response level. Teachers who thoroughly enjoyed teaching science spent more time on science than teachers in any of the other categories.

What we have argued earlier about the relationship of content emphasis as a judgment variable to actual time allocations can be recapitulated for the attitude variable. When levels of enjoyment in teaching a content area go up, time allocations follow suit. For the

third internal factor under consideration, relationships appear to be less predictable and more complex.

Competence in Teaching Content Area

We asked teachers to indicate to us how difficult they found teaching academic areas of the elementary school curriculum. The response levels were (1) "I find it very difficult to teach in this area", (2) somewhat difficult, (3) rather easy, and (4) very easy. Table 3 summarizes the data [redacted] allocations to content areas in the school day associa[redacted] different response levels.

That none of our teachers found reading, language arts, mathematics, science, and social studies very difficult to teach may not be surprising. It is more interesting that teachers do not seem to necessarily spend less time on a subject just because they find it difficult to teach. In other words, the amount of time allocated to an area of the elementary school curriculum follows neither simply nor directly from the degrees of difficulty that teachers judge they have in teaching that area.

These results can be interpreted in two ways. First, attitude and perceived competence may vary independently. For example, a teacher may love to teach mathematics. But because of, say, an understanding of the complexities of mathematics and high standards in terms of student outcomes, the teacher may find teaching mathematics quite difficult. On the other hand, a teacher may find a content area easy to teach and thoroughly boring, hence not enjoyable to teach.

Second, a perceived level of difficulty in teaching a content area can be counter-balanced by professionalism in teachers. Though it is

Table 3

The Relationship of Teacher Competence
To Time Allocations in All Subject Matter Areas

Area of Competence	Subject Matter Areas	Degree of Difficulty: Very Difficult	Somewhat Difficult	Fairly Easy	Very Easy
Language Arts	Language Arts	--[3]	34.92[2]	47.81	53.64
	Reading	--	75.09	47.32	50.00
	Mathematics	--	28.21	33.09	46.29
	Science	--	47.05	8.44	5.36
	Social Studies	--	31.11	9.72	18.41
	Other[1]	--	22.44	57.25	58.95
Social Studies	Language Arts	--[3]	40.25	45.23	54.44
	Reading	--	36.1[illegible]	65.17	20.21
	M[illegible]tics	--	28.77	39.98	31.37
	S[illegible]ce	--	9.58	17.95	1.69
	Social Studies	--	8.24	13.01	36.82
	Other	--	74.13	45.39	76.41
Reading	Language Arts	--[3]	46.03	52.35	42.84
	Reading	--	50.29	28.20	79.79
	Mathematics	--	32.90	30.07	51.20
	Science	--	20.93	5.64	9.02
	Social Studies	--	17.35	22.53	0
	Other	--	40.02	75.27	61.49
Mathematics	Language Arts	--[3]	64.44	37.86	53.81
	Reading	--	20.21	58.98	59.96
	Mathematics	--	31.37	30.41	48.74
	Science	--	1.69	19.62	11.26
	Social Studies	--	36.82	14.48	8.43
	Other	--	76.41	51.83	50.10
Science	Language Arts	--[3]	44.59	54.44	42.84
	Reading	--	54.26	20.21	79.79
	Mathematics	--	31.87	31.37	61.20
	Science	--	18.09	1.69	9.02
	Social Studies	--	15.07	36.82	0
	Other	--	48.55	75.41	61.49

[1]Other subject matter includes music, art, crafts, and physical education.

[2]Figures given are the average amounts of time spent in each subject matter area by the typical child on the typical day.

[3]No teachers rated the difficulty of teaching the content at this level.

tempting to avoid subject matters which are difficult to teach, obligations to teach may be felt regardless of personal difficulties. It is one of the hallmarks of a professional that the call of duty is attended to, and that temptations particular to the exercise of one's profession are recognized (Katz, 1980).

Responsibility in Content Decisions

The road from dispositions to acts is far from smooth. That is to say, what teachers think and feel about subject matters and of their competence to teach in them will not invariably translate into the allocation of time to content in the school day. Sarason (1971) uses a musical analogy to draw attention to the multiple determinacy of teacher action and the thematic nature of teacher characteristics:

> When we listen to a symphony we are set to pick out and respond to the melodic theme, and it is all too easy to forget that the way we hear the theme is very much determined by literally scores of instruments that are not playing that theme but nevertheless are part of the whole. If we look at teacher characteristics in this way we can learn much--just as we can enjoy the melodic themes in a symphony--but just as the melody is not a symphony, teacher characteristics are but one aspect of a more complicated orchestration of factors. (p. 173)

In this dynamic configuration, the personal reality of teachers matters. Part of this personal reality is teachers' relations--commitment, attitude, competence--to an area of that curriculum.

During the school day, teachers can be a law unto themselves, favoring certain areas of the curriculum at their discretion. But professional discretion is not arbitrariness. Personal whim and fancy must be bounded by an impersonal conception of duties. Teachers' judgments of the curricular emphases appropriate for their classrooms are, in principle, justifiable acts. Justifiable are those acts for which good reasons can be

given. In light of their significance for individual and society, good reasons are required for decisions on educational content,

> Decisions that confront educators are notoriously varied, complex and far-reaching in importance, but none outweighs in difficulty or significance those decisions governing selection of content. . . We do not, moreover, consider it a matter of indifference or whim just what the educator chooses to teach . . . We try to convince others; we present ordered arguments, we appeal to custom and principle; we point to relevant consequences and implicit commitments. In short, we consider decisions on educational content to be responsible or justifiable acts with public significance. (Scheffler, 1977, p. 497)

What shall we favor in the elementary school curriculum, social studies or mathematics? This question was implicit in the judgments and time allocations of the teachers we studied. How does one weigh the importance of mathematical knowledge that gives an individual access to many occupations of high status against the social significance of awareness and understanding in a diverse culture? Teachers are making decisions in the face of this and other ethical dilemmas.

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