

## FACULTY REFLECT ON COURSE PLANNING

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Faculty members' beliefs about educational purpose and the nature of their academic fields strongly influence how they plan introductory courses. Interviews with 89 faculty members teaching in diverse colleges and representing eight fields also identified faculty attention to student preparation, available textbooks, and locally important factors, but little attention to alternative instructional strategies during course planning. Based on the findings, the authors have developed a tentative general model of course design and related questions to guide future study.

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Educators are debating ways of ensuring “coherence” and “integrity” in the college curriculum. Such debates are based, in part, on recent reports suggesting varied strategies to achieve these goals. For example, a report from the National Institute of Education (NIE) stated that colleges should require more general education courses, clarify expectations, and encourage students to become more involved in learning (National Institute of Education, 1984). At least one national report has implied that patterns of college coursework emphasizing the humanities will help students achieve desired outcomes effectively (Bennett, 1984). Still another report maintains that the specific courses taken are not as important for curricular coherence as the experiences of students within their varied academic programs (Association of American Colleges, 1985). Concurrent with these diverse prescriptions for improving the college curriculum, many policy makers have echoed the NIE study group's view that measuring student outcomes will encourage colleges to improve learning experiences for students.

These improvement proposals—advocating augmented general education,

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strengthened humanities programs, clarified expectations, and increased measurement of student outcomes—emphasize changes in institutional practices or broad patterns of student course taking. One important area these reform proposals do not address directly is the role of the individual course. Arguably, the foundation of curricular change is at the course level. Although comprehensive reforms should not be neglected, it is also important to improve coherence within individual courses, where the structure for much academic learning is established. It is for classroom settings that faculty members usually plan and teach courses in ways that they believe help students learn facts, principles, ideas, attitudes, skills, and ways of thinking. Like the writers of the national reports, most faculty members intend their work to result in an academic program with coherence and integrity for the students. When course-level expectations that instructors currently have for their students, the course plans they construct, and the outcomes they hope students will achieve are more fully understood, it will be easier to address issues raised by recent national reports regarding instructional quality at the program and institutional levels.

Theories about how students learn reinforce the importance of understanding how academic courses are planned in order to facilitate broader programmatic change. Cognitive psychologists tell us that meaningful learning requires students to integrate new information into existing knowledge structures. These findings have spawned speculation that the way instructors arrange course content may influence student learning. If so, each course, as well as entire programs, should be planned to possess coherence and integrity.

According to cognitive learning theorists, students also learn more effectively when they understand the reasons underlying instructional tasks and consciously select appropriate learning strategies. This implies that teachers and students should share an understanding of what the learning objectives are and how the instructor expects them to be achieved. From a different perspective, this notion reinforces the idea that teachers should make their expectations clear for students at the course level as well as the program level.

Do faculty members have clearly focused academic intentions and plans for their courses? Could these plans be communicated to students in ways that foster understanding of the learning tasks? Could student intellectual growth be enhanced if faculty made their plans and intentions more explicit? Could students learn more, learn more effectively, or learn more efficiently if faculty arranged course content differently within courses as well as within entire programs? The foundation for answering these questions must be laid by examining intentions of faculty when they design courses. Unfortunately, little research evidence exists about how college instructors select and arrange course content.

The purpose of this study was to explore how faculty members from several

fields plan introductory courses and to identify factors that influence their planning. Introductory courses were chosen as the study focus because general education programs recently have been criticized intensely as lacking coherence.

## STUDY QUESTIONS AND RELATED LITERATURE

The questions posed in the study were as follows:

1. What factors influence faculty members in planning introductory courses?
2. How strong are various influences on course planning?
3. Do course-planning influences and course designs differ for faculty in various disciplines and in different institutional settings?

We defined *college course planning* as the decision-making process in which instructors select content to be taught, consider various factors affecting the teaching and learning process, and choose from among alternative strategies for engaging students with the content. In this context, *course planning* is assumed to mean decisions that instructors undertake *before* the first class meeting and the explicit or implicit statements of objectives and strategies that result.

Although studies of teacher planning at the K-12 level began in the United States about a decade ago (Clark and Peterson, 1986), only Australian researchers have reported such studies at the college level (Andresen, et al., 1985; Andresen, Powell, and Wieneke, 1984; Powell and Shanker, 1982). These studies of a few college professors and their classes have focused more on the teaching tasks than on the course-planning process.

While the research focusing directly on course planning in higher education is limited, much literature implies that course planning by college teachers is closely related to discipline-embedded assumptions and beliefs as well as to the socialization of faculty members in varied fields (Dressel and Marcus, 1982; Gamson, 1966; Snow, 1959; Stark and Morstain, 1978). The Australian investigators retrospectively judged that their design had included insufficient attention to the instructors' disciplines. Thus, the basic framework for our investigation built on theoretical discussions about the dimensions of disciplinary differences (Confrey, 1981; Dressel, 1980; Dressel and Marcus, 1982; King and Brownell, 1966; Phenix, 1964; Schwab, 1964). Although we assumed that other factors, such as college mission and student characteristics, would be important, the degree to which they influence course design was initially considered much more speculative.

The literature about disciplinary perspectives and general theories about course design provided the rationale for questions in an interview protocol we

developed to explore the study questions. The theories included a linear course-planning model by Posner and Rudnitsky (1986), the ideas of Schwab (1969) about commonplace elements of curriculum (student, teacher, subject, and milieu), and the work of Toombs (1977–78) specifying three major aspects of curriculum design (content, context, and form). From these theories we identified key elements potentially influential in course design among college instructors and developed a protocol to collect faculty perspective about them. For example, we expected that decisions about course form, such as content selection and content arrangement, are influenced by faculty educational assumptions. In turn, we speculated that faculty educational assumptions are affected by (1) content influences such as discipline characteristics and (2) context factors such as college goals, program goals, student characteristics, faculty characteristics, and local internal and external influences.

For the interviews, faculty beliefs about education were explored by gaining faculty reaction to short paragraphs based on an adaptation of the conflicting curricular conceptions developed by Eisner and Vallance (1974). Similarly, methods of arranging course content were explored by expanding the sequencing categories originally developed by Posner and Strike (1976). The influence of the disciplines on course planning was assessed by adopting discipline components discussed by Dressel and Marcus (1982, pp. 89–99), who (following Phenix, 1964) identified mode of inquiry, relation to other disciplines, symbolic system, values, and substantive aspects as important components. We also built on the Dressel and Marcus work (p. 85) to develop items about discipline characteristics.<sup>1</sup>

As indicated earlier, empirical research about course planning by faculty in higher education is almost nonexistent, so this study is truly exploratory. We could not frame the questions to follow any logical sequence of planning steps faculty typically pursue because such steps are unknown. Nor was there previous research establishing what faculty feel is most important in their course planning. To fill this gap while developing more informed hypotheses, we used theoretical dimensions in both precollege and college literature as the basis for our protocol. We were probing as much for the correct questions as for the answers; consequently, we discarded or revised some questions along the way. The research presented here was undertaken, in part, to construct a survey instrument to study faculty course planning nationally among a representative group of college faculty. We believe that incrementally developing knowledge about course planning will contribute to an area void of systematic study.

## METHOD

Using the interview protocol just described we conducted interviews with 89

probably "typical" faculty members who were teaching introductory courses in biology, business administration, composition, history, literature, nursing, mathematics, and sociology at diverse colleges. The composition of the sample is given in Table 1, which also supplies brief descriptive information about the institutions and the introductory courses on which the interviews focused.

In Table 2, we show the demographic characteristics of the faculty sample and a summary of those faculty characteristics that differed by college type and by academic field taught. As might be anticipated, there were differences among the eight academic fields and the four types of colleges on a number of faculty characteristics such as sex, the amount of nonteaching experience, the degrees held, and the extent of research articles published. The sample of faculty interviewed was 41% female, higher than the percentage of women among faculty generally, probably because English composition and nursing tend to be taught by women.

The 90-minute interviews were tape recorded for later analysis while one of two interviewers, themselves faculty members, simultaneously coded responses. Researchers first answered general questions designed to solicit unprompted responses and then structured questions (including rank-ordering tasks and card sorts with point assignments) to secure responses about different

**TABLE 1. Distribution of Faculty Interviews by College Type and Introductory Course**

Introductory Course	College Type				Total <i>N</i>	Average Class Size	Percent Nonlecture Courses
	Doctoral Univer- sities	Compre- hensive Colleges	Liberal Arts Colleges	Com- munity Colleges			
Sociology	2	2	3	3	10	57	0
History	2	2	2	2	8	37	0
Biology	2	3	4	4	13	47	0
English composition	2	3	4	5	14	27	54
Literature	2	3	2	5	12	37	42
Mathematics	2	2	4	4	12	37	0
Nursing	2	1	2	6	11	37	0
Business	2	2	2	3	9	47	0
Totals	16	18	23	32	89	37	14
Average class size	57	47	30	37	37		
Percent nonlecture courses	0	13	13	23	14		
Mean college enrollment	16,000	16,130	860	6,690			

**TABLE 2. Demographic Characteristics of Faculty Interviewees**

Characteristic	Total ( <i>N</i> = 86)	Comparison	
		College Type <sup>a</sup> <i>p</i> <sup>d</sup>	Academic Field <i>p</i> <sup>d</sup>
Age			
<i>M</i>	46	n.s. <sup>a</sup>	n.s. <sup>b</sup>
<i>SD</i>	8		
Years taught college			
<i>M</i>	15	n.s. <sup>a</sup>	n.s. <sup>b</sup>
<i>SD</i>	9		
	<u>Percent<sup>c</sup></u>		
Sex			
Male	59	0.02	0.01
Female	41		
Years at other work			
None or some	42	n.s.	0.03
Slight	13		
Modest	21		
Much	24		
Rank			
Unranked	24	0.00	n.s.
Lecturer	4		
Instructor	9		
Asst prof	21		
Assoc prof	14		
Professor	28		
Degree			
Bachelor	2	0.00	0.08
Masters	43		
Two masters	8		
Doctorate	47		
Education courses			
None or very few	50	0.05	n.s.
Modest	30		
Much	20		
Instructional workshops			
None or slight	49	n.s.	0.02
Modest	23		
Much	28		

TABLE 2. *Continued*

Characteristic	Total ( <i>N</i> = 86)	Comparison	
		College Type <sup>a</sup> <i>p</i> <sup>d</sup>	Academic Field <i>p</i> <sup>d</sup>
	Percent <sup>c</sup>		
Published teaching material			
None or slight	86	0.04	n.s.
Modest	7		
Much	7		
Published research			
None or slight	77	0.02	0.05
Modest	9		
Much	14		
Presented conference			
None or slight	72	n.s.	n.s.
Modest	21		
Much	7		

<sup>a</sup> Comparisons based on *F* ratio with *df* = 4, 81.

<sup>b</sup> Comparisons based on *F* ratio with *df* = 7, 78.

<sup>c</sup> All categorical comparisons based on chi-square test for independence; degrees of freedom vary.

<sup>d</sup> n.s. = *p* > .10.

design possibilities and planning influences. All respondents were asked to "think aloud" as they completed the structured tasks. We did not try to define items on card sorts for the faculty members. Rather, we responded to requests for definitions with statements like "I'd rather know what the statement means to you in your introductory course."

We deliberately selected forced-choice techniques to better elicit faculty members' descriptions of their reasoning and decision-making processes, although such techniques restrict the statistical degrees of freedom when data are analyzed. These techniques have been replaced in the survey instrument by Likert-type scales, which may yield somewhat different results.

## RESULTS

The order of presentation of the data corresponds to the order of the study questions listed earlier. First, aggregate results are provided for all faculty interviewed, then differences by college type and by academic field are noted. Using a generous level of statistical significance (*p* < .10) appropriate to an

exploratory study, we compared course-planning influences and processes for faculty in various disciplines and in different institutional settings.

### Course-Planning Influences

Faculty members were asked to respond to two probes: "Tell me about what you do as you plan this introductory course" and "What things do you believe influence you as you plan?" Later, interviewees were given cards with various influences and asked to sort them to indicate their relative importance. To estimate the strength of various influences on course planning, we used both our judgments of the emphasis they gave in answering open-ended questions and their answers to the specific probes.

While Table 3 contains data on those influences faculty mentioned in response to open-ended questions, Table 4 contains data on the mean number of points out of a possible 100 points faculty members allocated to various factors

**TABLE 3. Percentage of Faculty Placing Strong or Heavy Emphasis on Specific Course-Planning Influences in Open-ended Responses**

Influence	Percent	Difference	
		College Type <sup>a</sup> <i>p</i> <sup>c</sup>	Academic Field <sup>b</sup> <i>p</i> <sup>c</sup>
Student characteristics			
Type	97	n.s.	n.s.
Quality of preparation	60	n.s.	0.03
Effort	25	n.s.	0.05
Discipline substance	52	0.09	n.s.
Textbooks	44	0.00	n.s.
Program or college goals	35	0.00	n.s.
Instructor's background	24	n.s.	n.s.
Relation of field to other fields, to life, career, etc.	21	0.06	n.s.
External influences	15	n.s.	0.02
Feedback from previous classes, students, colleagues	12	n.s.	0.09
Mode of inquiry of discipline	11	0.01	n.s.
Views of experts in instruction	8	n.s.	n.s.
Vocabulary/symbolism of discipline	4	n.s.	n.s.

<sup>a</sup> Comparisons based on chi-square test of independence; *df*=4; *df*=16.

<sup>b</sup> Comparisons based on chi-square test of independence; *df*=7; *df*=28.

<sup>c</sup> n.s. = *p* > .10.



**TABLE 4. Relative Importance of Course-Planning Influences in Structured Questions**

Influence	Mean Rating <sup>a</sup>	Difference	
		College Type <sup>b</sup> <i>p</i> <sup>d</sup>	Academic Field <sup>c</sup> <i>p</i> <sup>d</sup>
Characteristics of the discipline	16.4	0.09	n.s.
Own beliefs	15.6	n.s.	0.01
Student characteristics	12.8	n.s.	n.s.
Instructor's own background	12.2	n.s.	0.01
Program goals	9.8	n.s.	0.00
Student's future plans	8.3	n.s.	n.s.
College goals	7.1	n.s.	n.s.
Available resources and facilities	6.0	n.s.	0.00
Instructional expert views	5.7	0.01	0.04
Factors I can't control	5.0	n.s.	n.s.

<sup>a</sup> Minimum rating = 1 point; maximum rating = 100 points.

<sup>b</sup> Comparison based on *F* ratio with *df* = 4,81.

<sup>c</sup> Comparison based on *F* ratio with *df* = 7,78.

<sup>d</sup> n.s. = *p* > .01.

in a more structured question about the strength of influences. As shown in both Tables 3 and 4, faculty members are strongly influenced in course planning by the characteristics of the discipline they teach and by their own backgrounds, including their beliefs about the purposes of education. Frequently, faculty members said it was difficult or impossible for them to separate their discipline, their background, and their beliefs. Such statements seemed to attest to the strength of faculty socialization in their fields. As we listened to faculty describe these influences, we sensed that other important influences within the specific teaching environment, such as student characteristics, may be superimposed upon these background factors.

For example, while describing their first steps as selecting content from their field or choosing course materials, many faculty emphasized that student characteristics influenced these selections. Most also said they were influenced by the textbooks available. Overall, however, they rarely mentioned making choices among alternative instructional strategies. Thus, using Toombs's categorization, instructors' comments centered primarily on content, modestly on context, and only peripherally on course form.

In specific situations, faculty members mentioned program goals, college goals, and objectives of external groups (such as accreditors or state agencies) as influential in their planning. For example, at a college with a religious mission, college goals were strongly influential. In a program such as nursing that is

responsive to both a professional accrediting agency and state-level examinations for graduates, program goals influenced by these external sources, in turn, influenced course planning. Most faculty, however, did not attribute strong influence either to program goals or college goals.

According to the faculty members we interviewed, the views of instructional experts, feedback from previous classes, research modes from the disciplines, and local factors beyond their control (such as resources, calendars, or facilities) seldom are important influences on faculty members in course planning.

The influences that faculty frequently mentioned spontaneously (discipline, student characteristics) also were rated important in the more structured probe. When posing more structured questions about influences on course planning (see Table 4), we deliberately included some items that faculty rarely mentioned in response to open-ended questions. Responses confirmed that these influences were probably not mentioned because they lack importance to faculty.

### Differing Influences among Academic Fields and College Types

After coding faculty members' open-ended responses to questions about course influences, we noted a substantial number of differences among faculty teaching in different types of institutions and relatively few differences among academic fields taught (see Table 3). In contrast, when we compared responses from questions in which faculty ranked the importance of specific influences, differences by academic field seemed more notable than differences by type of institution (Table 4). The reason for the different findings when the question is posed in two ways is not clear. We hypothesize, however, that local contexts were foremost in faculty members' minds as they initially thought aloud about course planning. When broader considerations were introduced by the investigator, faculty members may have judged local factors as relatively less important.

We tried to understand the underlying bases for differences among academic fields by comparing responses to four probes that followed the questions about course planning. In these four sets of structured questions we explored (1) the way faculty members defined their academic fields, (2) their beliefs about the purpose of education, (3) the reasons why they would select particular content, and (4) the ways they prefer to sequence that content.

Faculty members were asked to:

1. Choose and rank order the three best definitions of their field from a list of seven (drawn from Dressel and Marcus, 1982),
2. Rank order six paragraphs describing different beliefs about the purpose of education (based on Eisner and Vallance, 1974),

3. Rank order nine cards describing reasons for selecting course content and assign a total of 100 points to the cards to indicate their relative importance (constructed to represent current concerns for coherence, integration, and involvement drawn from cognitive psychology and from various national reports);
4. Rank order six methods of arranging course content (expanded from Posner and Strike, 1976).

Faculty in the fields represented in our sample could be roughly separated into two groups based on the characteristics they attributed to their academic field (the distribution of the highest ranked of their three choices is shown in Table 5) and their related beliefs about educational purpose (Table 6). Although our sample was not sufficiently large and representative to confirm this finding, we expect that these two groups may become even more distinct when information about how they choose and arrange course content is also considered.

One group of faculty chose attributes that characterized their fields as disciplines, consisting of sets of concepts, principles, ideas, phenomena, or objects to be explained to students. They reported planning their courses to teach these concepts and principles, and they also simultaneously tried to help students become effective thinkers and/or social change agents. History, biology, and sociology are examples of such fields.

A second group of faculty members believed their fields are not appropriately characterized as disciplines. These instructors, most frequently teaching

**TABLE 5. Characterizations of Their Academic Field Preferred by Faculty**

Characterization	First-Choice Characterization (%)	Difference	
		College Type <sup>a</sup> <i>p</i> <sup>c</sup>	Academic Field <sup>b</sup> <i>p</i> <sup>c</sup>
A set of interrelated concepts and operations	25	n.s.	0.01
A mode of inquiry	30	n.s.	0.01
A body of knowledge	22	0.08	0.00
A group of objects or phenomena to explain	12	n.s.	0.01
A group of scholars	11	n.s.	0.00
A set of interrelated interests and values	0	n.s.	0.01

<sup>a</sup> Comparison based on chi-square test with  $df=4,76$ .

<sup>b</sup> Comparison based on chi-square test with  $df=7,73$ .

<sup>c</sup> n.s. =  $p > .10$ .

**TABLE 6. Mean Ranking Assigned by Faculty to Each of Six Educational Beliefs**

Educational Beliefs	Mean Ranking <sup>a</sup>	Difference	
		College Type <sup>b</sup> <i>p</i> <sup>d</sup>	Academic Field <sup>c</sup> <i>p</i> <sup>d</sup>
Effective thinking	5.4	n.s.	n.s.
Social change	4.4	0.09	n.s.
Systematic instructional process	3.5	n.s.	n.s.
Great ideas/discoveries	3.1	0.00	0.00
Personal enrichment	3.1	n.s.	0.00
Pragmatic constraints	1.6	n.s.	0.03

<sup>a</sup> Minimum ranking = 1; maximum ranking = 6.

<sup>b</sup> Comparison based on *F* ratio with *df* = 4,77.

<sup>c</sup> Comparison based on *F* ratio with *df* = 7,74.

<sup>d</sup> n.s. = *p* > .10.

composition or literature, generally described their field either as a group of people who share pursuit of values and interests or (as a second-ranked choice) the interrelated set of values or interests itself. This group of faculty tended to see their role as promoting student growth, skill acquisition, or personal enrichment.<sup>2</sup>

Differences among faculty by academic field and college type in the way they characterized their disciplines are shown in Table 5, and differences in their choices among educational belief statements are shown in Table 6. The comparisons show more differences in faculty educational beliefs and the way they view their discipline by academic field than by institution.

In an attempt to test reports by Seidmann (1985) that community college faculty members felt substantially constrained in their course planning and teaching by factors beyond their control, we included a paragraph implying that one's educational beliefs were not likely to predominate in course planning because of a lack of autonomy. Response to this is referred to in Table 6 simply as "pragmatic constraints." Faculty, including those in community colleges, vehemently disavowed such a notion.

As desired by both cognitive psychologists and authors of the various national reports, many faculty members, in selecting introductory course content, reported having chosen material that represents fundamental disciplinary concepts, helps students add to their cumulative knowledge, helps them integrate their ideas, or stimulates them to search for meaning (Table 7). In contrast, most faculty members explicitly rejected the idea that they would choose content because students will enjoy it or will learn it readily. For introductory courses, most instructors also felt that it is premature to choose

**TABLE 7. Specific Influences on the Selection of Course Content**

Influence	Mean Rating <sup>a</sup>	Difference	
		College Type <sup>b</sup> <i>p</i> <sup>d</sup>	Academic Field <sup>c</sup> <i>p</i> <sup>d</sup>
Fundamental concept of discipline	14.1	n.s.	0.00
Helps students accumulate knowledge into whole	12.8	n.s.	n.s.
Stimulates search for meaning	12.0	n.s.	0.00
Interrelates concepts into larger whole	11.0	n.s.	n.s.
Useful in solving problems	10.7	n.s.	n.s.
Encourages learning on own	10.0	n.s.	n.s.
Students enjoy topic	9.5	n.s.	n.s.
Based on research concept in field	6.7	n.s.	0.00
Students readily learn	6.6	n.s.	0.05

<sup>a</sup> Minimum rating = 1; maximum rating = 100.

<sup>b</sup> Comparison based on *F* ratio with *df* = 4,81.

<sup>c</sup> Comparison based on *F* ratio with *df* = 7,78.

<sup>d</sup> n.s. = *p* > .10.

material specifically because it acquaints students with methods of inquiry in their field. In their view, such material is best included in more advanced courses. The relative importance attached by faculty respondents to these influences on choosing content is shown in Table 7, along with summary comparisons by institutional type and academic fields. In selecting content, there were no differences among college types, but we detected differences among academic fields. Specifically, those fields in which faculty see their discipline as consisting of concepts to be transmitted to students differ from those less structured fields in which faculty hope that they can encourage students to search for meaning.

### How Faculty Arrange Course Content

Based on correlations in this small sample, faculty members seem to arrange course content in ways that reflect both their views of their academic fields and their beliefs about educational purpose. Their preferred methods of sequencing, which exhibit more rank-order differences by academic field than by type of institution, are shown in Table 8. Again "pragmatic sequence," as characterized by a paragraph describing the influence on sequencing of calendar, facilities,

**TABLE 8. Preferred Method of Arranging Course Content for Introductory Course**

Method	Mean Ranking <sup>a</sup>	First Choice (%)	Difference	
			College Type <sup>b</sup> <i>p</i> <sup>d</sup>	Academic Field <sup>c</sup> <i>p</i> <sup>d</sup>
Conceptually based sequence	5.0	48	n.s.	0.01
Learning based sequence	4.1	17	n.s.	0.00
Knowledge utilization sequence	3.5	9	n.s.	n.s.
Structurally based sequence	3.3	18	n.s.	0.00
Knowledge creation sequence	3.1	8	n.s.	0.01
Pragmatic sequence	2.0	4	n.s.	n.s.

<sup>a</sup> Minimum ranking = 1; maximum ranking = 6.

<sup>b</sup> Comparison based on *F* ratio with *df* = 4,74.

<sup>c</sup> Comparison based on *F* ratio with *df* = 7,71.

<sup>d</sup> n.s. = *p* > .10.

lack of resources, and other constraints, was not believed by faculty to be important relative to other rationales. In some cases the specific methods of arranging course content chosen by faculty members in different academic fields were not surprising. The most obvious illustration is that every history professor chose structural sequencing (specifically, chronological treatment of subject matter) as the preferred method. To cite another instance, instructors in applied fields, such as nursing and business, were least likely to choose sequences based on knowledge creation. Corroborating their view that they would not emphasize mode of inquiry of their field in introductory courses, faculty members gave low ranking to course arrangements paralleling the creation of knowledge in their fields.

Correlations between faculty members' preferred methods of arranging content and other variables described previously, such as their educational beliefs, and their educational backgrounds, and the three rank-ordered characterizations faculty members assigned to their disciplines, are reported in Table 9. The correlation patterns in Table 9 hint that, with a larger and more systematic sample, regression models can be developed that predict faculty preferences for arranging content from their discipline and associated educational beliefs. We hypothesize that the most common pattern will be associated with the belief that the academic field is a set of concepts and operations. In this case, faculty arrange content in ways intended to help students integrate ideas from the discipline into abstract principles, and for these faculty members, textbooks tend to be important as organizers. In a second common pattern, faculty beliefs link the importance of education for personal enrichment with a view that either an inquiry into meaning or a set of interrelated values is to be pursued. Because of

**TABLE 9. Correlates of the Ways of Arranging Course Content for Introductory Course**

Content Arrangement	Sequencing Method <sup>a,b</sup>					
	Struc- turally Based	Con- cept Based	Knowl- edge Creation	Learn- ing Based	Knowl- edge Use	Prag- matic
Mentions of planning factors						
Choose materials			25			
Set goals/objectives					25	
Mentions of planning influence						
Discipline structure						-25
Student evaluations			-25	21		
Definitions of academic field <sup>c</sup>						
Mode of inquiry			29			-20
Set of values		-25				20
Set of objects to explain	44			-35		
Group of scholars		-30			38	
Body of knowledge		27	-28			21
Interrelated concepts	-30	40	-21			
Specific influences on planning						
Own background	26					
Beliefs about education		-24				
Instructional experts	-21			37		
Constraints			31			
Student plans		26				
College goals						34
Program goals			-29			
Resources/facilities		24				20
Influences on content selection						
Student readiness						30
Fundamental concept			-31			
Stimulate search for meaning		-34			25	
Encourages self-learning		-24				
Problem solving	-20				45	
Educational beliefs						
Social change					28	
Set by others					-32	
Personal enrichment		-22			29	
Discover great ideas	26				-29	
Person/situation factors						
Class size				-28		22
Courses in education	-31			29		
Teaching workshops	-41			35		
Presented conferences		-21		31		

TABLE 9. *Continued*

Content Arrangement	Sequencing Method <sup>a,b</sup>					
	Struc- turally Based	Con- cept Based	Knowl- edge Creation	Learn- ing Based	Knowl- edge Use	Prag- matic
Academic field dummy						
Biology						
Business			- 20			
Composition				21		
History	39					
Literature		- 35				
Nursing			- 34			
Mathematics						

<sup>a</sup>  $N = 70$  after listwise deletion of missing values.

<sup>b</sup> Only items with correlations above .20 are shown in table. Decimal points are omitted.

<sup>c</sup> Respondents chose three characterizations; first choice was assigned a value of 3, second choice a value of 2, etc.

the individualized nature of this second pattern, textbooks are of relatively little importance; student characteristics are seen as important determiners of instruction.

## DISCUSSION

Based on our findings in this exploratory study, we developed a tentative "Contextual Filters Model of Course Design" (see Figure 1). The model posits that faculty members' views of their academic fields, their backgrounds, and their assumptions about educational purpose interact to form a "discipline-grounded" perspective that initially exerts a strong influence on course planning. Subsequently, we hypothesize that specific characteristics of the instructional setting act as "contextual filters," modifying, in varying degrees, faculty members' views. Building on the interaction of the discipline-grounded perspective and salient contextual factors, instructors can begin course planning at one or more decision points. Planning proceeds in a nonlinear fashion in ways that remain to be clarified, but selection of subject matter is likely an early step for many faculty.

Since the relationships in this model form a set of interrelated hypotheses subject to empirical test, we are developing the model further, hoping to culminate with a general model of collegiate course planning. Currently, we are conducting a survey of a 10% random national sample of teaching colleges that includes introductory courses in 12 diverse fields. The survey, which has been constructed to expand upon information we obtained from the interview study



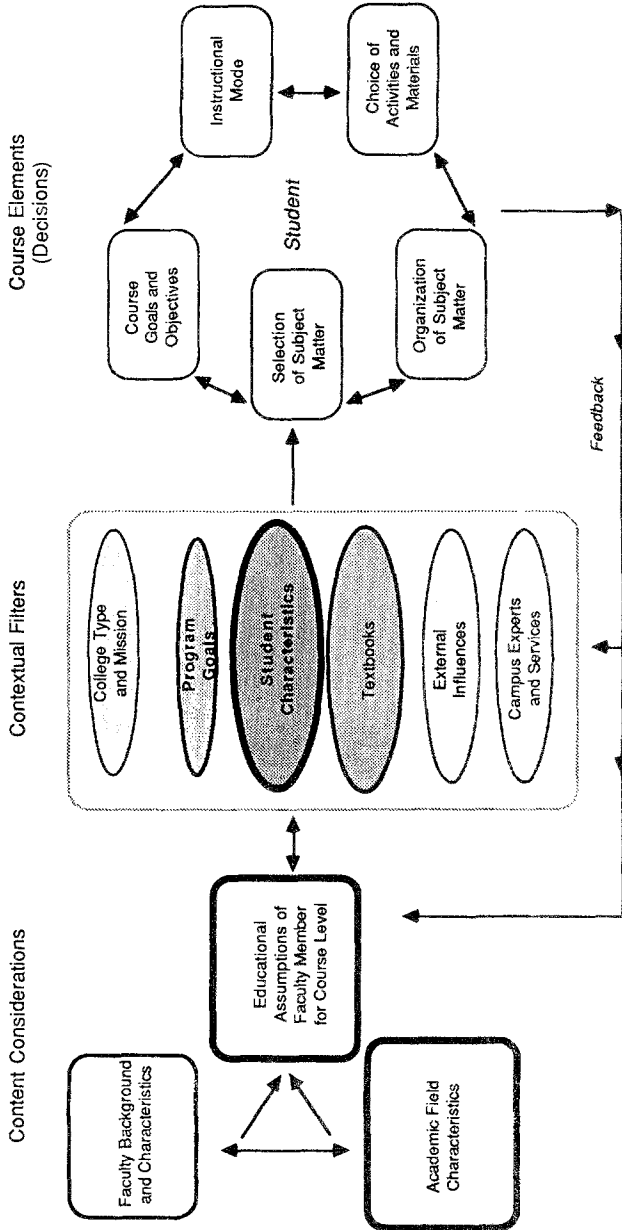


FIG. 1. Contextual filters model of course design.

reported here, should enable us to be far more precise about the strength and relationships of course-planning influences. Through regression and cluster analyses we expect to be able to characterize several patterns of course planning among faculty in various academic fields and to determine the extent to which the type of college may modify these discipline-based patterns.

The interview study had a number of limitations typical of exploratory studies designed to generate grounded theory and instrumentation for more systematic research. Several of these limitations, uncovered both during the interviews and in feedback seminars with the participating faculty, resulted in refinements to the survey instrument. For example, the number of belief statements and course-sequencing patterns was expanded to accommodate faculty responses, additional disciplines, and institutions with special missions. Also, the interview sample included mostly experienced faculty who frequently were maintaining their course routinely. In the larger survey sample, we expect data from a sufficient number of less experienced and part-time faculty, thus permitting us to compare their planning with that of experienced and full-time faculty.

Data presented in this paper reinforce the arguments of earlier theorists that educational purpose and process vary by discipline. The faculty members we interviewed tend to plan courses and communicate to students following their view of the nature of their disciplines. However, as implied in our planning model, it is difficult to disaggregate the extent to which these planning procedures are influenced by the discipline itself, graduate school socialization, or the characteristics of individuals attracted to certain disciplines. Nonetheless, the combined effect of these three factors seems sufficiently strong to suggest that "usual patterns" of course planning may be associated with specific academic fields.

Although the assumptions that faculty members initially hold surely are modified by the instructional setting, the beliefs that underlie course planning seem very enduring. Disentangling the discipline-related beliefs from contextual factors is difficult. Despite the strength of faculty belief systems and implicit theories that undergird course planning, we found substantial modifications in patterns based on local contexts. Thus, we believe it is an oversimplification to argue that certain faculty assumptions translate rather directly into a course structure or teaching style (Dressel and Marcus, 1982). Similarly, although personal characteristics of teachers are certainly important in determining course plans and teaching style, we think discipline socialization in the academic field may be at least as important as personal traits in determining instructional style. There is a great deal more to learn about why some of the categories of influences we have called "filters" in our model have salience for some faculty and not for others in the same setting.

Within the bounds of their discipline and context, faculty members seem to consider an extremely modest number of alternatives in planning introductory

courses. We observed that the small number of faculty members who reported an active role in their discipline associations or were currently pursuing doctoral study often considered alternative teaching styles based on new information in the field. Faculty without doctoral training in the discipline more often had preparation in education and sometimes reported precollege teaching experience. For faculty with these backgrounds, alternatives in course design were more likely to involve teaching strategies and sequencing.

Because of recent reports that cite discontent and alienation among faculty members, we deliberately explored the extent to which faculty members felt constrained or discouraged about their teaching. Although we included items to probe for both constraints on course planning and on content arrangement, we found very little evidence to support Seidman's (1985) conclusion that faculty in community colleges feel constrained, despondent, or alienated. To the contrary, we noted considerable interest and enthusiasm about teaching among most faculty members interviewed. We believe that where discontent does exist, it may center more directly on working conditions, salaries, and reward options than on the teaching aspects of faculty work.

We see several implications for practice from the study. Knowing that faculty beliefs about educational matters differ substantially across teaching fields and that concepts such as "mode of inquiry" have meaning unique to the discipline has implications for faculty development. For example, it may be more effective to conduct instructional design workshops with faculty from the same teaching field whose customary course-planning patterns are similar than to mix faculty from different fields. However, if the workshop's intent is to introduce new alternatives, then a diverse group would be more appropriate.

As faculty spoke to us about their course planning, we sensed the value of self-reflection about the planning process. A number of them stated that the experience raised issues they seldom deliberated. We believe the interview procedures and protocols might be adapted by institutions as a useful form of faculty development. We also found some faculty members able to articulate the reasons why they chose certain course materials, content, or structures; others gave little evidence of having reflected on their decisions. This observation poses a set of new research questions: What are the factors that contribute to self-reflection about course planning? Do reflective and nonreflective faculty differ in teaching effectiveness or satisfaction with teaching?

A final practice implication emerges from the observation that the faculty interviewed seemed to teach as they had been taught and to have acquired course-planning skills on the job. The preparation of graduate teaching assistants ought to include an emphasis on instructional design, including examination of the relationship between discipline characteristics and course planning and teaching.

Despite the limitations noted earlier, the study suggests several avenues for

further research. The data hint that faculty profiles can be constructed representing the “usual patterns” of course planning by faculty in specific academic fields. Data from the national survey will be examined for such planning patterns. This evidence would be useful for both faculty development and institutional planning purposes.

We found that faculty members interviewed generally seemed unaware of instructional or learning theories. The few who cited them referred to work that seemed to us out of date. Apparently, there is a substantial time lag in applying contemporary educational advances to college teaching. Even so, in several discussions, reference was made to individuals with credibility and the capability to bring new knowledge about teaching to faculty members. This concept of “translator” suggests a number of questions: What makes an effective translator? Who are the individuals in various fields that can translate educational theories into practical knowledge? Can their contributions be encouraged or developed?

Some other questions particularly important to both basic and institutional researchers are mentioned here. Can instructional improvement programs for experienced faculty succeed if they attempt to change basic beliefs about education that have been acquired through long years of faculty socialization? Or, if the ways college instructors plan courses are subject to influence, are such influences most effective during a formative period?

Might institutions develop successful instructional improvement efforts by encouraging faculty to include new types of information in their planning? Consideration of the filters in our tentative contextual filters model suggests the possibility of focusing faculty attention on the availability of potentially useful information they do not currently use. For example, a college might encourage vigorous discussion of program goals, or it might improve communication about student characteristics. Varying the strength and salience of such influences has the advantage of avoiding challenges to strongly held beliefs but holding potential for producing incremental changes tailored to the specific campus and academic field.

Would longitudinal studies of new college instructors as they learn to develop planning strategies be useful to ascertain the source of beliefs and practices exhibited by experienced teachers?

In conclusion, coherent educational design seems to require at least three elements: (1) a suitable plan must be constructed by experts in the academic field; (2) the plan must be communicated effectively to students; and (3) students must possess capabilities and motivations needed to carry out the plan successfully. This study has been one of the first to explore the rationale and influences for construction of a suitable plan at the course level. Additional studies with national samples of faculty to verify these results and extend them to the level of program plans are under way. Eventually, research is needed that

measures educational outcomes at both levels as each of these three elements—the plan, its communication to students, and the effects of student characteristics—is varied. Although national critiques of higher education have called attention to problems, it remains for interested teachers and researchers to find solutions. One important point of attack is at the level of course planning.

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## NOTES

1. The interview protocols, a detailed discussion of the rationale for inclusion of each question, and the method of coding responses are available in a technical report (Stark et al., 1988).
2. Similar differences between literature teachers and others have been found independently by Naveh-Benjamin and Lin (1987) as they worked with faculty members and students to measure the effects of explicitly teaching the instructor's cognitive structure to students. In their experiment, students in literature classes showed smaller gains in cognitive organization, less movement toward the instructor's cognitive frame, and opposite correlations of grades with cognitive organization when compared with students in psychology and biology classes.

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