This paper compares discussions of instructional resources in academic departments with highly continuous planning with those of departments characterized by less continuous planning. Members of 44 departments in different fields and institutional types were interviewed about their department's planning contexts, roles, processes, and decisions. Interviews were conducted with 44 department chairs and 83 faculty members. Compared to departments that scored low for continuous program planning, high scoring departments discussed instructional resources more frequently and systematically, and had more complex instructional resource concerns. Departments in the low continuous planning group tended to describe instructional resource discussions as "complaining" rather than "planning." Disciplinary and institutional differences and implications for instructional resources and planning are discussed. (Contains 1 table and 14 references.) (Author/SLD)
Instructional Resource Discussions in Continuous Planning Academic Departments: Implications for IR and Planning

Charlotte L. Briggs, College of William and Mary
Joan S. Stark, University of Michigan
Jean Rowland-Poplawski, University of Michigan

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Contact: [After August 15, 2002]
Charlotte L. Briggs, Ph.D.
Visiting Assistant Professor
Loyola University Chicago
820 North Michigan Avenue
Chicago, IL 60611
(312) 915-7401
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Abstract

This paper compares discussions of instructional resources in highly continuous planning academic departments to those in less continuous planning departments. Members of 44 departments in diverse fields and institutional types were interviewed about their departments' program planning contexts, roles, processes, and decisions. Compared to departments that scored low for continuous program planning, high scoring departments discussed instructional resources more frequently and systematically, and had more complex instructional resource concerns. Departments in the low continuous planning group tended to describe instructional resource discussions as "complaining" rather than "planning". Disciplinary and institutional differences, and implications for IR and planning are discussed.
Introduction

When departmental faculty plan curricula together, they may discuss the curriculum in terms of various potential concerns. Stark and Lattuca (1997) suggest that curricular decisions fall into eight categories, which they refer to as curriculum elements: purpose, content, sequence, instructional processes, instructional resources, evaluation, and adjustment. The focus of this study is departmental discussions about instructional resources. Instructional resources include material, human, and facilities assets used in the teaching and learning process, such as audio-visual equipment, instructional staff, and laboratory space. In recent years, advances in instructional technology, demographic shifts, and increased awareness of learning styles have all encouraged faculty to emphasize more active learning and more realistic laboratory and clinical learning experiences. Indeed, El-Khawas and Knopp reported in 1996 that 81% of institutions surveyed reported increased efforts in the preceding decade to promote active learning, and 98% reported increased use of computers in instruction. They also reported a general theme across institutions of a desire to link "college study and the employment world" (p. 23).

As instructional resources become more varied, they may also create more complex curriculum planning scenarios, as faculty must research options, cope with their own learning curves, and make difficult budget decisions. As instructional resources increasingly include computer technology, planning for the maintenance and timely replacement of equipment and software becomes a more significant aspect of curriculum planning for individual departments and schools. While departments carry out many aspects of curriculum planning with little institutional consultation, planning for instructional resources must be carefully and genuinely coordinated between the department and the institution because of the budgeting relationship.
between them. As efforts to improve undergraduate education continue to emphasize planning for specified outcomes, institutional researchers may be called on increasingly to provide information and data support directly to individual academic departments. While many institutional research offices already support departmental assessment efforts, they may also be called on to support instructional resource planning, both by individual departments and by administrators responsible for campus computing, instructional technology, and residential learning communities. Understanding how faculty in different types of departments think about instructional resources as part of their overall program development process may aid institutional researchers and planners (and other administrators or campus committees) to support and coordinate planning efforts.

This paper reports findings from interviews with members of 44 academic departments nominated as especially active in their program planning efforts, and explores the frequency and nature of their discussions about instructional resources. More specifically, it compares instructional resource discussions in departments that scored in the highest and lowest quartiles of this selected group on measures of continuous program planning, and notes a number of important themes associated with frequent and infrequent discussion of instructional resources.

Literature

Stark and Lattuca's (1997) conception of instructional resources as a decision category of academic plans appears to be uncommon in the literatures on academic planning, course design, and teaching. Indeed, even most other survey texts on the college curriculum neglect the subject entirely (Rudolf, 1977; Levine, 1978; Gaff, Ratcliff & Associates, 1996; Lattuca, Haworth, & Conrad, 2002). Until recently literature on academic planning often has reflected a
limited view of potential instructional resources, and frequently has treated instructional
staffing, facilities, and equipment as individual topics rather than part of a comprehensive plan
(Halstead, 1979; Heydinger, 1980; Jedamus & Peterson, 1989). While instructional technology
planning is a growing area of concern, there is little advice available about how to plan for it,
let alone how to integrate planning at the course and program level with that at the institutional
level. There is even less discussion of how to plan for increasingly computerized equipment in
programs that prepare students to work in rapidly changing science and technology dependent
fields (e.g., nursing, electronics, theater arts).

The majority of literature about teaching and curriculum design fails to distinguish
decisions about instructional resources from those about instructional processes. If an
instructional resource such as a video is mentioned, it is usually discussed only in terms of pros,
cons, and approaches to using it as a teaching technique. In their guide to course design, Posner
and Rudnitsky (2001), for instance, instruct teachers to develop an outline of intended learning
outcomes and then determine "instructional foci" to move students toward those outcomes. By
"instructional foci" they mean specific learning experiences, but they say no more about how
faculty might consider the resource implications of such decisions. In his book on "teaching
tools," Boschmann (1987) entitled his chapter on instructional resources "Use of Gadgetry,"
betraying a common attitude toward instructional resources: that they can enhance teaching, but
are not a fundamental component of curriculum planning. In their book on active learning
strategies, Bonwell and Eison (1991) say

The lack of materials or equipment needed to support active learning can be a barrier to
the use of some strategies promoting active learning (for example, demonstration and
They go on to say that advisory literature about improving classroom discussion has often glossed over the very important question of "discussion materials", that is, material stimuli for discussions. They list a number of options, including essays, poems, data and case studies, which they say good discussion leaders "search for" and "hoard" (p. 23-24). Thus, instructional resources, in their view, appear to be an individual responsibility based on attentiveness and luck rather than on planning. Perhaps because they want to allay objections based on cost, Bonwell and Eison, as well as the majority of others who advocate active learning techniques, largely avoid the issue of instructional resources. Empirical study of instructional resources as an element of curriculum planning, therefore, will contribute to higher education scholarship as well as practice.

Conceptual Framework

This paper reports an analysis of data from the Curriculum Leadership for Undergraduate Education (CLUE) study which sought to understand the contexts, leadership roles, planning processes, and curricular decisions of academic departments that engage in comparatively continuous curriculum planning at the program level. The conceptual framework for the study draws on Stark and Lattuca's (1997) definition of curriculum as an academic plan consisting of eight potential elements, including instructional resources, and Stark and colleagues' (Stark, Lowther, Bentley, et al., 1990) contextual filters model of course planning, which asserts that internal, organizational, and external influences interact to shape
curricular decisions. The concept of continuous program planning is original to the larger CLUE study, and was developed inductively from the interview data. Continuous program planning was defined by high composite scores on 20 indicators related to 4 criteria for departmental planning processes (Author identifying reference):

1. Continuous and frequent curriculum planning processes
2. Awareness and responsiveness
3. Participation and teamwork
4. Use of evaluation for adaptive change.

By comparing academic departments with composite scores in the top and bottom quartiles, [Author reference] found that departments that planned curricula more continuously also: (a) discussed more of the eight curricular elements frequently; (b) considered more of the elements to be areas of curriculum expertise worthy of ongoing faculty development; and (c) had more plans to increase departmental expertise in the elements. Instructional resources was the only curricular element that all departments in both the top and bottom quartiles for continuous program planning discussed at least "some" (64%) or "frequently" (36%). For this reason we chose to scrutinize the data more closely to better understand departmental discussions of instructional resources as an integral part of curriculum planning at the program level.

Sample

Data consisted of semi-structured interviews with 127 department chairs (n=44) and faculty members (n=83) from 44 academic departments that were nominated by their chief academic officers (CAO) as being especially active in program-level curriculum planning. We sent requests for nominations of departments with at least seven full-time faculty members to CAO's at a random, stratified 15 % sample of Carnegie Classification Research 1 & 2, Doctoral
1 & 2, Masters 1, and Associate of Arts institutions throughout the United States. We provided the CAOs with seven optional justifications for their nominations and encouraged them to indicate additional or alternative justifications if they preferred. The participating departments were selected for maximum variation from a sample of 213 nominations arrayed on a matrix of the 4 institutional types and 7 liberal arts and pre-career field types\(^2\). We interviewed individual department chairs and faculty members by telephone for 60-90 minutes using a semi-structured interview protocol that asked a wide variety of open-ended questions about the departments' program planning contexts, processes, roles, and decisions.

Analysis

Three researchers and two assistants undertook a multi-stage qualitative analysis process to identify, refine, and evaluate the inter-rater consistency of 4 criteria and 20 indicators of continuous program planning.\(^3\) The lead author then coded the 127 interview transcripts for each of the 20 indicators, assessed the coded passages for each department to score it on a five-point scale for each indicator\(^4\), and summed the 20 scores to arrive at a final continuous program planning score for each department. For the analysis reported in this paper, departments were rank-ordered by their combined scores (score range 50-95 out of a possible 100), and then the departments in the top quartile (mean = 90) and bottom quartile (mean = 65) were selected for comparison. The responses that are the focus of this analysis described the nature, frequency, and conditions under which departments discussed each of the eight

\(^2\) The liberal arts field types were humanities, social sciences, and sciences & mathematics. The pre-career field types were those proposed by Stark (1998): enterprising services, human services, information services, and artistic services.

\(^3\) For a fuller description of this multi-stage process and resulting criteria and indicators, please see [Author identifying reference].

\(^4\) 5 = strong positive evidence, 4 = some positive evidence, 3 = insufficient evidence, 2 = some negative evidence, 1 = strong negative evidence.
curriculum elements. The lead author coded and compared all passages related to instructional resources from participants in the high and low continuous planning groups.

The analysis of instructional resource discussions consisted of four parts. First, interview passages relating to instructional resources (typically from three interviews per department) were grouped by department and assessed on a three-point scale (none, some, frequent) to describe the occurrence of instructional resource discussions in each department. Second, the passages were searched for examples of specific instructional resources to determine how participants themselves conceived of this curriculum element. Third, a list was compiled of the instructional processes that participants mentioned as occasions for using the instructional resources. Finally, passages were reviewed to identify significant themes describing the various contextual influences that prompt or limit instructional resource discussions.

Findings

Instructional resource discussions occurred relatively frequently in most CLUE departments; no department reported a complete absence of such discussion. However, as Table 1 shows, the departments in the low continuous planning group discussed instructional resources less often than departments in the high continuous planning group. Furthermore, their instructional resource discussions tended to be informal rather than part of a systematic planning process, and they were less likely to view this curricular element as a potential area of curriculum expertise worthy of ongoing faculty development.

---------------------------------Insert Table 1 approximately here---------------------------------
The following is a list of items one or more participants mentioned when asked about instructional resources. The list answers the question, in the view of interviewees, "What are instructional resources?":

- Computer technology (including computers, presentation technology, calculators, software, databases, equipment and instrumentation of various kinds)
- Other equipment and materials for laboratories, clinical courses and other simulated work environments and performance studios
- General staffing (teaching assistants, part-time faculty, secretaries)
- Specialized staffing (full- and part-time faculty, technical support, instructional design support, consultants)
- Facilities (regular classrooms or special purpose space such as labs and studios)
- Course release time to develop curricula
- Textbooks and other instructional materials
- Photocopying
- Library resources
- Transportation (e.g., vans)
- Funds to pay students for practicum work in the field
- Support for students with special needs (e.g., tape recorders)

Most of these items raise financial concerns for departments, but some are matters of availability and access. For instance, a department may have difficulty finding a faculty member with specific qualifications even if it has the budget and authority to hire one. Similarly, instructional resource discussions may be about options rather than costs. When a department discusses which textbook or software to adopt, for example, the costs may be irrelevant or similar for the various options.

Although several of departments mentioned increasing concern about students with learning disabilities, many campuses now have administrators and offices that provide resources directly to students with disabilities or provide assistance to departments, particularly when compliance with the Americans with Disabilities Act (ADA) is a concern. Centralized budgeting for students with disabilities may reduce the need for departmental discussion of this item as an instructional resource issue even if departments discuss it as a learner or instructional processes issue.
The next list contains items participants mentioned as reasons they needed to discuss instructional resources. It answers the question "What types of curricula are apt to require discussions of instructional resources?":

- The adoption of new technology (which is a resource itself, but also prompts the need for other resources such as facilities, faculty/TA training, support staffing, and committee time to research)
- Clinical courses
- Laboratory courses
- Studio courses
- Field courses, or courses that incorporate some field experience
- Other efforts to get students "out into the world"
- Courses that involve group work or require small class sections
- Honors programs
- Courses for which no acceptable textbook exists
- Courses that utilize the World Wide Web
- Programs with a large number of majors
- Programs with a large number of service courses or individual service courses with a large number of students.
- Programs taught exclusively or primarily by full-time faculty

As this list suggests, many instructional resource needs stem from the type of instructional processes the department employs, which may be more closely related to its field of study than to institutional influences. Institutional type may play an indirect role, however, by determining the degree to which the department emphasizes professional preparation, since vocationally oriented programs tend to be particularly resource intensive. Beyond that, institutional type may determine the inclusion or exclusion of whole fields of study such as industrial technology.

Departments, particularly in the high continuous planning group, often discussed instructional resources as they considered a new instructional approach. However, the high continuous planning departments were also more likely than the low continuous planning departments to employ instructional processes other than lectures and discussion, and therefore to discuss instructional resources as part of their normal program planning. An examination of
the planning contexts of departments that frequently discussed instructional resources suggests that a mission to prepare students for professional practice is the most consistent determinant of frequent instructional resource discussions. As might be expected, many of these departments reside in Associate of Arts institutions. In addition, institutional planning and evaluation systems appear to increase the frequency of such discussions. The following list of departmental characteristics and conditions answers the question "What are the contextual attributes associated with frequent discussion of instructional resources at the program level?":

- The department's instructional processes are resource intensive and instructional resources are perceived to be necessary rather than merely beneficial
- The department's mission is professional preparation
- Change in the professional practice field is rapid, particularly involving technology
- The department must keep up with the practice field to attract, retain, and place students
- Institutional planning and program evaluation processes are frequent and cyclical
- The department routinely discusses instructional processes as a group
- The department takes collective responsibility for planning a number of core courses
- The department determines teaching assignments as a group due to a commitment to instruction by full-time faculty or the need for specialized course staffing.
- The department is pursuing a large-scale curricular revision or innovation project
- There are opportunities to obtain external grants for resources (unless grant procurement is viewed as the chair's or administration's job)
- The department is hiring a new faculty member

The departments that discussed instructional resources infrequently often reported that they talked about them more in the context of complaining than planning. Most expressed a high level of frustration over their inability to secure the instructional resources they requested. A few, however, said they seldom discussed instructional resources because they had what they needed. Many of these departments, particularly the frustrated ones, shared some common contextual attributes beyond simply the absence of some of the items listed above. The following list of departmental characteristics and conditions answers the question "What are
the contextual attributes associated with less frequent discussion of instructional
resources at the program level?":

- The department’s mission is liberal arts education, particularly in a social science or
  humanities field
- The department is strained by high enrollments
- The department’s primary instructional resource concern is staffing and facilities, not
  equipment or other material expenditures
- The department frequently has failed in the past to acquire requested instructional resources
  from the institution causing a general sense of bitterness and resignation among its
  members
- The institution does not engage departments in cyclical planning, and program review tends
  to occur sporadically if at all
- The chair takes responsibility for acquiring and distributing departmental funds for
  instructional resources to faculty members on the basis of individual requests
- Curricular discussion in general is somewhat limited at the program level in deference to
  individual faculty autonomy
- The department delegates course staffing responsibilities largely to a scheduling committee
- The department delegates technology planning responsibilities largely to a technology
  committee

Neither set of contextual attributes should be interpreted as causal determinants of
instructional resource discussions or their absence. While some may be causes, others are
probably correlates that simply help describe the types of departments that are more or less
likely to require resource intensive instructional processes. The lists are helpful, however, for
two reasons. First they indicate that institutionally mandated planning processes play a role in
the frequency and effectiveness of instructional resource discussions. The CLUE data suggest
that rather than being yet another layer of bureaucratic paper work, strategic planning that
integrates institutional and departmental resource decisions is associated with relatively low
levels of frustration and perhaps higher levels of procurement success for departments. Many of
our participants noted the large amount of data their institutions supplied to help them with
departmental planning. Although some admitted they had initially resisted strategic planning as
an external reporting burden, they had come to appreciate the institutional support it provided
for their internal planning efforts. More specifically, these planning systems seemed to provide a mechanism for long-range planning that is reviewed and adjusted frequently enough to respond to unexpected short-term conditions. For instance, some departments reported opportunities to make major purchases over the course of several budget years, but also appeared to have the flexibility to respond quickly to new opportunities and changes in their environments.

The second reason these lists are helpful is because they reveal differences in the contexts, and number and type of instructional resources that were of most concern to the departments that discussed instructional resources frequently compared to the departments that did not. Those that discussed instructional resources less frequently tended to have fewer resource concerns, most of which could be dealt with between the chair and individual faculty members. These departments tended to be in arts and science fields with fairly traditional instructional processes and lower levels of group decision making in general than the other departments. Furthermore, those departments that did express strong instructional resource concerns spoke primarily about the problem of general staffing to provide instruction to very high enrollment courses. They sometimes had material concerns as well, but primarily they complained about shortages of graduate student teaching assistants and part-time instructors. One sociology department at a large research university, for instance, struggled to provide instruction to 800 majors. Other departments were challenged by large enrollments in service courses for non-majors. In most cases, these courses were standard subjects that the departments offered every year for general education credit or to fulfill core requirements for majors. Keeping up with staffing sometimes required a special “scheduling” committee or a course release for a faculty member other than the chair. Although finding and supervising an
army of instructional staff is important and challenging, such personnel tend to be interchangeable enough that departments have no need to discuss them very often or in much detail. In contrast, the departments that discussed instructional resources frequently were likely to need personnel with specialized clinical expertise. Because the exact nature of that expertise often changed from term to term with changes in professional practice, departments discussed instructional resources frequently to determine clinical staffing priorities for the immediate and near future and to identify specific candidates to fill openings.

To exacerbate these differences, departments that frequently discussed instructional resources tended to have an extremely complex array of instructional resource concerns because one instructional resource has a way of leading to the need for others. For instance, more instructional staff may require more classroom space, audio-visual equipment, and photocopying. New computers may require dedicated laboratory space, software, faculty training, and technical support. An innovation such as “reform calculus” requires extra faculty time and possibly travel to study the method, extra faculty time to implement it, staffing and classroom space for additional course sections, graphing calculators, new textbooks, and potentially computer programs to supplement instruction or aid in course management. Consequently, in such departments, discussion of instructional resources is apt to be part of a complex program planning conversation that includes multiple instructional resources and multiple curricular elements. Discussion may start with content that requires special instructional processes, but planning is also likely to involve discussion of purpose to prioritize “wish lists”, learners to determine needs and preferences, and evaluation to justify expenditures. In times when there is little hope of procuring instructional resources, therefore, program planning discussions in general may be considerably less frequent.
Summary

Discussions of instructional resources occurred relatively frequently in most of the departments. However, departments in the low continuous planning group tended to discuss instructional resources less often and less systematically than departments in the high continuous planning group. Instructional resource discussions usually stemmed from the types of instructional processes the department employed or was considering, which is often related to its field of study and institutional type. Discussion of instructional resources occurred most frequently in fields heavily influenced by technology, particularly when graduates needed specific technological competencies for jobs. Furthermore, fields heavily influenced by technology were more commonly situated in Associate of Arts institutions where departments were much more likely to report that both their institutions and their program accreditors required them to document planning and/or outcomes. Discussions of instructional resources were less frequent in fields reliant primarily on human rather than material resources (i.e., instructors for high enrollment courses). These departments were also more likely to describe their discussions as "complaining" rather than "planning" and to report the absence of systematic departmental and institutional planning.

Discussion and Recommendations

The CLUE sample included only academic departments nominated as especially active in curriculum planning at the program level, therefore it was not intended to be representative of all departments. Furthermore, the interview protocol was not designed specifically to investigate departmental discussions of instructional resources. Consequently, this study is
exploratory and its conclusions are tentative. Nevertheless, this comparison of departments that scored high on indicators of continuous program planning to those that scored low illuminates the importance of disciplinary and institutional contexts in departmental planning for instructional resources. As well as contributing to curriculum scholarship, awareness of these common differences should help institutional researchers and academic planners understand and perhaps anticipate differences among departments' needs for instructional resources. Equally important, understanding the types of curricula that require more instructional resources can help them watch for curricular trends that might increase or decrease instructional resource demands. A pedagogical movement within a discipline or campus workshops about active learning, for instance, might increase demand for databases, vans for field trips, or smaller class sizes in departments that have never asked for such resources in the past. Some departments may feel frustrated if their institutions are slow to recognize that their need for increased instructional resources is legitimate due to changes in their discipline or field of professional practice. While institutions often recognize as necessary instructional resources that consist of actual equipment used in the workplace, they frequently question the cost effectiveness of new teaching tools that are purely for instructional purposes. Indeed, departments themselves often question the value of new instructional products. Departments that are faced for the first time with myriad choices may need assistance researching their relative costs and benefits. Understanding emerging trends in instructional resources, and how they may differ by discipline and institutional type, therefore, is important for academic planners, as well as for institutional researchers who may provide data on trends, costs, and comparative outcomes to aid departmental decision making.
In addition, many departments have limited experience negotiating directly with outside vendors, particularly for custom products or service contracts. Academic planners may want to be particularly cognizant of curricular trends that require such products and services, and be ready to provide guidance in those extra-institutional relationships. Finally, systems that integrate program planning with institutional planning may initially meet with faculty resistance, but over time they appear to reduce departmental frustration by providing opportunities to negotiate priorities constructively. Departments that characterized their discussions of instructional resources as most frequent and positive also reported receiving considerable assistance with planning from their institutions and program accreditors. One can only assume that this condition benefits the institution as well as the department, and it is therefore worth the institutional effort to provide support and weather any initial resistance to an integrated planning system.
References


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None: department does not discuss  
Some: department discusses occasionally  
Frequent: department discusses frequently and routinely as part of program planning process
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