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ABSTRACT

Institutional procedures for fielding out-of-state data requests are examined in order to develop procedures for the generation of data for state agencies in a prompt, accurate, yet politically astute manner. Part I (Analyzing the Request for Data) discusses the importance of understanding the reasonableness and complexity of the request. Part II (Collecting the Data) offers six management steps involved in data collection: (1) informing relevant units or departments; (2) checking existing data bases to avoid duplication; (3) preparing report formats; (4) actual collection activity; (5) tabulating and editing of data; and (6) forwarding and filing of data. Part III (Monitoring the External Agency's Analysis of the Data) discusses the need for monitoring and control by representatives of the colleges and universities which agency staff claim to have analyzed. Part IV (Review of the Agency's Use of Data in Decision-Making) focuses on the importance of knowing what data is examined by the agency; only data used in decisionmaking should be emphasized in the report. The final part (Evaluating Data Reporting Procedures) suggests that once every three years colleges and university administrators should compile a careful record of the number of data requests and responses in order to develop the best system for reporting. It is suggested that knowing the agency's purpose and use for the request enables the institution to respond with a tailor-made response; therefore, paperwork and staff energy are kept to a minimum. References are provided. (LC)

THE PAPER BURDEN: INSTITUTIONAL MANAGEMENT OF EXTERNAL REPORTING REQUIREMENTS AND REQUESTS IN HIGHER EDUCATION

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The public interest, which must be recognized by public institutions, and the need for institutional and scholarly autonomy came into conflict at many points, and nowhere is this more critical than in the development of a comprehensive system wide information system. Knowledge is power and prior information results in prior power. The demand for additional information by coordinating boards and their staffs can be expected to grow--and grow--and grow.

--Fred Harcleroad
in Joseph D. Boyd et al.
"Comprehensive Information Systems for Statewide Planning in Higher Education" (Iowa City: American College Testing Program, 1971), p. 35

The Paper Burden: Suggestions for Improving the Efficiency of Institutional Reporting

Introduction

Reports are used to judge the performance of colleges and universities. The public demand for accountability in the expenditure of public funds requires branches of government, their committees and agencies to request and study regular performance reports from public institutions in order to assure the effectiveness of their operations. Because expenditures for higher education consume a large share of total state revenues, legislators, governors and the staff members of their supporting agencies have joined to create a multitude of reporting responsibilities for the officers of colleges and universities. Dependent for their continued support on the beneficence of the public and its government agencies, most institutions of higher education have little choice but to issue the reports on their work that elected officials and bureaucrats demand.

In their classic study of the financial control of colleges and universities, Russell and Doi consistently argue that institutions' efficiency can best be calculated by measuring the proportion that each spends for instruction of students. Institutional support expenditures, by

contrast, are minimized in efficient colleges and universities. While Russell and Doi may oversimplify the criteria for judging institutional efficiency, few would dispute their contention that the main purpose of higher education is to discover and transmit knowledge, not to report on how the institution functions. Although reports to society on the achievements of higher education help colleges to maintain their sources of support, reporting and administration is not the main business of the institution. Therefore, the cost of institutional reporting should be contained as much as possible while still allowing colleges and universities to communicate effectively with the external agencies which constitute an important link in their public support.

A few states have brought all their public colleges and universities under the direct management control of a single board of regents or "superboard." The superboards replaced the individual lay boards of trustees which existed earlier. This paper does not examine the relationship between colleges and "superboards" in those states but instead explores the more typical relationship between institutions of higher education and state coordinating boards of commissions of higher education in states which have left the management control of institutions in the hands of individual lay boards. The coordinating boards and commissions (hereinafter called "state

agencies"), are usually devoted to issues of planning and coordination of higher education rather than the governance of individual colleges and universities.

Because planning and coordination requires a thorough understanding of the present conditions within the institutions which are being coordinated and planned, the first task of a commission or coordinating board of higher education is to study the structure, mission and productivity of institutions within its bailiwick. At first, coordinating boards may lack data on the operations of colleges and universities. Or, they may possess "information" that has been compiled from an aggregation of mixed and incompatible data. Such information, of course, is really misinformation. In order to create a reliable flow of information from institutions to state coordinating boards and commissions, agency analysts must request from institutions both periodic reports and occasional, special self-studies. Only in this way can the people who are charged with the responsibility for planning or coordinating state institutions of higher education be certain that their policies are grounded in thorough understanding.

Unfortunately, state agency requests for information from institutions creates a heavy workload for institutional administrators (Boyd, p. 35). While Roger Bassett (p. 4) of the National Center for Higher Education Management

Systems (NCHEMS) suggests that periodic reports and institutional self-studies which are requested by state agencies may be useful to college officers in exercising what Anthony (passim) calls the operational and management control of their institutions, there is evidence to suggest that much of the data requested by state agencies will not be particularly useful to local managers (Moos, p. 282). Local managers, after all, have different primary responsibilities than state-level planners and coordinators. Because the mission of a staff largely determines the type of information it needs, the special mission of the commission or coordinating board renders much of the information collected by its staff less useful for institutional management. Of course, there are exceptions to this rule. Some information is vital to both the institution and the board. State agencies can usually draw such information from universities with a simple request; the local data bases can be tapped to fill the request.

Because their state-level responsibilities frequently require coordinating boards to collection information that is often of limited value to institutions, state-level information systems cannot depend for support on institutional information systems alone. Continual updating of state-level information collections is complicated by the fact that the state information system is not entirely compatible with local, institutional data

systems. By the same token, the special character of state-level information needs and information systems make institutional use of state systems difficult. When faced with state agency requests for data, institutional officers cannot rely upon an interface between their local information system and that of the agency. Instead, they must take time to learn state-level data definitions which may not be part of the local system. Institutional reporting to state agencies is a special task; it cannot be accomplished by merely allowing agencies access to existing institutional information systems.

Besides being requested to report to agencies of state government, legislative committees and the office of the governor, institutions are also asked to report to accrediting and licensing agencies at regional and national levels, and to national centers for the study of higher education. If an institution is totally independent of federal sources of support and its operations are not endangered by lack of regional and national accreditation, a college can afford to refuse national-level requests for data. Most institutions, however, find national reporting, like state reporting, a somewhat distasteful necessity.

Given the fact that institutions must report to both state and national levels, can the reporting tasks be combined? On the surface there is every reason to

think that they could. National centers seek data that are readily aggregated with information from other institutions. In order to make aggregation of data easier, national collectors of data such as the American Association of University Professors (which conducts an annual salary/compensation survey), the National Center for Educational Statistics (of the U.S. Department of Education), and the National Center for Higher Education Management Systems have created standard definitions and procedures for data collection. NCHEMS, for example, has developed a "Statewide Measures Inventory," a "list of items of information, along with concise definitions, relevant to statewide post-secondary education planning and management" (McLaughlin, p. 1). The taxonomy provides a standardized list of academic progress which can be used as a framework for reporting a college's offerings. The taxonomy is now utilized annually in the National Center's Higher Education General Information Survey or HEGIS. Coupled with a statewide measures inventory like that of NCHEMS, the HEGIS survey allows agencies to collect and aggregate compatible information on both the offerings and the statistical performance of colleges and universities by program area.

Of course, states are free (and even encouraged) to use national standardized taxonomies and inventories. Because institutions have been required by the former

U.S. Office of Education to provide data in the new, standardized HEGIS format, they have an investment in national data collection techniques. "The requirements of the . . . HEGIS reporting, and its associated heavy information load, have required that institutions devote considerable time and effort and the assignment of ADP resources to preparing and submitting these data once this reporting capacity has been developed" (Purves, p. 153). Institutions invested hoping that "requests for data by state agencies" could be filled "quite readily if the HEGIS reporting categories are appropriate." Unfortunately, many state "requests for information address specific organizational issues neither encompassed nor defined by the HEGIS categories" (Purves, p. 153).

Data most useful to state agencies are often not found in either local nor national data bases because the policy issues which motivate state-level data collection are not those which lie behind national and institutional data collection efforts. National information systems reflect the national concerns which led to their establishment (e.g., concern over the number of graduates annually from American medical schools). By the same token, state data collections reflect the different policy issues faced by individual states. For example, agricultural states may need to know how many graduate students in the state are pursuing studies which could contribute to the

search for adequate supplies of energy for the state's farmers. It is highly unlikely that HEGIS, NCHEMS or other national information systems would contain such information. If local institutions were to keep track of such information, it would probably not be in any statewide, standardized format which could be easily utilized by state-level data collectors.

To summarize, state and national agencies which maintain collections of educational statistics have missions which differ distinction from each other and from the mission of the single college or university. Because information systems are established to serve the mission of those who create them, it is natural to expect that state-level information needs cannot be met simply by tapping existing institutional and national information systems.

The mission or role-defined difference of opinion between college officers and state agency staff on the question of what institutional data is worth collecting leads some administrators to conclude that state agency data requests can only be expected to disrupt institutions and drain their resources away from instructional and research activities. Speaking the sentiments of many institutional officers, Allan Ostar (p. 6) notes the tendency of state agencies to ignore the cost of their data requests to institutions.

> Some problems for higher education stem from the states' desires to collect data almost for its own sake--far more data than anyone really can use in meaningful policy decisions. For example, one relatively small western state university last year estimated that it spent at least $166,000 on reports to 25 different state central agencies. This money had to come out of appropriations to the university. It was not available for faculty salaries, library books, laboratories or other purposes. Multiply such sums by several thousand colleges and you get some idea of the cost in money as well as staff time involved simply in reporting to state agencies.

Rough estimates of the costs of state-level reporting by agencies may have to suffice for there appear to be no careful studies of the exact cost of state data requests. Institutional officers seem to agree, however, that data requests by state agencies are increasing at a dramatic rate (Cohen, p. 4). Agreeing with the classical premise of Russell and Doi, Bowen and Glenny emphasize the fact that much of the institutional cost of reporting to state agencies comes at the expense of "equally valid demands of instruction and research" (Bowen, p. 69).

Although adequate studies on the exact cost of college reporting to state agencies are yet to be completed, enough is known about the significance of the costs to make timely some recommendations for the improvement of institutional procedures for the filling of state data requests. How can institutions go about developing procedures for the generation of data for state agencies in a prompt, accurate, yet politically astute manner?

It should be emphasized that the responsibility for developing efficient data-generating procedures is that of the college or university. Although national agencies can and do make recommendations to institutions for the improvement of their data generating capacity (Bassett), the institutions have the most to lose by refusing to improve their procedures. As long as institutions continue to react to external requests for information, they will be unable to control the costs which are associated with compliance. By systematically adopting new, efficient procedures for the generation of information for external agencies, institutions can begin to control both the number and the cost of requests for data. Because the costs are paid from institutional budgets, the responsibility for acting to reduce the costs belongs to institutional officers rather than the staff or state or national agencies.

More specifically, the responsibility for improving institutional procedures for the generation of data falls to the president, vice-president for business affairs, and director of institutional research of the college or university. Because one of their primary responsibilities is the preparation of reports for external agencies, directors of institutional research should be willing and able to study ways in which each step in the reporting process could be taken more efficiently. In

institutions without a director of institutional research, it falls to the vice-president for business affairs to bring to the president's attention the increasing costs of institutional reporting to external agencies. The president must then delegate supervision of responses to external data requests to one or more subordinate officers who understand (or are willing to learn) the steps which should be taken to improve institutional efficiency in responding. The following discussion is designed to help those responsible for institutional reporting understand the steps in the reporting process and some ways each step can be taken more efficiently.

I. Analyzing the Request for Data

In order to comply appropriately with a data request from an external agency, institutional officers must first understand the purpose of the request. Unless a request's purpose is understood, a responding institutional officer might supply data which is unsuitable for the study contemplated. If the agency staff recognize the unsuitability of the data, the institution will probably be requested to generate a second, costly run of information. If the data's inappropriateness is not recognized, the agency's study will lead to the publication of false or misleading information--an embarrassment ultimately both for the agency and its institutional data-provider.

Submission of inappropriate data can usually be avoided by asking the agency staff how the requested data will be used. The contemplated use of the data indicates what kind of data is actually required by the agency. The refusal of agencies to specify the ways in which requested data will be used should be a danger signal to institutions receiving data requests. In a publication of the National Center for Higher Education Management System (pp. 14-16), Roger Bassett writes: "It is important that a state agency be selective in the process of identifying data items (and) avoiding a collect-everything approach. . . . A state agency must consider institutional resources and capabilities, both short-term and long-term, for providing data." The first task in improving institutional procedures for the generation of data is, then, establishment of a policy that the institution will not fill requests for data unless the external agency specifies how the data will be used. To do anything less will encourage the collection of inappropriate and misleading data and the over-taxing of institutional capacity for the generation of data.

The documented existence of a great deal of unused data in state agency information systems (Dressel, p. 296; Purves, p. 142) proves the need for a reduction in the scale of data requests. Just as a grocery bargain turns out to be no bargain at all if it is never consumed, the

the collection of unused data is very expensive "no matter how efficiently it was obtained" (Bassett, p. 19). Refusal of agencies to announce the use that will be made of data at the time of its collection is a signal that no particular use has been defined and that the data might not be put to use. Because institutions must bear the cost of generating data, they should be extremely wary of collecting, tabulating and editing data that may very well never be used by those to whom it is delivered.

After deciding what is being requested and the likelihood that it will actually be put to agency use, institutional officers should give some thought to the requesting agency's right to know what it has requested. Would submission of data according to the request result in the violation of laws which protect the privacy of individuals whose records are held by the institution? The Family Educational Rights and Privacy Act of 1974 (the so-called Buckley Amendment) requires the consent of students or their parents in order to release individual student records (Public Law 93-380, Title IV, Sec. 438, as amended, 20 U.S.C. Sec. 1232(g) Supp. IX, 1974). The Privacy Act of 1974 (Public Law 93-579, 5 U.S.C. Sec. 552(a)) prohibits the use of social security numbers as publicly available file identifiers. In addition, a number of states have laws protecting the privacy of citizens and their records (Hollander, p. 53). Dressel (p. 296) notes the concern of

institutional research officers for the protection of confidential records within their care. Computer-based records are, in some ways, more difficult to protect than paper records for they are part of larger collection to which many people may have the right to partial access. The National Association of College and University Budget Officers' College and University Business Administration manual (Section 2-5, p. 9) warns, however, that "considerable quantities of confidential information relating to individuals are stored in computers. Depending on particular circumstances, the deliberate revelation of such data (through allowing access to computer files) may constitute actional invasions of privacy." The wholesale sharing of an institutional information system with staff of a state agency would likely be construed as an irresponsible, deliberate violation of the rights of individuals whose records are stored in the information system. When faced with a request for data, college officers should avoid transmitting data in formats which could compromise the private records of individuals whose privacy is protected by law.

Finally, each request for data should, following the NCHEMS recommendation, be analyzed for its probable cost to the institution. A state agency interested in the effectiveness of college programs might ask colleges to survey their alumni's satisfaction with the colleges'

reasonableness and its probable complexity, the following steps must also be taken.

I. Analyzing the request for data;

II. Collecting the data:

- A. Informing relevant units or department,
- B. Checking existing data bases to avoid duplication,
- C. Preparing report formats,
- D. Actual collection activity,
- E. Tabulating and editing of data,
- F. Forwarding and filing of data;

III. Monitoring the agency's analysis of the data;

IV. Review of the agency's use of data in decision-making;

V. Evaluating the data reporting procedures.

Cost analysis of data requests should improve as institutions begin to engage in regular evaluation of their data reporting systems (see V. above). Lacking such cost studies, college officers can review the steps required to meet an individual data request in order to provide some rough estimate of the institution's capacity for responding promptly and effectively. If the institution cannot commit sufficient funds to the task of complying with a request for data, the request can be returned immediately with explanation to the agency which issued it. If the total request or some parts of it seem especially complex and time-consuming, the institutions might request a division of the request and state support for the more complicated, demanding tasks. If the request seems manageable, the external agency can be informed immediately

programs on an annual basis. The purpose for such a survey is not hard to understand. If carried to completion, it might yield valuable information on the college's performance. But what would the costs of the immense data collection effort be and could the college realistically be expected to finance it from current appropriations? How much money would remain for the support of the main work of the college: instruction of students?

Like requests for information that will never be used, requests for unreasonably complex collections of data cost institutions money which they could better spend on instruction, service and research. Unfortunately, there is evidence that state agencies are not always aware of what constitutes an unreasonably complex request. Purves and Glenny report (p. 179) finding no cases of careful documentation of software costs incurred by institutions in the course of establishing data bases for the preparation of reports to external agencies. Once again, responsibility falls to the officers of institutions to analyze carefully each request for data in order to determine its probable cost.

Estimates of cost must be based on a thorough understanding of the steps which must be taken by an institution in fulfilling a request for data by an external agency. Beginning with the tasks of analyzing a request for data to determine its nature, its propriety, its

of the institution's intention to comply and projected timetable for compliance.

II. Collecting the Data

Collecting institutional data is not a simple affair even after the request for data has been clarified. The effective collection of data requires that affected departments or units be notified of the study, that the inventory of existing data bases be reviewed, that appropriate formats for reporting requested data be prepared if they do not already exist, that responsibility for actually collecting the data be delegated organizationally, that the data collected be properly tabulated and edited, that the edited data be properly and promptly reported to those who requested it and others who have the right and need for it, and that the data either be incorporated permanently into the institution's internal management information system or be filed or recorded as an "occasional report" in a place readily accessible to institutional managers who could use it to improve their performance.

A. Informing Relevant Units or Departments

When external agencies request information on institutional units, the units should be informed for several reasons. First, the data request may signal a reconsideration of state educational policies which affect the studied unit. For example, a proposed study of enrollment

declines in foreign language courses may indicate a review of an existing policy to support all fields of study regardless of the difference in demand for courses in different programs of study. Or, it may indicate the state's interest in initiating a new policy to encourage the study of foreign languages. In either case, institutional officers who believe they can read the handwriting on the wall in state agency data requests should share their intelligence with those whom the handwriting will eventually affect. If it is to be believed that the agencies' collection and analysis of data constitute a signal to colleges and universities, the signal should be shared within the institution upon its receipt.

Units being studied by an external agency can also be helpful in reviewing data on their operations prior to its transmission to the agency. If the data fail to reflect adequately a unit's operations, the unit manager can either work to improve the data or, if weaknesses are inherent in the type of data request the agency has made, the unit manager can provide documentation of its shortcomings. For example, if the data requested show a decline in the number of students in foreign language classes, a chairperson of foreign languages might be able to point out the reasons for such a decline. If, for example, enrollments have fallen because foreign language faculty have been "borrowed" by an English as a Second Language program for

foreign students, state agency staff should be informed. To do anything less would be to contribute to the misinforming of those who have actively sought to understand the performance of a college or university better.

B. Checking Existing Data Bases

Once the unit affected by a proposed data collection is notified of the collection effort, institutional officers should search current, existing institutional, state and national data bases to make certain that the requested information is not already available in convenient form. Institutions report to a variety of state agencies (Dressel, p. 292; Ostar, p. 6) it is conceivable that the information requested by one agency may have been reported recently to another. Agencies lack a convenient method of checking to find recently reported data for in only two states do statewide information systems for higher education exist (Purves, p. 43). In the remaining states, it falls to institutions to inform agencies of where the information they seek may be found. On some occasions, state agencies fail to use the access they have to the Higher Education General Information Survey (HEGIS) or other national collections of information. At other times, rapid staff turnover in the agency may create "short organizational memory" with the result that agencies request the same information more than once (Wilson, p. 102). Duplication of reporting can often be prevented by an

efficient, alert state agency staff. But if a state-level request for information is duplicated, it is not the agency that will pay the cost of a second report. The cost will be paid by institutions; therefore they must assume final responsibility for checking to be certain that a request for data does not cause the duplication of a data generation effort.

In order to detect duplicative data requests, institutional officers must keep a reliable record of former requests and the reports which were generated in response. The catalogue should be organized under type of data headings rather than chronologically in order to make its use more convenient for those who receive external requests for data.

Of course, there will be times when new requests cannot be filled with existing data. Then an executive officer of the institution must delegate organizational responsibility for the execution of an appropriate report. The delegation of responsibility for responding to external requests for information can create organizational problems within the university. Sometimes, it is not clear which officer should be accountable for generating the report to a state agency. This is particularly true when agencies' request information on the costs of academic programs. The chief business officer of the university is, of course, the final authority on costs. But the chief

instructional officer is the final authority on instructional programs. Who should take responsibility for responding to the request? Trouble can also arise when one officer needs the cooperation of persons in another officer's line (or jurisdiction) in order to respond to the request for information. Does the reporting officer have the authority to order the generation of data from within a unit that is not ordinarily within his or her bailiwick? These organizational issues should be resolved before they actually arise in the process of filling a request for data.

C. Preparing Formats for the Collection of New Data

The person responsible for the collection of new data has several choices as to how the data will actually be collected. It could be collected in formats supplied by the agency which first requested it. Or it could be collected in formats especially designed to collect not only the requested data but also other data which would be useful to local managers. The information could be collected only once or it could be collected on a continuing basis. Individual data providers could be identified with their response or they could be afforded anonymity. (If data providers are to remain anonymous, data collectors will have some difficulty in urging those who are slow to respond to comply with the request for data.) The data

could be collected and immediately aggregated and reported to data providers. Or it could be submitted to extensive analysis first. These are some of the options for those charged with the design of a proper format for the collection of new data.

Collected data can be processed by hand, mechanically or electronically. Before the actual collection of data begins, data collectors would be wise to design a collection format that is appropriate to the type of tabulation which is anticipated. For example, if data are to be processed electronically, they probably should be collected in disk, tape or optically-scanned format.

Although Bassett is correct in claiming that "reliance on special one-time surveys can improve the relationship between a particular analytical requirement and the data required to support it," it is also true that such requests are "very costly to the respondents" (Bassett, no. 2, p. 18). If there is a good chance that the data about to be collected will be needed on a periodic basis, institutions should give serious thought to adapting an existing periodic collection format to meet the new data needs. The effort required in the data collection can be significantly reduced by utilizing a pre-existing data collection process. For example, the U.S. Census Bureau is able to obtain new information about the American population in a relatively unobtrusive way by including new

questions in what most respondents perceive to be an old, and therefore familiar, process. By reducing the effort required to respond, the data collectors can encourage compliance with the request for data.

On the other hand, adaptation of a previously-existing data collection format can create organizational problems for the institutional officer charged with responsibility for responding to the external request for information. Often the existing data collection format is perceived as the "property" of some office within the organization whose staff may resent any attempt to "tamper with" their "property." Fear of threatening their peers' territorial sensibilities may cause many an institutional officer to collect her/his own information instead of utilizing data collection procedures that are already in use. Of course, institutional officers are also influenced by a request which emphasizes the need for a data collection specifically designed for one particular study. In the end, the organizational officers' respect for territorialism in the college and the purity of agency research design results in additional costs to the institution and its members who must receive, read, study and respond to more requests than otherwise would be necessary.

After deciding whether or not to design a totally new format for the collection of new data and after deciding whether to collect the new data only once or on a

regular, periodic basis, the institutional officer in charge must decide whether data on respondents is to accompany their responses. If respondent identity is to be preserved only until forms are returned, some person must be delegated the responsibility of separating the identifying label from the data after the response has been recorded. If information on the respondent is necessary, consideration should be given to obtaining some of it from existing data banks. Is it necessary, for example, to ask respondents to provide widely-disseminated information such as their office numbers, rank, courses taught within the last year, etc.? If the information is compiled using already-existing data banks, the cost of data collection in staff time required will again be reduced.

Data collection formats should be designed to take advantage of the most efficient tabulation systems available within the institution. Electronic data processing offices may be able to assist the data collection in the design of a format for collection which could vastly reduce the costs of tabulating and editing the collected data. (Word processing systems now often contain both computational and editing capabilities.) At the same time, however, respondents often feel dehumanized by an electronically-based survey which refuses to allow for creative human responses. If possible, therefore, formats should allow respondents an opportunity to talk back to those who

are collecting the data. Anecdotal responses and comments may provide helpful suggestions for the improvement of limited response questionnaires and thereby improve the effectiveness of the data collection. In addition, solicited comments may help data collectors understand better the results of their efforts. Whatever the means of data collection, designers of the collection effort should seek the assistance of those in the institution who are most familiar with the problems of research design. Unclear collection formats yield unreliable results and often force a duplication of the collection process.

D. The Actual Collection of Data

Once the data to be collected are defined and an appropriate, efficient collection format conceived, the actual collection of the data can begin. A first step in the collection of data is the briefing of line officers whose individual units will be asked to respond to the request for data. Officers may already have been consulted about the contemplated data collection during the time the institution's records were being searched to determine whether the data were already available or during the time an appropriate format for the data collection was being designed. Nevertheless, the line officers must be notified before the actual start of data collection if data collectors are to avoid trespassing on the officers' organizational territory.

More than the fragile ego of the line officer is involved here. Good line officers want to protect their employees from the sort of administrative distractions that data collections represent. They are also wary of how the policy issues inherent in a data collection effort may be construed. For example, would a survey of the number of publications by faculty panic a lower division staff burdened with very heavy teaching loads? Deans and vice presidents could help avert any such panic by explaining the reason for the survey and its importance to the total institution. With the support of appropriate line officers, data collectors can expect to collect more accurate data in a more efficient and timely manner than they could collect otherwise. Employees want to please their supervising officers and if they believe that their supervisors support the data collection effort, they will be more likely to cooperate with it.

Once administrative support for the data collection has been laid, the effort can begin. Forms can be distributed, collected and tabulated. It is important that the distribution of any data collection forms be well-timed. They should not be distributed just before a break in the academic term or at a very busy time in the term. It is too easy to lose a form one hasn't the time to answer immediately. The amount of paper in motion in academic offices at the end of a term makes that

a very untimely season for the distribution of questionnaires and other data collection devices. Lost forms mean extended and complicated collection efforts with extra expense to universities and colleges which could better use the funds to support instruction.

E. Tabulation and Editing of Data

After it is collected, data should be tabulated efficiently and edited to suit its intended audience(s). The tabulation of data is not as simple as it might sound. Issues of research design arise when respondents fail to answer certain questions or when conflicting information is discovered. How should "missing data" or "scrambled data" situations be handled? The often-used practice of assigning tabulation of data to clerks or work-students is ill-advised unless the clerks and students have expertise or clear guidelines in the interpretation of vague or ambiguous data patterns. At the very least, there should be agreement on how the tabulators are to handle the following problems:

1. no response is given;
2. two or more conflicting responses are given by a single respondent;
3. different data sources yield conflicting, contradictory information;
4. a response pattern indicates that the information is from an unreliable source.

It is at the tabulation stage of data collection when the task of protecting the confidentiality of respondents is most difficult. If para-professionals are involved in tabulation, they should be reminded of the importance of keeping the data confidential. Responses should not be tabulated in heavily-trafficked areas and they should be kept in a locked and secure place when they are not being used. After the data have been tabulated, response forms should be shredded or otherwise safe-guarded from public inspection. (If there is any chance that the tabulation will have to be redone, response forms should be preserved for a reasonable period of time.)

After responses are tabulated, the results may be edited in order to inform one or more audiences of the outcome of the data collection. Serious consideration should be given to preparing a special report for each of several potential audiences. The external agency which originally requested the data may be given a complete and sophisticated account of the outcome. Other groups (such as respondents, institutional trustees, the news media) may be given an aggregated and more readily-understandable account of the results. Although distribution of a single report on the data collection would save time for those who are responsible for its dissemination, in the end the time would be wasted in every case where those receiving the full report decided to discard it because of its excessive

complexity. Taking the time to tailor reports to specific audiences is a way of making more effective use of the energies already invested in the collection of institutional data.

F. Forwarding and Filing Reports

Before data reports are forwarded from the institution, they should be checked for accuracy by the executive officers of the institution. To repeat: no report on the institution should be forwarded to external agencies until college officers have had a reasonable opportunity to review it. The review of reports prior to their dissemination can prevent the embarrassment of publishing partial, inaccurate or misleading information. Moreover, giving institutional officers an opportunity to review the report allows them another opportunity to anticipate policy changes which may well result from the agencies' analysis of the report which is being forwarded. Finally, institutional officers may find information in the report that is useful to them in their role as managers of the institution. If they agree on the continuing usefulness of such reports for institutional management, they can request that the data collection procedure be made a regular part of the college's management information system.

Of course, adequately documented reports should be forwarded on a timely basis to those who have requested them. If separately-edited reports are sent unsolicited

to other audiences, an explanation of how the report originated and how it might serve the audience should be included. Unsolicited reports are easy to file and forget, especially in organizations with rapid staff turnover and short organizational memory. A cover letter explaining the potential usefulness of an unsolicited report might sufficiently impress those receiving it to circulate either the report or, at the very least, notice of its availability to staff members within the agency.

Within the limits imposed by the need for discretion and protection of confidences, reports should also be circulated within the institution. If the college or university has a college archive or professional collection, editions of the report should be placed there. All officers of units directly affected by the report should receive a copy. Respondents, too, should be appraised of its outcome. As participants in an important process, they have a right to share in its outcomes. Moreover, when respondents are informed of the outcome of a process, they are more likely to cooperate when the process is repeated. Data collection efforts gain credibility among respondents as those collecting the data report competently the results of the collection efforts. Respondents are less likely to give their full cooperation to collection efforts which are coordinated by amateurs, novices and those who claim to be engaged in "trial runs," "first

passes," or "pilot projects."

Finally, a visible and accessible descriptive catalogue of all reports and data submissions (organized by subject) should be maintained within the institution. Only wide notice of reporting activities will prevent the need to duplicate them.

III. Monitoring the External Agency's Analysis of the Data

Colleges and universities cannot afford to send information to external agencies merely assuming that the agencies will make fair and effective use of it. Faulty agency analysis is all too common. Branches of state government and the agencies which they have created frequently succumb to the temptation of making policy recommendations on the basis of only a cursory examination of what Purves and Glenny (p. 148) call collections of "assemblyline" data such as "degrees granted" or "student hours generated." (See Berdahl (p. 119) for additional examples of shallow analysis.) The faulty analysis by agencies can effectively undermine effective institutional reporting of performance data. No matter how carefully institutions go about collecting, tabulating, editing and reporting data, their efforts are for naught if the succeeding analysis stage fails to lead to conclusions which truly reflect the data. Because colleges and universities invest a significant part of their resources in the generation of information

for external agencies, they have an interest in seeing that the agencies adequately analyze the reported information. They should, therefore, act to monitor agency analysis in order to assure its adequacy.

The analysis of college-generated information is not a simple matter, however. The "common denominator" of money linking effort (expenditures), and production (profit), in the private sector (Anthony, p. 41) is lacking in colleges and universities. Money cannot be used to measure the performance of colleges and universities because their products are not sold on the open market. Because agency analysts often come from backgrounds in business and industry, however, there is a tendency to use a balancing of expenditures and "production" in order to judge the performance of institutions. When such "assemblyline" analysis is not linked to an understanding of institutional mission and quality, questionable conclusions are reached. Good programs, more experienced educational analysts know, cost more money because they require more and better resources. This is not to say, of course, that the more expensive a program the greater its quality. It is to say that programs cannot be judged on economy of operation alone.

Both quality of program and uniqueness of mission drive up the costs of academic programs. If a state depends on a given university to produce a constant flow of

licensed veterinarians, should that university be faulted for "inefficiency" because its small program in veterinary medicine produces student credit hours at a cost slightly higher than the cost of veterinary medical programs in larger, neighboring states with larger schools of veterinary medicine?

Another example of recurring inadequate agency analysis of institutional data is documented by Purves and Glenny (pp. 145, 148) who note the tendency of state agencies to ignore the distinction between fixed and variable costs faced by institutions with fluctuating enrollments. Although it may be simpler for legislators to send, for example, $300 more to a college for each extra full-time student it enrolls (and deduct from its appropriations $300 for each student disenrolled), in fact, an extra student enrolled causes only a "marginal" increase in costs to a university. Although the extra student may require an extra dormitory room, textbook, etc., he or she creates no additional need for sidewalks, administration buildings or classroom heat. They are necessary even without the extra students' enrollment. The "savings" of a single disenrollment are similarly "marginal." Nevertheless, state agencies continue to recommend appropriations based on enrollment data alone without recognizing that the costs of larger enrollments are only marginal.

Professional researchers agree that state agency

analysis of data should take into account the unique history, mission and geographical location of each college and university (Dressel, pp. 296-297; Bowen, p. 257) in any judgment of its performance. Yet such considerations complicate the task of analysis and for that reason they may well be ignored by agency staff who must struggle with limited resources against a series of imminent deadlines.

Who can hold staff analysts to account for their work? Agency directors are poor candidates for they are likely to be more worried about the agency's capacity for delivering some sort of analysis on time than about the adequacy of the analysis. Agency directors are accountable to executive or legislative branches of government and are employed by elected officials who hope that the agencies can defuse volatile political issues. The idea that political decision-making can be replaced by the analysis of bureaucrats is what Robert Boguslaw calls the ideal of "the New Utopians" (p. 191). In the New Utopia, political problems are assigned to agency staff who make decision-oriented recommendations based on a "study" of "data." The politicians then follow the bureaucrats' advice and, if criticized for their decisions, take refuge behind the "analysis" which the agency staff has performed. As it turns out, no one from staff analyst to state governor has any reason to find fault with the agency's analysis for the analysis is used as a political

shield against those who take issue with political decisions. If the quality of agency analysis is to be monitored and controlled, it will have to be monitored and controlled by representatives of the colleges and universities which agency staff claim to have analyzed.

IV. Review of the Agency's Use of Data in Decision-Making

If a review of the relationship between reports of data to agencies and the agencies' decision-making reveals that an agency routinely collects institutional data merely to buttress decisions which its staff members or directors or influential politicians have already made, institutional officers should reevaluate their procedures for responding to its requests for data (p. 143). For example, if agencies persist in recommending that funding be tied to raw enrollment figures, universities would probably be wise to forego elaborate explanations of the uniqueness or quality of their programs. If budget requests are routinely cut by a standard percentage regardless of demonstration of need, institutions would be well-advised to submit a "dream budget" request in order to get the sort of appropriation which is actually needed to support a viable academic program. In either case, the costs of data collection to the institution could be cut to a bare minimum due to the refusal of state agencies to utilize the data in any serious, analytical review.

On the other hand, if policy decisions seem increasingly to result from careful agency analysis of institutionally-derived data, colleges and universities would do well to invest more of their resources in the careful collection, tabulation, editing and reporting of data to state agency staffs. Whether college officers decide to spend more or less of their limited resources on the generation of data for state agencies depends on whether they are dealing with "new utopians" or the sort of persons Williams calls the "human" decision-makers for whom the "mastery of recorded facts is only a preliminary in arriving at academic policies." For the latter, "nothing can supplant the human attributes that must come into play: sympathetic intelligence, imagination, courage and integrity" (Williams, pp. 177-178). For the new utopian, on the other hand, human attributes are more trouble than they are worth. Rather than engaging in endless debate which serious analysis allows, the utopian would prefer to utilize data to support the prompt, efficient administrative delegation of decision-making (Purves, p. 143).

When colleges are faced with data requests from a "new utopian" agency or legislative committee staff, they have little choice but to respond as players in a political game designed by the staff or the governmental bodies which created the agency and which can use the staff in a "new utopian" style. Instead of issuing reports to inform

agency staff members of the true nature of institutional performance, college and university officers sometimes have little choice but to provide only the minimum of information from being used against them by those who used facts merely to support previous decisions. Such an attitude toward state-level data requests is already common among institutional officers in states where agencies are the pawns of political interest groups rather than being conduits for the flow of accurate and reliable information (Miller, p. 23).

V. Evaluating Data Reporting Procedures

Finally, once every three years colleges and university administrators should keep careful record of the number of external data requests which they receive and the ways in which each data request was processed. Who was assigned the task of filling the request? With whom were the reports filed? To what extent did the generation of reports improve the institutional information system's data bases? Only through such an accounting method will the real institutional costs of generating data (in both time and dollars) be calculable. If possible, training in responding to external data requests should be based on the lessons learned from such careful, periodic accounting. All who are assigned the responsibility for responding to external data requests should have the advantage of training based on the institution's prior experience. Ideally,

both the accounting and the training would be handled by the director of institutional research who would be familiar both with technical methods for improving institutional reporting and with the internal and external political problems which such reporting can create. In the absence of an office of institutional research, the executive officer of a college might consider the preparation of a manual to guide those who are charged with reporting responsibilities. The manual should cover the issues raised in this paper ranging from analysis of the data request to the ways in which institutional response to data requests might be evaluated.

Although the institution's general policy toward data collection efforts by state agencies may not be capable of encapsulation in the manual (especially in states where new utopians control state agencies), the manual can specify the need to consult with ranking executive officers of the institution prior to providing agencies with the information they request. The political context which currently affects agency-institution relationships can be reviewed in the process of the consultation.

No matter how institutions decide to go about improving their capacity for responding to external requests for information, the task will not be a simple one. Generating information is more complicated than it might at first seem and the complexity is compounded by political

considerations which shape the meaning and significance of data requests. The policy of simply giving agencies what they ask for has been recommended by some. Berdhal, for example, claims that if "institutions can suppress their distaste at having to fill out another set of papers . . . they will probably soon learn that board reactions will tend to be pro forma and thus fairly easy to live with" (p. 161). But such a view is naive for agencies frequently ask for data which they do not need and cannot use, or worse, which they intend to misuse. For example, Purves and Glenny (p. 159) note that in the view of some, state-level requests for information are sometimes made "simply to place the institution on the defensive or embarrass it because it cannot provide the data." The sheer volume of steadily increasing data requests (Carlson, p. 102) is itself reason for taking a more sophisticated stance in response to state-level agency data requests.

The strategy of giving agencies all they ask for in hopes that they will eventually "choke" on the mass of data that is provided hasn't worked. "State agencies," according to one observer, "are like Hydras--if one chokes on the mass of data you shove in its craw, two others spring up by its side" (Cohen, p. 4). If the Hydra is to be combatted effectively, institutions must take the initiative in improving the rationality (and thereby the efficiency) of their procedures for submission of information

to external agencies. In the end, the paperwork burden will only be relieved by those who are now compelled to bear it.

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