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ABSTRACT

The potential for schools of education as major resources for research and development and other knowledge-generation and knowledge-use activities is discussed, along with the negative view of federal policymakers in this regard. The study reported here was designed specifically to employ contemporary organizational theory and case study aggregation methods on the problems of "sheltered units" or bureaus within educational institutions. A set of propositions and counterpropositions were derived and tested about the nature of the organizational climate and its function. A list of structured questions and answers about the outcomes of interest that could be used with each of eight case studies was then generated to form an analytic checklist. Three readers reviewed and completed checklists for the case studies, making possible aggregate descriptions of university-based bureaus, their organizational contexts, and their potential. It is noted that most of these bureaus curfently have two to four staff members, engage in multiple processes (such as research, development, evaluation, dissemination, adoption and field service, or research and field service), were created to respond to immediate perceived needs, reside in doctorate-granting institutions, and are undergoing mission redefinition or role extension, but are hindered by fiscal exigencies. It is concluded that the study provided a test of the range of applicability of theory relating to organizational contexts for "sheltered units," and of the usefulness of the Lucas methodology in coping with data formerly not amenable to aggregation. A bibliography is included. (Author/MSE)

THE POTENTIAL OF UNIVERSITY-BASED BUREAUS OF RESEARCH: A CASE STUDY AGGREGATION ANALYSIS

by

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Introduction

It is apparent that schools and colleges of education are no longer the single or even central knowledge production and utilization (KPU) agency in education. Although millions of dollars are channeled each year into colleges and universities for the purpose of accomplishing educational research and development, there are other agencies and private organizations competing for the same funds. Other agencies include, but are not limited to, teacher centers, school districts, state departments of education, federal labs and development centers, and private for-profit and non-profit educational consulting and development corporations. The competition for limited funds has been fierce and the sharp loss of confidence in university-based researchers's ability to answer the pressing problems of practitioners in the public schools has not aided in balancing that competition.

Nevertheless, schools of education represent a major resource for research and development and other knowledge-generation and knowledge-utilization activities (Clark, 1977). Personnel, funds and facilities exist which are capable of being deployed for what is a high priority on most larger campuses - the research function. In support of the research mission, a dean of education may choose from among many strategies. One of those strategies might be to support the "idiographic producer", the lone researcher who works and writes essentially without the collaborative help of colleagues. Another strategy is often to create a sheltered unit, or bureau, that has as its main function one or more aspects of KPU.

Bureaus have generally not been viewed by federal policymakers as having a high potential for research and development (NIE, 1975), although there has been controversy over them from the early 60's (Sieber and Lazarsfeld, 1964; Guba, 1964, 1965; Puffer, 1967; Stockton, 1970). On the other hand considerable evidence exists that education deans see them as viable tactical structures

to protect, augment or enhance research and development productivity (Clark and Guba, 1977). Since bureaus are part of the tactical repertoire available to deans, and one which is both utilized and contemplated today, it is important to know what organizational arrangements have contributed most to efficiency and effectiveness in research productivity. Such knowledge is useful both to administrators within universities, in and out of the education unit, and to Federal planners responsible for projecting and funding education research and development programs. Therefore, three primary objectives guided the study: (a) to describe university-based bureaus of research and KPU; (b) to describe the organizational contexts of such units; and, (c) to project the potential of such units for the likely near future.

Background and Theoretical Perspectives

The literature in education provides a rich body of research and commentary on the functioning of bureaus. Both the potential (Sieber and Lazarsfeld, 1966; Puffer, 1967; Rossi, 1976) and the problems (Guba, 1964, 65: Stockton, 1972; Corwin, 1973) are explicated in painful detail, but blueprints for maximizing effectiveness and minimizing problems have not been forthcoming. The controversy over the utility of such units has not diminished with time. Both Rossi (1976) and Hull (1976) refer to examples which buttress the organizational theory on sheltered units which are created in industrial and governmental settings to protect and defend precarious values. Such units in industry and government are almost always the subject of controversy, mistrust or distrust and/or overt hostility from the organization at large (Shibutani, 1955; Selznick, 1957; Goode, 1958; Arnold, 1979). Both the sociological literature and the organizational theory literature, however, support the contention that certain kinds of "elitist" values, which are often precarious in the context of the larger organization, must be defended and protected whenever possible.

Selznick, in his studies of the Tennessee Valley Authority and in subsequent work on administration (1949, 1970), discussed the role of sheltered units and their function. Basically, these units defend whatever values that may be necessary but threatened within an organization. In schools of education for instance, bureaus often are postulated to guard the value of research in the face of current opposition (such as the press for service). Selznick's theory of elite autonomy captured the distrust and disdain held by the self-styled workhorses of an academic institution toward researchers. In addition, the sociological literature on sub-cultures, even though it has been addressed primarily to deviance, delinquency and marginal group membership, provides understanding of academic and professional group membership (Arnold, 1970; Goods, 1957; Katz, 1958; Shibutani, 1955) by focussing on membership of various power groupings within universities and other professional groups (i.e., psychologists, psychiatrists, etc.).

Thompson (1967) identified an ancillary problem for organizations that handle "unique or custom tasks" such as universities. Their internal groupings assume different configurations to perform one or more specialized functions. For example, faculty members are organized into departments for housekeeping tasks like budget allocations and professional specialities. But they are allocated into other groupings for other tasks, such as inter-disciplinary research teams, committee work and doctoral committee advisement. The concept of grouping faculty for specialized work -- especially in the face of funding pressure for team-oriented research approaches is compelling.

Learned and Sproat (1966) conceived organizations as composed both of the work environment and associated tasks. Human response to the groupings, tasks and environments can often create both conflict in custom-task organizations and differential status designations attached to various tasks. Thus,

some tasks acquire higher status than others. Furthermore, those workers within an organization who perform "elite" or specialized tasks often share in greater rewards within the organizations. Research is one function in schools of education for which high performance is almost always rewarded. Those who perform well at other kinds of tasks (e.g., teaching or field service) will almost surely be commended for those tasks, but institutional rewards and prestige accrue to those who do research. Accordingly the insultation of high-reward tasks into special units has great potential for conflict. It was therefore important to know whether the potential of such units was great enough to justify their creation or continuation; whether there were or are contextual factors which promote or constrict achievement of R & D missions; whether the professional culture supports or constrains the unit; or whether other strategies for supporting this mission might prove more fruitful.

At present, the organizational and sociological literature delineates the structure and function of sheltered units in industrial and military, but not educational, settings. However, neither a general theoretical description of bureaus nor explanation exists for the organizational features inherent in education units that enhance or inhibit mission achievement (Corwin, 1973; Guba and Clark, 1975; Clark and Guba, 1977).

Compounding the conceptual drought is a failure in methodology. Various means of testing assumptions and hypotheses about organizational contexts and bureaus have not proven particularly useful. First, the investigations illuminate neither the range of external nor internal factors impinging on effectiveness. Second, the studies generally have not aided education administrators to plan for better R & D utility and optimal attainment.

The present study was designed specifically to employ contemporary organizational theory and case study aggregation methods on the problems of sheltered units or bureaus within educational institutions. Traditionally, bureaus

have been studied either with case studies or with single in-depth observation forms. The results are isolated case studies and other historical evidence lacking theoretical generalizations. Therefore, studies of such units have been severely constrained by the absence of a methodology that permits comparison of documentary, analytic and historical evidence. A method does exist, however, that possesses at least moderate usefulness for comparative analysis and subsequent theory development.

Case Study Aggregation Method

William Lucas (1974a; b) proposed a methodology that makes possible the comparison of formerly non-comparable case studies. The case study aggregation method is particularly useful because it allows the aggregation of studies that are usually "non-random, diverse and qualitatively uneven." Moreover, this is accomplished in such a manner that new insights may be drawn from already existing research not intended for the new purposes (Lucas, 1974b).

Lucas described the methodology as follows:

> ...the case survey method... [draws] research together to identify what it is we already "know," what it is we do not know, and what it is we suspect...the case survey approach is particularly appropriate for the review and summation of case experiences, an important type of policy research literature. Case studies of local programs and agencies are valuable because they are a major component of many policy research literatures, they are rich in information and insight, and there are so many of them. Millions of dollars are spent each year on modest evaluations and reports on the activities of local projects. Yet they are found scattered and isolated in government reports, consultant evaluations and academic publications that neither address nor rebut findings of earlier case studies. The case survey method was developed as a means of bringing diverse case studies together under a common conceptual framework so that the findings will be cumulative.

In applying the method, a first step is to determine what the phenomenon under investigation is. In this case, it was bureaus, centers or institutes devoted to a variety of knowledge production or utilization functions, and

located within education units. A list of the phenomenon's outcomes and their possible determinants are organized under a broad set of conceptual and theoretical rubrics. In this study, the rubrics were drawn both from previous bureau studies and from organizational theory and research literature. A set of propositions and counter-propositions were derived about the nature of the organizational climate and its function. It was these propositions and their inverses which were to be tested. For example, two propositions and their counter-propositions were:

1. Research is a faculty priority, and when allowed to choose, faculty members overwhelming will choose research over teaching (Sieber and Lazarsfeld, 1966).	1. Teaching, not research, is a faculty priority, in all classes of institutions except private, doctoral-level, research-oriented institutions (Clark and Guba, 1977).
2. Research bureaus should not and must not turn away from research and do service, or experience "goal displacement"	2. There is always a tendency for organizations of a non-profit nature to turn away, at least partially, from their original goals or to suffer "goal displacement" (Berelson and Steiner, 1964).

A second step in the inquiry was to generate a list of highly structured questions and answers about the outcomes of interest which could then be used with each case study. Those questions and answers form an analytic checklist. The possible answers to each of the questions are delineated in such a way that each reader of the case study can make the most appropriate response to the question. In addition, each question allowed the reader to indicate whether the case study contained no information on that question, and provided for a confidence level rating of his response. The confidence level rating indicated the reader's certainty that the answer provided was accurate. Additionally, it allowed the analyst to examine further those responses of high certainty.

The next step included identifying the universe of bureaus and identifying from among those the units with documentary evidence on their organizations.

Ideally, the universe ought to include all units, although the number of bureau directors who reported no such evidence existed ran to 20% of all units identified. Data for this study were case studies, bureau histories, annual reports, budget and personnel requests and accreditation studies solicited from deans and directors of such units. SCDEs identified as having such a unit, or planning to create one, were identified in the RITE Project Study (Clark and Guba, 1977). Ten case studies existed in project files prior to the solicitation. A total of 93 additional requests were made for bureau documents to deans or bureau directors. Responses were received from 67 (72%) administrators, but 19 (20%) had no documents and 14 (95%) stated such reports were confidential. A total of 34 (37%) returned the documents. Of these, 14 (16%) were complete and usable. This 14 and the 10 original case studies or a total of 24 comprised the sample.

Of the total returned, there were 16 (16%) that were either technically or methodologically inadequate. That is, the documents were poorly written, consisted only of a brochure for client use, or failed to deal with one or more of the five outcomes of interest to the research. The outcomes of interest were, in general terms: a) goals and missions of bureaus; b) processes or functions; c) activities and roles of faculty; d) unit integration (with remainder of education unit); and e) worker motivation, perceptions and rewards.

As might be expected, those case studies solicited were largely (95%) from doctoral-level institutions. It is exactly that sort of institution which provides that climate which most often favors values and rewards research productivity. It is also most often the larger doctoral-level institutions which have greatest flexibility in deploying resources into such units, and which is most likely to either have bureaus in existence already or to be contemplating the creation of one.

The case studies utilized for this study fairly obviously did not comprise the universe of such studies. Nevertheless, from fairly recent research (Clark and Guba, 1977) on what institutions typically have bureaus, want them or plan to create them, it was inferred that the 24 cases utilized were a fairly representative sample.

In the search for case studies from the probable universe, decision rules were generated which guided both the search and sampling procedures. Choice of case studies, sampling parameters, and problems of bias, as well as decisions not to include and reasons for exclusion, must be made explicity by a set of decision rules which serve two purposes. On the one hand, they make explicit to the checklist readers and analysts the guidelines and definitions which structure the study. On the other hand, they clarify to the audience criteria for decisions to aggregate, include and exclude. Where decision rules treat exclusion, particularly, examples of methodological or technical inadequacy ought to be included.

Methodology, Bias and Reliability. Problems arose in the study when certain data became "noisy", that is, when questions arose about the accuracy or validity of the case studies themselves. Noise in the data was attributed to two biasing problems, termed timing bias and balance bias.

The problem of timing bias related to the year in which the documents were prepared. In over half of the cases, the case study materials were prepared prior to 1971. As a result of the age of the studies, it is likely they reported conditions both internal and external to the bureau and SCDE which have been drastically altered within the last half-decade or more. Both terminology and understandings of KUP activities have changed and levels of sophistication concerning the variety and scope of such missions have been broadened

and deepened. The future of educational KUP in 1969-70 may not look like the immediate past of 1978.

Balance bias posed another difficulty. With respect to demographic data, the reports were assumed to be fairly reliable. The numbers of staff, graduate assistants, refereed papers and presentations, and the level of current and projected fiscal resources were easily verifiable on an internal basis. Those data, however, which might be termed "perceptual" were deemed more subject to manipulation for political purposes. The case studies themselves were often prepared internally, addressed to certain constituents and designed to serve a variety of powerful and sophisticated purposes, such as accreditation and budget requests. For that reason, strong positive projective bias likely inhered. (Lincoln, 1977).

Those data more amenable to bias probably tended to lead to occasionally erroneous conclusions, i.e., to conclusions contrary to fact. Lucas has suggested two possibilities for determining reliability in instances such as this. The first is to use the frequent duplication available in the literature and to complete checklists on two different observer's reports (two case studies available on the same bureau). Where two existed, this was done. The agreement between checklists was therefore "a measure of the combined observer and reader reliability" (Lucas, 1974b).

A second way to determine observer (case study writer) reliability was to perform field checks. By gathering field observations from those who were part of the original program or unit,[1] using the same checklist questions employed by the readers, separate checklists can be completed for each program or bureau. This form of reliability check provides useful data on the "possible bias" (Lucas, 1974b).

[1] Since current observations are fresher than memories of times past, the separation of present events from those past is important, but modest reliability may be obtained.

The particular study was constrained by an inability to collect data in the field.[2] In this case, a relatively simple but important adaptation was utilized. The present study grew out of the larger ongoing RITE study (Clark and Guba, 1975, 1977), which generated considerable information ancillary to the central thrust of that study, but central to the outcomes of interest in the present inquiry.

When it became evident that somewhat older projections and predictions did not exhibit congruence with contemporary states-of-affairs, or when current research contravened less recent case studies, evidence was subjected to the "current realities" test. That is, data that were generated by the case studies were compared to newer research as a means of establishing observer reliability, and testing for positive projective bias. In some instances, of course, case studies writers were not to be faulted for their generous and optimistic future projections. In other instances, however, case study writer (observer) projections were overly optimistic given the near, clear future. That slightly positive bias, especially with respect to institutional levels of support, discretionary funding, and proposed programmatic thrusts, was accounted for by the equivalent of field reliability checks.

Analysis of Data

Three readers were chosen, all of whom have had either broad experience in educational administration or direct experience in bureaus and research units. The readers reviewed with the analyst the purpose of the study, the method, decision rules and all definitions of concepts for two days. At that point, each of the three readers completed three sample case study checklists for which the analyst had already ascertained the "correct" or most likely

[2]Funds available for travel were severely limited.

answers (the analyst, as principal investigator, was presumed to be sufficiently expert to provide the criterion estimate). The percents of agreements provided an estimate of interreader reliability.

A 33 percent agreement (or 22 of 67 questions), either between readers or between individual readers and the analyst, might be expected solely by chance since each item had at least three possible response categories. Standard deviation at the .05 percent level of confidence was (1.96) (3.86) = +7.56. The expected chance agreement would then not exceed 22-1/3 + 7.56 = 29.98 questions. Converted to percent, this number of items was 44.6%. Thus, agreement on 44.6 percent of the items would be expected by chance or fewer than one time in twenty.

In actuality, percents of agreement both among the readers and between readers and analyst were far above the chance level. Between readers A and B, the percent of agreement was 72; between readers B and C, the percent of agreement was 89; and between A and C, the percent of agreement was 71. Between the analyst and readers A, B, and C, the percents of agreement were 69, 76, and 91, respectively. The high level of agreement between the analyst and reader C was thought to be attributable both to increasing sophistication of training the readers and to the sophistication of reader C, who is currently employed in a bureau setting. Familiarity with both the contemporary bureau setting and with organizational contexts appeared to reduce error and raise reader reliability greatly. All percents of agreement, which represent reader reliability, were well beyond the realm of chance (Lincoln, 1977).

For this study, all readers completed checklists on all case studies, although if the universe of studies is large, that need not be necessary if reader reliability is well established. Once all checklists were completed, discrepancies were adjudicated by the analyst and responses scored.

Confidence Ratings.

Each question on the analytic checklist had a confidence rating scale (Likert-type) on which the reader/analyst could indicate his level of assurance that the case study addressed the question unambiguously. Thus, the confidence rating could be used to assess whether responses to individual questions were based on clear statements, statements for which there might be multiple or ambiguous meanings, or simply inferences. These ratings in effect assign a "certainty" level to reader/analyst answers. Confidence level ratings exhibited high levels of congruence across readers. In other words, when case studies were explicit, readers were uniformly confident; when cases were ambiguous or unclear, it was obvious to all readers. The complete set of propositions and counterpropositions generated follows. Beside each is indicated in summary fashion whether the proposition or its counter was supported. All propositions (listed as "a's") are drawn out as disembedded assumptions from Sieber and Lazarsfeld (1964).

Propositions and Counter-Propositions	Proposition Supported	Proposition Not Supported	Insufficient Information
I. a. Research productivity is a shared value in SCDEs, enjoying sympathy and support in all its manifestations by most faculty.		X	
b. Research is a tenuous or "precarious" social value, which must at least be protected by elites (groups within the organization responsible for protection of social values); at worst, special safeguards must be created to defend the value (and its protectors) from strong groups with similar responsibilities who might attack it. (Selznick, 1949)	X		
II. a. Research is a faculty priority, and when allowed to choose, faculty members overwhelmingly will choose research over teaching.		X	
b. Teaching, not research, is a faculty priority (in all but 2A institutions). (No "released time" for teaching, only for research.) (RITE, 1976)			

Propositions Cont.	Proposition Supported	Proposition Not Supported	Insufficient Information
III. a. Bureaus are, and can continue to be, sheltered workshops housing intellectual critical cass.		X	
b. Bureaus may not be able, in the face of external and internal pressures, to enjoy the status of protected unit, i.e., fiscally protected, protected in terms of the reward system, protected from the hostility of extra-bureau faculty. (Guba, 1965)	X		
IV. a. University-based research organizations grow out of the needs of researchers to increase their own opportunities for serious scholarship.		X	
b. Since serious scholars, especially those who are able to garner external funding on their own, are reluctant to affiliate with bureaus, which they perceive as draining off resources from research monies, i.e., overhead expense, etc. (Campbell Report, 1975), bureaus are likely to be set up for other kinds of reasons and by other agents than groups of scholars, e.g., bureaus as "holding companies," bureaus to fill stimulation and behavior-modeling roles, bureaus to shelter and defend "precarious values," such as research and so forth. (Clark & Guba, 1975, Selznick, 1970)	X		

Propositions Cont.	Proposition Supported	Proposition Not Supported	Insufficient Information
V. a. Faculty doing exclusively or primarily research will enjoy the support and encouragement of their non-bureau colleagues who are not engaged primarily in research.		X	
b. Faculty who engage exclusively or even only primarily in research will not always enjoy the support or encouragement of their colleagues. (Guba, 1964)	X		
VI. a. When a researcher is only a part-time researcher and a part-time teacher, research and teaching are both compromised.		X	
b. Neither research nor teaching are necessarily compromised when a faculty member engages in both.	X		
VII. a. An organization's "true commitments" (the demands that are placed upon it internally and externally) are unchanging.		X	
b. An organization's "true commitments" are not unchanging. (Selznick, p. 73)	X		

Propositions Cont.		Proposition Supported	Proposition Not Supported	Insufficient Information
VIII.	a. Research bureaus should not and must not turn away from research to do service. (S)			X
	b. There is a tendency for organization (of a non-profit character to turn away, at least partially, from their original goals, or to suffer "goal displacement." (Berelson & Steiner, 1964).			X
IX.	a. Service interferes with research.		X	
	b. Service may not necessarily interfere with research. The relationship, at best, is unclear.	X		
X.	a. Team, especially interdisciplinary research, is better than research done by single individuals.		X	
	b. Team-type research is not necessarily better than research done by the lone researcher.	X		

Propositions Cont,	Proposition Supported	Proposition Not Supported	Insufficient Information
XI. a. Faculty can be persuaded to do team-mode types of research even though professional socialization encourages and rewards the "lone researcher". (S)		X	
b. Unless specifically hired for that function, faculty will not engage in team-mode research if it endangers their standing or advancement within the reward system. (The more closely the member holds to the organization's professed values, the more likely he is to be promoted within the organization.) (Berelson & Steiner, 1964).	X		
XII. a. The reward systems of universities are, or will be, accomodating of multiple modes of research (i.e., teamwork modes).			X
b. Reward systems of universities are, by and large, not multiply-focused, but single-focused, rewarding the lone researcher.			X
XIII. a. The aspirations of deans for additional full-time research faculty have validity in the real world.		X	
b. The aspirations of deans with respect to hiring fulltime researchers does not have validity in the real world.	X		

Propositions Cont.	Proposition Supported	Proposition Not Supported	Insufficient Information
XIV. a. When deans express a desire for more research faculty, they know what they want and understand fully what the costs are.			X
b. Deans do not know what they want; they do not fully understand the costs, either economic or psycho-social, of having full-time researchers in their units.			X
XV. a. Faculty will support the aspirations of deans in hiring educational researchers.			X
b. Faculty will not support the aspirations of deans in hiring educational researchers.			X

Conclusions and Discussion

A Description of University - based Bureaus. The days of what one person called "those mythical Midwestern bureaus" are largely over. Most bureaus these days have between 2 and 4 persons FTE, including clerical help. More than half operate with only one graduate assistant if they have any at all.

They are almost without exception multi-process units, although they may have a programmatic substantive focus (e.g. Center for Urban School Studies). They often engage, as stated, in multiple processes, such as research, development and evaluation, or dissemination, adoption and field service, or research and field service.

Most of the units created within the last eight to ten years have been created on an ad hoc basis. That is, they respond to immediate perceived needs or new thrusts in the field (e.g., the Center for Ecological Education, the Institute for Moral Education). They often have only small facilities, and the major resources committed to the operation are usually in the form of one parttime clerical assistant, one graduate assistant, and one fulltime faculty line.

A number of the newer bureaus are required to justify their existence on an annual basis. To the extent that they are unable to capture outside funding (from any of a variety of sources), and thus may not be able to sustain all or a portion of their operation, they are allowed to wither away!

Most, although not all, of these units reside in institutions which give the doctoral degree in education. About half of the sample included former "teachers" college" universities, which are moving increasingly toward expanded definitions of faculty roles (to include research, development, and the like).

Well over half of the units had as one of their main functions the coordination, facilitation, or technical advising to research and development projects. These functions were to be extended, by common understanding, to any faculty

member who might need the service, whether or not s/he might be assigned to the Bureau.

Many of these units are undergoing mission redefinition or extension of their former roles. They are moving more heavily into service functions, toward extended knowledge utilization functions (i.e., installation, adoption, school planning, change agentry, linking functions and the like), and toward more ad hoc activities (i.e., workshops, school evaluations, on-site in-service education, etc.). They are attempting to respond, however weakly, to the pressing needs of public school personnel.

The Organizational Contexts. The first of four major propositions was that significant potential opportunity exists for the bureau to be perceived with envy and distrust or as deviant from the normal organizational pattern of the school of education. Nevertheless, evidence of such perception was notably absent. For instance, only three units reported any extra-bureau hostility to their operation, and more than half (17 of 24) reported or implied fairly cordial relationships between the bureau and the rest of the School of education (several also did not report any information on this variable). Those units which described as one of their mission areas the facilitation of non-bureau member research or development activities reported both the largest incidence of non-member affiliation for such activity and the most cordial relationships with the rest of the school or college of education. But a number also reported some difficulty in securing faculty to work on bureau projects (9 of 24). Some evidence also exists, however, to suggest that the value of such units is not widely appreciated, nor are the values they embody widely shared within the larger unit.

Although it is suggested that the "siren song" of service may on occasion interfere with the research function (Guba, 1965; Sieber and Lazarsfeld, 1966), there was no evidence that most bureaus endured excessive drain on their resources in fulfilling this mission. The case study writers occasionally indicate that service demands are high (five cases), that such demands are increasing (six cases), and that requests for some kinds of service are occasionally turned down (five cases) either for lack of time or for lack of personnel. But in no cases did writers of the case studies indicate that service interfered with, or impinged upon, time for research. In only two cases did case study writers comment that service demands drained personnel away from research.

The professional school culture that socializes new professionals to the "lone researcher" mode has not changed over the past 20 years (Sieber and Lazarsfeld, 1966; Stockton, 1975). Thus newer programs of funded research, which call for intra- and inter-disciplinary, programmatic, intensive team approaches are still neither comfortable nor stable approaches in most institutions over the long term. Further, scant evidence exists that the training and socialization of graduate students, either to newer approaches or to new and emerging roles, has increased significantly. In only two case studies did writers indicate that graduate students assumed major responsibilities for projects undertaken by the bureau. In all other units which hired graduate assistant help, those students were assigned at best minor apprenticeship roles and at worst, clerical duties related to projects.

The Potential of Such Units. Fiscal exigencies have left bureaus and research units in an ever more marginal position within the larger unit school of education. Increasingly left to fend for themselves in an RFP market, they have less and less time, personnel and resources to devote to long-range inquiry on

fundamental educational problems. As a result, they have been largely dealt out of the major research/KPU functions for which they were intended.

Importance of the Study

The Study makes three main contributions to educational research. First, it has increased the fund of knowledge about R&D units or bureaus housed in schools, colleges and departments of education, especially as that knowledge relates to organizational arrangements which enhance, facilitate or inhibit productivity. Second, the study provided a test of the range of applicability of theory relating to organizational contexts for such "sheltered units". And third, the study provided for a test of the relatively new Lucas methodology, which had not been utilized with a collection of case studies from education.

The third contribution is perhaps the most important, since it validates a new tool for researchers who may need or wish to cope with bodies of material already in existence which formerly would not have been amenable to aggregation. Now able to aggregate random and diverse case studies under a set of common conceptual rubrics, the researcher may utilize materials which were insightful but heretofore unusable except for highly specific purposes.

One example of rich case study material which comes to mind is the expanding number of program evaluations. Even when the programs are the same, but in different locations throughout the country, often evaluation efforts do not produce comparable--and therefore meaningful--program-wide results. The case study aggregation method, conducted as a form of evaluation audit or meta-evaluation, can aid planners and program directors in drawing "together available research systematically and [establishing] what...it is we already 'know', what it is we do not know, and what it is we suspect...so that findings will be cumulative" (Lucas, 1974b). The addition of such a methodological tool

to the repertoire of researchers greatly enhances the probability that findings will be significant. In addition, it ensures that research costs will be ultimately lowered, since generation of new research will not be necessitated in order to produce comparable results.

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