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ABSTRACT

The objective of this study was to identify characteristics of researchers and small, undergraduate colleges supportive of curriculum research. A questionnaire, designed to determine professional characteristics of the respondents, and environmental, and organizational factors supportive of curriculum research was mailed to the total faculty of four colleges, and the responses analyzed. In additional, other, similar studies were reviewed and the results compared with the present study. Curriculum researchers reported a higher incidence of: doctorates; senior faculty positions; heavier teaching loads; administrative responsibilities; degree of outside professional activities; research training; departmental research committees and student research programs; established college relationships with other institutions; availability of a centralized research office; and awareness. All respondents: ranked curriculum research low for curriculum improvement; reported similar motivators; and ranked individual faculty, departmental chairmen, and the presidents highest for favorable attitudes toward research. Results of similar studies were generally consistent with the results of this study. (Author)

FINAL REPORT

Project No. 2-C-087
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ANALYSIS OF SELECTED CHARACTERISTICS OF FACULTY CONDUCTED CURRICULUM RESEARCH IN SMALL COLLEGES

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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Departmental and individual autonomy are more positive organizational modes for curriculum research. However, more faculty involvement in curriculum research appears less effective for curriculum improvement than does improving the confidence of the faculty in curriculum research, and making the results available to departmental committees and individuals responsible for curriculum improvement.

PREFACE

The cooperation of the faculty of the four colleges surveyed for this study is gratefully acknowledged. In particular, we appreciated the constructive, additional comments many of the respondents added to their returned questionnaires.

The American Association Of State Colleges And Universities was an essential source of consultation and information for this study, and has generously agreed to assist in the dissemination of the results to its 307 member institutions.

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I. INTRODUCTION AND STATEMENT OF THE PROBLEM

Introduction

A variety of circumstances is fostering a strong force of opinion that a college or university faculty member should be classified as either a researcher or an educator. Central to this opinion, at least, is a hypothetical role conflict that prohibits simultaneous competency in each field. Few institutions are justifiably able to create these exclusive roles. Certainly, most small, undergraduate colleges are not sufficiently endowed with resources to muster a cadre of faculty to fulfill the manpower needs of these exclusive classifications. And, if they were, many would argue that such an arrangement is neither consistent with sound educational practice nor the public good.

The Problem

A third-level problem is the need of the educator to engage in research activities to maintain his professional proficiency. This is most apparent in the undergraduate colleges where the demand for self-renewal is great and the resources scant. In this setting, the concern is not with translating research findings into curricula, but rather with renewing curricula through on-going research. In addition, the changing patterns in higher education suggest that independent and exploratory studies will require greater research skills on the part of college faculties. Thus, colleges will need to discover new schemes for providing faculty and institutional support that will, in turn, provide the environment in which new patterns of research can develop and be encouraged.

Therefore a study was conducted to attempt to identify personal, professional, and institutional characteristics conducive to research aimed at the improvement of curriculum and/or instructional techniques. It was hoped that this study would provide information that would affect employment practices at those institutions seeking faculty members likely to be active in curriculum research, provide guidelines for institutional administrative practices where such research is sought, and establish acceptable models of behavior for those faculty members (and institutions) seeking to engage in curriculum research activities.

Objectives

The study examined three factors related to curriculum oriented research: (a) individual characteristics of

faculty members engaged in such research; (b) environmental characteristics of the colleges supportive of the researcher; and (c) organizational and managerial practices related to research in the colleges. From this examination it was hoped to achieve the following objectives:

a. Formulate a clearer definition of the role of individual research in the renewal of the curriculum in the colleges;
b. Identify a pattern of individual traits associated with faculty members likely to engage in curriculum-oriented research;
c. Describe institutional characteristics most often present where curriculum-oriented research takes place.

II. PROCEDURES AND LIMITATIONS

Procedures

The faculty members included in the study were employed at four public colleges located in Pennsylvania and New York. The colleges were selected on the basis of their similar characteristics which included: (a) student enrollments of not less than 5167, but no greater than 5734; (b) degree programs including a predominance of undergraduate curricula; (c) administrative organization; and (d) willingness to participate i the study. All members of the faculty at each institution were included in the invitation to furnish the requested data.

A questionnaire was constructed to reflect the purposes of the study and mailed to each of the faculty members at their home addresses. Of the 1339 questionnaires distributed, 466 were returned and 456 sufficiently completed to include in the analysis. It was the judgement of the principal investigator that this number constituted a sufficient mass to achieve the objective of the study. Appendix 1 is a copy of the questionnaire used.

The data were arranged in tabular form and in a manner that identified those items related to the objectives of the study. A straight tabulation of percent of responses to items on the questionnaire provided for identification of the responses as those of either "researchers" or "non-researchers," as defined below.

One section of the questionnaire asked each faculty member to identify with a series of statements designed to determine the classification of the individual as a researcher or non-researcher within the definition of curriculum research contained in the questionnaire:

> "Organized curriculum research is defined as any planned and formalized activity of research, innovation, development, experimentation, or demonstration that (1) is directly related to an ongoing course (or courses) or curriculum, and (2) includes an objective evaluation. The study does not have to have grant or contract support to qualify. The research can deal with, for example, instructional technology, methodology, content, class organization, or instructional environment, in any discipline at the undergraduate level. Excluded from our definition are literature/research reviews to maintain currency of course material, revising and

updating curriculum, writing textbooks per se, and any form of innovation, experimentation, or demonstration that does not include an evaluation component. Also excluded are recognized research efforts on educational methodology or content that is not part of an identified, ongoing curriculum but rather has its major value and purpose in the broad general application of the theoretical results."

The data from these responses are presented in Table 1. It was predetermined that those respondents identifying with statements "a" and "b" should be classified as "researchers," and those identifying with statements "c," "d," and"f" would be classified as "non-researchers." The total responses to the statements exceeded the number of respondents due to multiple responses. Therefore, further analysis of the responses was necessary; the results can be seen in Table 2. A study of this table will establish that 190, or 42 percent, of the respondents were classified as researchers, and 266, or 58 percent, as non-researchers.

Limitations

Certain obvious limitations are inherent in a research undertaking, such as the scope of the inquiry, limits of the resources, and exclusions of factors conceivably of value to the study. Specifically, the limitations of this study relate to:

a. The adequacy of the data-gathering instruments and the classification of the data received.
b. The absence of a more sophisticated treatment of many variables in the data.
c. The confines of the sample of faculty included.
d. The constraints of the specific type of research activity under investigation.
e. The validity of the judgements made by the investigators.

In addition, two caveats in drawing inferences must be noted that may be interpreted as limitations:

a. The definition of curriculum research was intentially narrow. Therefore, many who were classified as non-researchers, based on their responses, may be active in research in other areas.
b. The questions presented to the respondents dealt primarily with perceptions. However, the individual perceptions were believed to be more important in this case than whether or not they were representative of the actual situation.

TABLE 1

Respondents' Self-Identification With Descriptive Statements Regarding Participation in Organized Curriculum Research

	Statements	N*
a.	I am currently engaged in an "organized curriculum research" activity.	87
b.	I have completed such an activity within the past three years (9-1-70/9-1-73)	128
c.	I have plans to initiate such an activity within the next 12 months.	51
d.	I have engaged in an "organized curriculum activity" but not during recent years or my tenure at this institution.	39
e.	I have not engaged in such an activity but I would like to do so.	71
f.	I have not engaged in such an activity nor do I have immediate plans to do so	157

* Total responses exceed number of respondents because of multiple responses.

TABLE 2

Classification Of Respondents As "Researchers" And "Non-Researchers"

Researchers		Non-Researchers		Total	
N	%	N	%	N	%
190	42	266	58	456	100

And, finally, the investigators recognize that there are many other ways of effecting curriculum improvement that are not dealt with here.

III. FINDINGS

Introduction

The findings of the study are presented in a manner that allows for comparisons to be made between those respondents classified as "researchers" and "non-researchers," as well as a limited analysis of the data within each classification of respondents. The data are grouped and presented here under the major headings of (a) Selected Professional Characteristics, (b) Professional Responsibilities, and (c) Institutional Environment.

Selected Professional Characteristics

The data presented in this part of the findings relate to the respondents' academic degrees, academic rank, teaching experience, career employment in work other than education, and prior association with research related activities. Data are also presented related to the respondents' assessment of the importance of organized curriculum research and an assessment of factors motivating involvement in such research.

An examination of Table 3 reveals that nearly all of the respondents provided information related to their educational degrees. The masters' degree was primarily the lowest attained degree. A higher number of doctorates were reported by the researchers than was the case of the non-researchers.

Table 4 contains information regarding the respondents' academic ranks and administrative responsibilities. A larger number of responses than respondents for each catagory has resulted from double responses by those in administrative positions who also listed their academic rank. A study of Table 4 reveals a tendency for those respondents classified as researchers to hold academic rank above assistant professor while those classified as non-researchers seem to be more evenly divided among the various professorial ranks higher than instructor. Also to be noted is the higher incidence of researchers among the department chairmen than is the case for non-researchers. The most marked difference when viewing the respondents as a total group is the relatively small number of assistant professors reported under the catagory of researchers.

The respondents' years of teaching experience in colleges and/or universities is the subject of Table 5. The

TABLE 3

Respondents' Highest Earned Degree

Degree	R (N=188) %	N-R (N=263) %	T (N=451) %
Bachelor's	1	1	1
Master's	32	47	41
Doctorate	67	52	58

TABLE 4

Respondents' Academic Rank
And/Or Administrative Title

Rank/Title	R (N=217) %	N-R (N=294) %	T (N=511) %
Instructor	5	6	5
Assistant Professor	18	31	25
Associate Professor	28	30	29
Professor	31	23	27
Dean	3	2	3
Assoc/Ass't. Dean	1	1	1
Dept. Chairman	10	5	7
Other Administrative	4	2	3

Notes
N=duplications of rank and title

responses to the request for information was nearly universal and, when analyzed, reveals a slight tendency for researchers to be more experienced than non-researchers.

In Table 6 data are presented regarding the respondents' teaching experience in educational endeavors other than colleges and universities. It can be observed that the percent of researchers having had such experiences is higher than that reported for non-researchers and that the response to the item on the questionnaire was nearly universal.

Information was sought concerning the career experiences of the respondents in activities other than education. (See Tables 7,8, and 9.) The responses to the appropriate questions were very high as can be seen in the N reported in Table 7; the slightly higher N for Table 8 and Table 9 is the result of multiple responses. These multiple responses were not large in number nor did they skew the values of the responses. Therefore, they were treated with the data in their respective catagories.

Slightly more than fifty percent of the total respondents have engaged in educational work for all of their full-time career employment. (See Table 7.) There appears to be no significant difference between the experiences of researchers and non-researchers in this regard. Of those respondents reporting career employment outside the field of education, business and industry was the largest employer, with government and employment other than self-employed second and third, respectively, (See Table 8.) Researchers were noticeably more identified with government employment than were non-researchers while the latter tended to have been more associated with business and industry, coupled with self-employment. The length of employment in fields other than education was rather uniform when comparing researchers with non-researchers as is shown in Table 9.

In an attempt to ascertain the academic and experiential background of the respondents with regard to formal research, a series of statements developed by Gyuro (1969) was included in the questionnaire. The statements, represented degrees of association, and their selection by the respondents as being self-descriptive, are presented in Table 10. Not surprisingly, researchers more often identified themselves with those statements associated with a higher degree of research training, participation, and research and literature consumption than did the non-researchers. Conversely non-researchers tended to relate to those statements least associated with formal preparation in research techniques, participation in research projects, and the consumption of research literature.

TABLE 5

Respondents' College/University
Teaching Experience By Years

Number of Years	R (N=189) %	N-R (N=264) %	T (N=453) %
0-5	19	26	23
6-10	37	36	36
11-15	22	20	21
16-20	14	8	11
21-25	4	7	6
25-30	3	2	2
31-+	1	1	1

TABLE 6

Respondents' Teaching Experience
Other Than College/University

Had Other Teaching Experience:	R (N=188) %	N-R (N=265) %	T (N=453) %
Yes	78	65	70
No	22	35	30

TABLE 7

Respondents' Full-time Career Employment
In Areas Other Than Education

Had Other Career Employment:	R (N=189) %	N-R (N=262) %	T (N=451) %
Yes	48	46	47
No	52	54	53

TABLE 8

Areas Of Employment For Respondents
Indicating Career Employment Other
Than Education

Area of Employment:	R (N=111) %	N-R (N=135) %	T (N=246) %
Government	31	21	26
Business/Industry	49	54	51
Self Employed	9	8	9
Other	11	16	14

TABLE 9

Years Of Employment In Areas
Other Than Education

Number of Years:	R (N=97) %	N-R (N=124) %	T (N=221) %
1-5	60	57	58
6-10	20	20	20
11-15	7	11	10
16-+	13	12	12

TABLE 10

Respondents' Self Identification With Descriptive Statements Regarding Association With Research Activity

Statement	R (N=186) %	N-R (N=261) %	T (N=447)
a. Extensive background in academic course work; directed and participated in variety of research projects; have published several articles dealing with research outcomes and methodology; established consumer of research literature.	17	12	14
b. Rich background in academic course work; participated in several research projects; regular consumer of research literature.	23	14	18
c. Exposure to academic research course work; have been associated with research projects; have been a consumer of research literature.	39	31	35
d. Have been associated with research projects and have been a consumer of selected research projects.	11	8	10
e. Have had an exposure to academic course work and have been a consumer of selected research literature.	7	22	15
f. Have been a consumer of limited areas of research literature.	3	13	8

The respondents were asked to indicate the importance they attached to organized curriculum research, when considered among other alternatives, as a means to accomplish personal change objectives in curriculum and/or instructional techniques. Their responses are presented in Table 11. Surprisingly, neither group of respondents gave a majority opinion to curriculum research as one of high importance. When combined values are examined, 85 percent of the researchers assigned "high" or "some" importance to this activity, compared with 66 percent of the non-researchers. The combined values of "low" or "none" reveal that these indicators of importance were identified by 15 percent of the researchers and 26 percent of the non-researchers.

TABLE 11

Respondents' Assessment Of Importance Of Organized Curriculum Research As a "Most Favored Method" For Effecting Change In Curriculum And/Or Instructional Techniques

Respondent	Degree Of Importance				
	High %	Some %	Low %	None %	N
Researcher	33	52	13	2	181
Non-Researcher	22	42	24	12	246
Total	27	46	19	8	427

Tables 12, 13, and 14 contain data regarding the importance respondents assigned to selected factors assumed to motivate college-level teachers to engage in curriculum research. The number of responses to this item on the questionnaire represents the lowest of all items included in the personal characteristics area, but, nonetheless, is sufficiently large to give validity to the findings. Although researchers and non-researchers agree on the importance of academic promotion as a motivating factor, the value assigned by both groups is low. In all other instances more researchers assigned a "high" degree of importance to the selected factors than did the non-researchers. When combined values of "high" and "some" are studied, motivational factors related to the desire to do a better job, personal development, and improvement of instruction were given the highest degree of importance by both groups. Those factors most often identified as having values of "low" or "none" by both groups were academic promotion, collegial relations, and salary improvement.

TABLE 12

Researchers' Assessment Of The Importance Of Selected Factors As Personal Motivation For Conducting Research Regarding Curriculum And/Or Instructional Techniques

Selected Factors	Importance				
	High %	Some %	Low %	None %	N
Academic Promotion	23	36	21	20	180
Salary Improvement	28	40	18	14	180
Professional Recognition	36	41	16	7	180
Personal Development	67	28	3	2	181
Desire to do a better job	83	16	1	0	183
Basic Curiosity	63	31	4	2	179
Improve Instruction	86	13	1	0	179
Collegial Relations	23	45	25	7	178
Student Relations	45	42	9	4	180

TABLE 13

Non-Researchers' Assessment Of The Importance Of Selected Factors As Personal Motivation For Conducting Research Regarding Curriculum And/Or Instructional Techniques

Selected Factors	Importance				
	High %	Some %	Low %	None %	N
Academic Promotion	23	34	17	26	248
Salary Improvement	25	38	16	21	245
Professional Recognition	33	40	14	13	248
Personal Development	56	33	7	4	246
Desire to do a better job	70	23	4	3	257
Basic Curiosity	48	36	12	4	248
Improve Instruction	74	20	3	3	247
Collegial Relations	14	43	25	18	244
Student Relations	32	43	16	9	247

TABLE 14

Total Assessment Of The Importance
Of Selected Factors As Personal Motivation
For Conducting Research Regarding
Curriculum And/Or Instructional Techinques

Selected Factors	Importance				
	High %	Some %	Low %	None %	N
Academic Promotion	23	35	18	24	428
Salary Improvement	26	39	17	18	425
Professional Recognition	34	40	15	11	428
Personal Development	60	31	6	3	427
Desire to do a better job	75	20	3	2	440
Basic Curiosity	54	34	9	3	427
Improve Instruction	79	17	2	2	426
Collegial Relations	18	44	25	13	422
Student Relations	37	42	13	8	427

Professional Responsibilities

The data presented in this part of the findings relate to the respondents' full or part-time status, academic discipline, academic-year teaching load, teaching load for responsibilities not included in the regular academic year, credit-hour equivalents for time released from teaching responsibilities for other purposes, participation in professional activities outside institutional responsibilities, and the frequency of such activities. Some mention will also be made of data presented earlier that may also relate to the respondents' professional responsibilities.

The reader's attention is directed to Table 4 presented earlier in this section of the report. A study of the data presented in that Table indicate that 15 percent of the researchers carried administrative appointments as did eight percent of the non-researchers. Table 15

presents data that reveals that virtually all of the respondents were serving their respective colleges on a full-time basis.

The respondents were asked to identify their major disciplinary area. Their responses were grouped according to the program classification structure of the National Center for Higher Education Management (Gulko, 1972) and are presented in Table 16. Seventeen disciplines were listed and an additional listing was made of responses that did not indicate an academic area but rather a functional responsibility (e.g., dean of arts and sciences). The most prominent data in the Table are those indicating that education was the discipline most often represented and to a high degree.

Any attempt to arrange groupings of disciplines for comparative purposes presents a host of dangers. Nonetheless, a simple classification of disciplines as professional and non-professional (leaving aside the definitions or rationale!) would indicate that 45 percent of the respondents represented professional disciplines (business and management, communications, computer and information sciences, education, health professions, home economics, library science, and public affairs and services) while 52 percent represented non-professional disciplines. The remaining three percent represented unclassified responses. Utilizing the same classification of disciplines (with the same dangers!) 51 percent of the researchers represented professional disciplines while 45 percent of the researchers represented non-professional disciplines. The corresponding figures for the non-researchers are 41 percent and 57 percent respectively.

The data presented in Table 17 is addressed to the responsibilities of the respondents as represented by credit hours and credit hour equivalants. Slightly more than two-thirds of the respondents in both categories teach an annual load somewhere between 13 and 24 hours, nearly one-fourth teach 12 hours or less, and the remaining few teach 25 or more hours per academic year.

Still referring to Table 17, both groups are equally represented in the category of 1-5 hours released time, and virtually equal in the 16-20 hour range. Whereas a higher percentage of non-researchers report 6-10 hours released time, almost twice as many researchers than non-researchers report 11-15 hours released time. The incidence of researchers holding administrative posts (See Table 4) may help explain this.

TABLE 15

Respondents' Appointment Status

Status	R (N=187) %	N-R (N=259) %	T (N=446) %
Full Time	99	97	98
Part Time	1	3	2

TABLE 16

Respondents' Academic Disciplines

Disciplines	R (N=190) %	N-R (N=266) %	T (N=456) %
Area Studies	0	*	*
Biological Science	5	7	6
Business and Management	6	4	5
Communications	5	7	6
Computer and Information Sciences	*	*	*
Education	34	22	27
Fine and Applied Arts	7	3	5
Foreign Languages	3	3	3
Health Professions	2	1	2
Home Economics	2	1	1
Library Science	2	6	4
Mathematics	3	7	5
Physical Sciences	7	11	9
Psychology	6	7	7
Public Affairs and Services	*	0	*
Social Sciences	9	8	9
Letters	5	11	8
Unclassified	3	1	2

* Respondents listing this discipline are less than 1%.

TABLE 17

Respondents' Responsibilities According To Semester Credit Hours And Percent Of Response To Item

Responsibilities And Credit Hours	R (N=165) %	N-R (N=233) %	T (N=398) %
Teaching Load For Academic Year:			
1-12 hours	27	24	25
13-24 hours	67	69	68
25-+ hours	6	7	7
Credit Hour Equivalents Released for Non-Teaching Responsibilities:	(N=49)	(N=74)	(N=123)
1-5 hours	20	20	20
6-10 hours	39	49	45
11-15 hours	29	15	20
16-20 hours	4	5	5
21-+ hours	8	11	10
Teaching Load For Summer And/Or Other Teaching Not Included in Academic Year Load:	(N=129)	(N=159)	(N=288)
1-5 hours	14	21	18
6-10 hours	68	60	64
11-15 hours	12	9	10
16-20 hours	1	0	0
21-+ hours	5	10	8

Further analysis of the raw data indicates that in most instances the credit hours taught and the credit hours released for other responsibilities total 20 or more. The exceptions relate to responses that list a functional responsibility in one or both of the places requesting credit hours (e.g., instead of listing credit hours the response may have been "department chairman").

Table 17 also presents data that indicate the credit hours taught in addition to those reported as the regular academic year load. Such assignments as summer session or extension or night classes not counted as a part of the regular load would appropriately be recorded. With the exception of the lowest (1-5 hours) and the highest (21 + hours) the researchers tend to teach more hours in these activities than do the non-researchers.

Respondents were requested to indicate whether or not the participated in activities (e.g., consultant, art shows, hired research, paid writing, etc.) directly related to their professional area and if so how often they participated in such activities. The responses to these questions are to be found in Tables 18 and 19. Referring to Table 18, 73 percent of the researchers indicate that they did engage in such activities while a similar response was indicated by 58 percent of the non-researchers. The frequency of such activity is the subject of Table 19, indicating very little difference between the researchers and non-researchers. Where differences do appear it would seem that non-researchers participate both more regularly and more rarely than do researchers.

Institutional Environment

The data presented in this part of the findings require the reader to keep in mind that much of the material represents the respondents' perception of situations and that these perceptions may or may not reflect the actual conditions. Though the difficulties of such analyses are not discounted, the investigation has assumed that, for the purposes of this study, the perceptions of the respondents are more meaningful than the realities of the situation.

Table 20 represents the respondents' responses regarding the management of research activities at their colleges. Not surprising to the authors, college-wide research committees and offices, or specific administrators for research are more prevelant in those colleges represented by researchers. It may also be noted that a larger number of non-researchers than researchers indicated that they did not know the status of this situation at their own college. Also, referring to Table 21, more

TABLE 18

Respondents' Participation In Activities*
Directly Related To Professional Area

Engaged In Activities:	R (N=189) %	N-R (N=261) %	T (N=450) %
Yes	73	58	65
No	27	42	35

(*e.g., consultant, art shows, hired research, paid writing)

TABLE 19

Frequency Of Respondents' Participation
In Activities* Directly Related To
Professional Area

Frequency Of Participation	R (N=139) %	N-R (N=154) %	T (N=293) %
Regular	22	28	25
Occasionally	63	53	58
Rarely	15	19	17

(*e.g., consultant, art shows, hired research, paid writing)

TABLE 20

Status Of Responsibility For Research Policies
And Facilitation At Respondents' College

Type Of Responsibility	Researcher				Non-Researcher				Total			
	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N
Does the college have a:												
College-wide Research Committee?	67	15	18	182	59	16	25	260	62	16	22	442
Office and/or specific Administrator for Research?	54	30	16	184	48	27	25	262	51	28	21	446

TABLE 21

Use Of Person Or Office Within The College Charged With The Responsibility Of Facilitating Research

	Yes	No	Don't Know	N
	%	%	%	
Researchers				
a. Have you used the services of this person or office?	51	46	3	115
b. If so, was the service satisfactory?	67	21	12	66
Non-Researchers				
a. Have you used the services of this person or office?	31	64	5	155
b. If so, was the service satisfactory?	40	28	32	72
Total				
a. Have you used the services of this person or office?	43	56	4	270
b. If so, was the service satisfactory?	53	25	22	138

researchers than non-reseachers used the services of the office or administrator for research; and, of those respondents who used these services, more researchers found them satisfactory than did non-researchers.

The formally established relationships (e.g., research, instruction, dual credit) between the respondents' college and other educational institutions is the subject of Table 22. Researchers indicated the presence of such relationships to a greater degree than did the non-researchers. Both groups indicated that such relationships existed most often between their respective colleges and public school systems and colleges similar to their own rather than two-year colleges or a university. Both groups indicated a lack of information in this regard, with the non-researchers being considerably less informed.

Respondents were asked to report the presence or absence of a clear understanding or statement of policy at their college regarding several matters thought to be related to research activities.(See Table 23) Both researchers and non-researchers reported in large numbers the presence of such policies or understandings as they related to instructional responsibilities, and faculty rights and responsibilities. Also in both instances they reported the absence of understandings or policies regarding faculty research and the relationship between teaching and research. Of some note is the large percentage of respondents in each catagory who reported that they did not know if such statements or policies existed at their college.

Table 24 reports data concerned with the availability of college funds for selected activities. The responses of both researchers and non-researchers indicate that funds were available for travel to professional meetings on an equal basis as was the case with funds for visits to other campuses, though this practice was less common than the former. Researchers indicated in slightly greater numbers than non-researchers the availability of funds for visits to grant-funding agencies while both groups indicated about equally the absence of funds for publications. Once again a sizeable number of the respondents indicated a lack of awareness of institutional policy in these matters.

The availability of college funding for selected research activities was not reported to be available in any large number by the respondents for the research activities listed. (See Table 25.) Only in the area of instructional techniques was there any majority of affirmative response, though here as in each of the other activities the largest number of respondents indicated that they did not know if the college provided funds for such activities.

TABLE 22

Status Of Established Working Relationship* Of Respondents' College With Selected Other Institutions

Other Institutions	Researchers				Non-Researchers				Total			
	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N
Two-year college	37	36	27	172	27	43	30	239	31	40	29	411
University	34	37	29	166	25	34	41	238	29	35	36	404
Public School System	68	16	16	172	52	18	30	241	59	17	24	413
College similar to own	63	22	15	169	48	21	31	245	54	22	24	414

(* e.g., research, instruction, dual credit, etc.)

TABLE 23

Status Of Selected Policies Regarding Research And Related Activities At Respondents' College

Does the college have a clear statement of policy or understanding regarding:	Researchers				Non-Researchers				Total			
	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N
Faculty research?	23	51	26	183	19	45	36	258	20	47	33	441
Instructional responsibilities?	74	15	11	159	71	12	17	237	72	13	15	396
Relationship between teaching and research?	17	57	26	180	14	50	36	258	15	53	32	438
Faculty rights and responsibilities?	80	13	7	183	72	12	16	261	75	12	13	444
Faculty professional activities off-campus?	48	31	22	183	47	22	31	262	47	26	27	445

TABLE 24

Availability Of College Funds For Selected Activities At Respondents' College

Activity	Researchers				Non-Researchers				Total			
	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N
Travel to:												
Professional meetings	80	13	7	184	79	12	9	259	80	12	8	443
Grant-funding agencies	39	16	45	160	27	19	54	223	32	18	50	383
Visit other campuses	56	19	25	167	54	19	27	247	55	19	26	414
Assistance in cost of faculty publications	23	45	32	181	21	39	40	256	22	41	37	437

TABLE 25

Availability Of College Funds For Selected Research Activities Of Respondents' College

Does the college provide funds for research activity related to:	Researchers				Non-Researchers				Total			
	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N
Curriculum change?	24	34	42	182	16	27	57	253	19	30	51	435
Instructional techniques?	33	31	37	178	24	22	54	250	28	25	47	428
Instructional management?	19	29	52	182	13	23	64	256	16	25	59	438
Professional discipline interests?	24	30	46	180	18	26	56	250	21	27	52	430

Table 26 contains data regarding the practices of the respondent's college as to the provision for certain matters related to research. The most striking data are related to the nearly universal practice of awarding sabbaticals to the respondents. Also noticable is the slightly more favorable report of the researchers than the non-researchers relating to space for research and the provision for research assistants. Researchers reported negatively with regard to released time for research while non-researchers indicated by a slightly higher number that relaeased time was available for research. The number of respondents who indicated an absence of any understanding of the institutional policy relating to most of the items was noticeably large.

Matters relating to the respondents' academic department are reported in Tables 27, 28, and 29. Referring first to Table 27, there is no appreciable difference between the two groups as measured by size of the department in terms of the number of full-time faculty members.

An attempt was made to ascertain the respondents' perceptions of his or her own department by presenting a series of contrasting statements. The results of this effort are presented in Table 28 and are marked by their uniformity in both groups of respondents. Only slight deviations are observable, and those descriptive statements selected most often by each group indicate that respondents viewed their departments as one of the largest faculty groups, in a major instructional area, and containing one of the more cohesive faculty groups.

Data related to perceptions of the organized research practices of the department are presented in Table 29. Neither researchers nor non-researchers reported a noticable amount of departmental activity in the area of research. Departmental budgets for research were rare, research committees were seldom reported as in existence, and faculty research programs were absent in nearly three-fourths of the responses. The only research practice to gain a 20-percent affirmative response related to student research which was reported by 28 percent of the researchers and 22 percent of the non-researchers.

It was assumed that an important environmental factor related to research concerns the perceptions of the potential or active researcher regarding the persons and structures of the institution as they affect research activities. Therefore, a series of questions designed to elicit these perceptions was presented to the respondents. The responses to these questions are presented in Tables 30 through 41.

TABLE 26

Status Of Selected Practices Related To Research At Respondents' College

Does the college Provide:	Researchers				Non-Researchers				Total			
	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N
Released time for research	39	45	16	184	38	34	28	256	38	39	23	440
Appropriate Space for research	47	27	26	179	36	22	42	256	41	24	35	435
Research assistants	44	32	24	185	32	30	38	260	37	31	32	445
Sabbatical leaves	99	1	0	179	95	2	3	255	97	2	1	434

TABLE 27

Size Of Respondents' Academic Department

Number of Full-time Faculty	R (N=184) %	N-R (N=262) %	T (N=446) %
1-5	7	6	6
6-10	24	23	24
11-15	30	34	33
16-20	23	20	21
21-25	10	12	11
25+	6	5	5

TABLE 28

Respondents' Selection Of Descriptive Statements Regarding Own Academic Department

Descriptive Statement	Frequency Of Selection R (N=819)* %	N-R (N=1150)* %	T (N=1969)* %
One of the:			
a largest faculty groups	10	10	10
a-1 smallest faculty groups	6	7	6
b lesser instructional areas	3	5	4
b-1 major instructional areas	14	12	13
c newest instructional areas	6	5	6
c-1 oldest instructional areas	11	12	12
d growing instructional areas	12	12	12
d-1 declining instructional areas	5	5	5
e more cohesive faculty groups	15	13	14
e-1 least cohesive faculty groups	4	5	4
f most "favored" dept.	7	7	7
f-1 least "favored" dept.	7	7	7

(*N=total number of selections)

TABLE 29

Status Of Selected Practices Related To Research
In Respondents' Academic Department

Does the department have a:	Researchers				Non-Researchers				Total			
	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N	Yes %	No %	Don't Know %	N
Research Committee?	15	77	8	180	10	81	9	252	12	79	9	432
Research Budget?	5	84	11	165	4	84	12	226	5	84	11	391
Faculty research program?	16	74	10	180	14	73	13	259	15	73	12	439
Student research program?	28	66	6	179	22	67	11	260	24	67	9	439

Tables 30, 31, and 32 contain data concerning the respondents' assessment of the degree of interest held by selected persons and groups with regard to changing curriculum and/or instructional techniques. A review of Table 30 reveals that researchers rated their own interest highest, with that of their department chairman and departmental colleagues nearly equal to their own. Among administrative officers, researchers reported the interest of the president and their dean to be higher than any other persons or groups outside the department. Vice presidents for academic affairs and students were rated as equally interested. The researchers, as well as non-researchers, indicated that further interest was to be found in decending order in institutional committees, forces outside education, and governing boards.

Table 31 presents the findings as they relate to non-researchers. The data here indicate that non-researchers assessed the interest of the same persons and groups in the same order as did the researchers with the exception that they advanced the interests of the students to be equal to that of the president.

In each analysis of the data pertaining to Tables 30 and 31 degrees of interest represented by "high" and "some" were combined as were those for "low" and "none."

Table 32 contains the combined responses of researchers and non-researchers. It is worthy of note that the interest of the governing boards and forces outside education is unknown by a number of respondents.

The respondents were asked to assess the influence of persons and groups with regard to change in curriculum and/or instructional techniques. There response to this request is contained in Tables 33, 34, and 35. It may be noted that the persons and groups selected for this item were the same as reported immediately previous to this response where the concern was with the degree of interest in the subject.

In combining the "high" and "some" catagories, the rank order of influence assigned by the researchers moves from the respondent, to his or her departmental colleagues, to the department chairman as the persons most influential. The next level of influence appears to include the president, the dean, and institutional committees. Students and academic vice presidents share the next lowest level of influence, with forces outside education, and governing boards the lowest degree of influence.(See Table 33.)

Non-researchers assessment of influence is presented in Table 34. Combining the data in the categories of "high" and "some" reveals that the most influential

TABLE 30

Researchers' Assessment Of Interest Of Selected Individuals/Groups With Regard To Change In Curriculum And/Or Instructional Practices

Individuals/Groups	Degree Of Interest					
	High %	Some %	Low %	None %	Unknown %	N
President	45	34	16	3	2	185
Academic Vice President	31	32	20	6	11	186
Respondent's Dean	43	35	13	4	5	184
Respondent's Department Chairman	64	25	6	3	2	176
Respondent's Departmental Colleagues	62	29	8	0	1	184
Respondent	69	28	3	0	0	185
Students	31	45	19	2	3	185
Institutional Committees	16	40	29	5	10	184
Governing Boards	6	17	33	20	24	183
Forces Outside Education	14	28	26	8	24	183

TABLE 31

Non-Researchers' Assessment Of Interest Of Selected Individuals/Groups With Regard To Change In Curriculum And/Or Instructional Practices

Individuals/Groups	Degree Of Interest					
	High %	Some %	Low %	None %	Unknown %	N
President	41	35	14	5	5	260
Academic Vice President	31	39	16	5	9	259
Respondent's Dean	39	36	13	3	9	249
Respondent's Department Chairman	60	25	10	3	2	248
Respondent's Departmental Colleagues	55	30	12	2	1	249
Respondent	63	29	5	2	1	255
Students	20	46	27	1	6	254
Institutional Committees	18	38	26	6	12	256
Governing Boards	3	21	28	23	25	253
Forces Outside Education	7	24	29	14	26	249

TABLE 32

Total Respondents' Assessment Of Interest Of Selected Individuals/Groups With Regard To Change In Curriculum And/Or Instructional Practices

Individuals/Groups	Degree Of Interest					
	High %	Some %	Low %	None %	Unknown %	N
President	43	35	14	4	4	445
Academic Vice President	31	36	17	6	10	445
Respondent's Dean	40	35	5	12	8	433
Respondent's Department Chairman	62	25	8	3	2	424
Respondent's Departmental Colleagues	58	30	10	1	1	433
Respondent	65	28	5	1	1	440
Students	24	46	24	1	5	439
Institutional Committees	17	39	27	6	11	440
Governing Boards	5	19	30	22	24	436
Forces Outside Education	10	26	28	11	25	432

TABLE 33

Researchers' Assessment Of Influence Of Selected Individuals/Groups With Regard To Change In Curriculum And/Or Instructional Practices

Individuals and Groups	Degree Of Influence					
	High %	Some %	Low %	None %	Unknown %	N
President	34	34	21	11	0	185
Academic Vice President	22	31	29	11	7	189
Respondent's Dean	30	36	22	7	5	183
Respondent's Department Chairman	52	29	14	3	2	177
Respondents Departmental Colleagues	54	32	13		1	186
Respondent	40	50	9	1	0	187
Students	16	40	35	9	0	188
Institutional Committees	21	39	27	7	4	188
Governing Boards	6	20	34	26	14	186
Forces Outside Education	12	32	28	8	20	182

TABLE 34

Non-Researchers' Assessment Of Influence Of Selected Individuals/Groups With Regard To Change In Curriculum And/Or Instructional Practices

Individuals and Groups	Degree Of Influence					
	High %	Some %	Low %	None %	Unknown %	N
President	30	28	26	10	6	264
Academic Vice President	27	35	21	9	8	259
Respondents' Dean	25	40	22	6	7	249
Respondents' Department Chairman	46	36	11	4	3	246
Respondents' Departmental Colleagues	49	32	14	3	2	254
Respondent	32	40	20	7	1	259
Students	8	36	44	9	3	260
Institutional Committees	16	39	26	11	8	259
Governing Boards	4	15	30	32	19	255
Forces Outside Education	7	25	32	17	19	255

person is thought to be the department chairman, who is rated nearly equal with departmental colleagues. Third in influence, but somewhat distant from the chairman, is the respondent. In order, the dean, academic vice president, and the president constitute the next levels of influence. Institutional committees, and students are nearly equal in influence as assessed by the non-researchers. Forces outside education, and governing boards are considered to be the least influential.

Table 35 contains the data for the combined responses. It is worthy of note that the combined responses do not alter significantly the major levels of influence. However, the combination of "high" and"some" and the same treatment of "low" and "none" assigns the same degree of influence to students in both combined categories.

Respondents were asked to assess the productivity of selected factors concerning the attainment of the respondents' desire regarding change in curriculum and/or instructional techniques.(See Tables 36, 37, and 38.)

In assessing productivity the researchers ranked the factors, from high to low, in the following manner: respondents' judgement, college curriculum committee, accreditation requirements, college development plans, departmental deliverations, professional society's position, practices at other colleges, consultants recommendations, governing body's expectations, and organized curriculum research. (See Table 36.)

By combining the categories of "high" and "some," the rank order of productivity assigned by the non-researchers, from highest to lowest, is: departmental deliberations, respondent's judgement, accreditation requirements, college curriculum committee, college development plans, professional society's position, practices at the other colleges, governing body's expectations, consultants recommendations, and organized curriculum research. (See Table 37.)

A review of Table 38, which combines the data in Tables 36 and 37 reveals no marked differences in the previously reported rankings.

Respondents were requested to report their assessment of the attitudes of selected persons and groups regarding locally organized curriculum research as an important factor in promoting change. The assessments are presented in Tables 39, 40, and 41.

Table 39 contains the data relative to the researchers' assessments of attitudes related to locally organized curriculum change. The leading groups held as favorable

TABLE 35

Total Respondents' Assessment Of Influence Of Selected Individuals/Groups With Regard To Change In Curriculum And/Or Instructional Practices

Individuals And Groups	Degree Of Influence					
	High %	Some %	Low %	None %	Unknown %	N
President	32	30	24	10	4	449
Academic Vice President	25	33	24	10	8	448
Respondents' Dean	27	39	22	6	6	432
Respondents' Department Chairman	49	33	12	4	2	423
Respondents' Departmental Colleagues	51	32	14	2	1	440
Respondent	35	45	15	4	1	446
Students	11	38	40	9	2	448
Institutional Committees	19	39	27	9	6	447
Governing Boards	5	17	31	30	17	441
Forces Outside Education	9	29	30	13	19	437

TABLE 36

Researchers' Assessment of Productivity Of Selected Factors Related To Respondents' Desire To Change Curriculum And/Or Instructional Techniques

Selected Factors	Degree Of Productivity				
	High %	Some %	Low %	None %	N
Departmental Deliberations	58	28	12	2	177
College Curriculum Committee	24	48	22	6	178
Organized Curriculum Research	10	35	40	15	172
Respondent's Judgement	42	45	12	1	175
Accreditation Requirements	29	41	20	10	173
Professional Society's Position	15	45	31	9	174
Governing Body's Expectations	9	37	40	14	169
College Development Plans	17	52	25	6	176
Practices at other Colleges	7	47	39	7	172
Consultants' recommendations	9	43	32	16	168

TABLE 37

Non-Researchers' Assessment Of Productivity Of Selected Factors Related To Respondents' Desire To Change Curriculum And/Or Instructional Techniques

Selected Factors	Degree Of Productivity				
	High %	Some %	Low %	None %	N
Departmental Deliberations	48	36	10	6	242
College Curriculum Committee	23	48	18	11	242
Organized Curriculum Research	7	26	37	30	231
Respondents' Judgement	39	49	7	5	241
Accreditation Requirements	28	44	19	9	232
Professional Society's Position	17	39	30	14	233
Governing Body's Expectation	10	36	35	19	229
College Development Plans	19	48	23	10	234
Practices at other Colleges	7	48	35	10	232
Consultants' Recommendations	6	39	33	22	223

TABLE 38

Total Respondents' Assessment Of Productivity Of Selected Factors Related To Respondents' Desire To Change Curriculum And/Or Instructional Techniques

Selected Factors	Degree Of Productivity				
	High %	Some %	Low %	None %	N
Departmental Deliberations	52	33	11	4	419
College Curriculum Committee	23	48	20	9	420
Organized Curriculum Research	8	30	38	24	403
Respondents' Judgement	40	48	9	3	416
Accreditation Requirements	28	43	20	9	405
Professional Society's Position	16	42	30	12	407
Governing Body's Expectation	10	36	37	17	398
College Development Plans	18	50	24	8	410
Practices at other Colleges	7	48	37	8	404
Consultants' Recommendations	7	41	33	19	391

TABLE 39

Researchers' Assessment of Attitudes of Selected Individuals/ Groups Regarding Locally Organized Research As an Important Factor In Promoting Change In Curriculum and/or Instructional Techniques

Individuals/Groups	Attitude				
	Favorable	Indifferent	Unfavorable	Don't Know	
	%	%	%	%	N
President	60	16	2	22	176
Academic Vice President	49	18	5	28	176
Respondents' Dean	58	20	2	20	174
Respondents' Dept. Chairman	66	18	5	11	170
Respondents' Dept. Colleagues	60	21	6	13	178
Respondent	81	11	3	5	176
Students	39	39	2	20	174
Institutional Committees	38	31	5	26	175
Governing Boards	20	34	7	39	173
Forces Outside Education	18	32	6	44	170

TABLE 40

Non-Researchers' Assessment Of Attitudes Of Selected Individuals/Groups Regarding Locally Organized Research As An Important Factor In Promoting Change In Curriculum And/Or Instructional Techinques

Individuals/Groups	Attitude				
	Favorable	Indifferent	Unfavorable	Don't Know	
	%	%	%	%	N
President	53	14	2	31	246
Academic Vice President	44	17	5	34	245
Respondents' Dean	47	19	3	31	240
Respondents' Dept. Chairman	52	17	7	24	238
Respondents' Dept. Colleagues	45	25	5	25	246
Respondent	62	18	5	15	241
Students	29	32	3	36	247
Institutional Committees	32	20	4	44	244
Governing Boards	16	28	4	52	242
Forces Outside Education	16	24	5	55	237

TABLE 41

Total Respondents' Assessment Of Attitudes Of Selected Individuals/Groups Regarding Locally Organized Research As An Important Factor In Promoting Change In Curriculum And/Or Instructional Techniques

Individuals/Groups	Attitude				
	Favorable	Indifferent	Unfavorable	Don't Know	
	%	%	%	%	N
President	56	15	2	27	422
Academic Vice President	46	18	5	32	421
Respondents' Dean	52	19	3	26	414
Respondents' Dept. Chairman	58	18	6	18	408
Respondents' Dept. Colleagues	52	23	5	20	424
Respondent	70	15	4	11	417
Students	33	35	3	29	421
Institutional Committees	35	25	4	36	419
Governing Boards	18	31	5	46	415
Forces Outside Education	16	28	5	51	407

were the respondents' department chairmen and departmental colleagues. The next most favorable groups were deans and students, followed by presidents, institutional committees, academic vice presidents, governing boards, and forces outside education.

The non-researchers' assessment of attitudes regarding locally organized curriculum research assigned a rank order from most to least favorable as follows: respondents, departmental colleagues, departmental chairmen, president, dean, students, vice president for academic affairs, institutional committees, governing boards, and forces outside education. (See Table 40.)

Table 41 shows the combined responses concerning assessment of attitudes.

IV. SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to gather information related to faculty research concerned with curriculum and instructional techniques with the primary objective to identify those characteristics of individual researchers and institutions most supportive of research oriented to curriculum improvement in their institutions. The procedures of the study included sending questionnaires to the total faculty of four selected and similar small colleges in two states, and an analysis of the findings of the returned questionnaires to determine the pertinent professional characteristics of the faculty members engaged in curriculum oriented research, the environmental factors supportive of the individual curriculum researcher, and the organizational and managerial practices supportive of curriculum research.

Conclusions

Professional Characteristics of the Faculty Member Engaged in Curriculum Oriented Research. The faculty member involved in research in curriculum and/or instructional techniques is more apt to have the doctorate degree, and hold the rank of professor or associate professor. Faculty with disciplinary backgrounds in education, fine and applied arts, or business and management are more likely to be involved in curriculum research than not. They are less likely to be involved in this type of research if their disciplinary backgrounds are mathematics, physical sciences, or letters. His or her duties generally extend beyond research into heavier teaching loads, and often into administrative responsibilities -- particularly at the level of department chairman. Although both researchers and non-researchers are involved in activities such as consultation, art shows and paid writing directly related to their professional areas, the reseachers' involvement is at a higher degree.

There is no unique identification of the faculty member active in curriculum research in terms of number of years of college/university teaching experience, full-time career employment in areas other than education, or years of employment in areas other than education. However, for those who have had career employment other than education, the researcher is more likely to have been involved in governmental services (as compared to business/industry, or self-employed), and for a period of five years or less. Also, the curriculum research faculty are more likely to have had teaching experience outside the college/university than have the non-reseachers.

The faculty member active in curriculum research is most likely to have: had a strong background in academic research course work; participated in earlier research projects; published articles; and kept up with the research literature. Interestingly, the curriculum researcher ranks organized curriculum research low in importance as an effective change method for curriculum and instructional techniques.

The primary personal motivation for being involved in curriculum research includes (in order of major preferences) improvement of instruction; the desire to do a better job; personal development; and basic curiosity. Academic promotion and collegial relations are at the bottom of the curriculum researcher's list of motivating factors. This ordering of motivational priorities duplicates that of the non-researcher, but is assigned a higher degree by the researcher.

Although both the curriculum researcher and the non-researcher assign the higest rank to the effect of departmental deliberations as a factor in changing curriculum and/or instructional techniques, the researcher gives it more credence. There is no significant difference in the researcher and the non-researcher's assessment of other factors affecting change in this area. Both the researcher and the non-researcher consider themselves, their department chairmen, and their presidents, as having the most favorable attitudes toward promoting change in curriculum and/or instructional techniques. The researchers alone add their deans and departmental colleagues to this group.

A review of the tabulation of all responses suggest that the researchers are more aware or more certain of what's happening around them and give more recognition to the role of students and outside forces in shaping influences on change in curriculum and/or instructional techniques.

Environmental Factors Supportive of the Individual Researcher. Although a large percentage of both researchers and non-researchers reported the existence on their campuses of a college-wide research committee and/or an office or specific administrator for research, the degree of incidence was higher for researchers. In addition, the researchers made more use of the centralized office or person responsible for facilitating research, and reported considerably higher satisfaction with the services received. The strong suggestion here is that such an office or person and/or committee is a positive environmental factor for curriculum research.

Another positive factor is an established and known working relationship between the college and other institutions.

Although these relationships are important irrespective of whether they are with two-year colleges, universities, public school systems, or colleges similar to the respondents' college, they take on greater positive significance if they are with public school systems and colleges similar to the respondent's college

Contrary to what might be expected, the existence at the college of clear policy statements or understandings regarding research and related activities has, at best, a questionable role of influence on a positive curriculum research environment, with a slightly higher incidence of both existence and non-existence of these reported by researchers. It is not inferred that the existence of such statements or understandings are unimportant. Rather, a safer inference might be that their existence is important to the professional needs of the faculty; policies implicit from actual activities of the college appear to take on more environmental importance for curriculum research than do those that are simply stated or understood as a basic tenet. That is, the availability of college funds for travel to grant funding agencies, research related to curriculum change, instructional techniques, institutional management, and professional discipline interests; and the provision of research assistants and space for research all lend themselves to an environment conducive to research on improvement of curriculum or instructional techniques.

Neither the size of the academic department nor the faculty member's perception of his or her department appears to be a variable for the research environment. However, the existence of departmental research committees and student research programs is a positive environmental influence. Likewise, the faculty member's assessment of interest of "significant others" concerning change in curriculum and/or instructional practices has little variance between researchers and non-researchers. What does appear to be significant here is the fact that some positive interest does exist. Aside from interest, the influence on change in curriculum and/or instructional techniques or self, student, departmental chairmen, dean, and forces outside education are important factors for the researcher. It is interesting to note the relatively low rating assigned by the researchers to the interest or influence of the academic vice president and the governing boards.

In summary, environmental factors within the college exhibiting positive influences on research on the improvement of curriculum and/or instructional techniques are those that are manifested in fiscal and support actions, and have no relationship with the bureaucratic power hierarchy. In certain areas, departmental environment is more important than the college-wide environment.

Organizational and Managerial Practices Supportive of Curriculum Research. Departmental autonomy suggests itself as an organizational mode favorable to the encouragement of research. As noted earlier, the curriculum researcher lists improvement of instruction, desire to do a better job, personal development, and basic curiosity as his major motivating factors for involvement in curriculum research. All of these are intrinsic rewards with three of the four being more personalized. On the other hand, the curriculum researcher assigns a surprisingly low rank to organized curriculum research when assessing productivity of different means of changing curriculum and/or instructional techniques. One reconciling interpretation of this paradox is that the curriculum researcher has a basic belief in the importance of curriculum research but does not see its output as having the effect it might otherwise have under more favorable and "enlightened" conditions. Thus, his response to the "productivity" question was based on observed reality rather than what he believes "should be."

This same faculty researcher (as well as the non-researcher) ranks departmental deliberations as second only to his own judgement as a productive factor related to change in curriculum. Similar rankings (i.e., self and department chairman) are given by both the researcher and the non-researcher in assessing attitudes of individuals or groups as an important factor in promoting change in curriculum and/or instructional improvement techniques.(Here, the non-researcher ranks the department chairman and the president as virtual equals.) In assessing the influence of individuals and groups with regard to curriculum change, the researcher ranks his or her department colleagues as first, and the department chairman as second, whereas the non-researcher gives these two catagories a virtual tie for the first ranking. The focus on the self and the department's major role in assisting the faculty member realize this "self" in curriculum research is consistent, suggesting that, if the college wishes to encourage curriculum research, it will organize itself to provide sufficient autonomy to the individual department to encourage the relationships that seem to have developed as a responsive environment.

The responses of the curriculum researchers to the existence and effectiveness of centralized research offices and committees suggest also that the college wishing to encourage research of this nature provide such persons and committee structures as part of their management and organizational network.

V. COMPARISON WITH SELECTED OTHER STUDIES, AND INVESTIGATORS' COMMENTS

Comparison with Selected Other Studies

Since the present study deals with researchers in a closely defined area of curriculum research, it might be instructive to compare the findings with selected studies of other types of researchers. As discussed by Fincher (1965), the work of William D. Hitt at Battelle Memorial Institute finds that individual characteristics of the nature of the environment are inseparable aspects of the research effort. Since certain individual characteristics will influence the choice of environment, and vice versa, this may well be a self-fulfilling observation. However, it is helpful to review the six major environmental factors proposed by Hitt as important to research stimulation and productivity: (a) managerial approval; (b) approbation of colleagues; (c) the freedom of the individual to inquire; (d) monetary reward; and (e) a desirable physical environment.

In a study of scientific creativity (Taylor and Barron, 1963), Taylor concludes that a productive researcher is a combination of "intellectual characteristics, emotional disposition, and a favorable climate."

Pelz and Andrews (1966), in a study of the productivity of 1300 scientists and engineers in a variety of industrial, government, and university settings, found that effective scientists: were self-directed by their own ideas; valued freedom; interacted vigorously with colleagues; found that what they personally enjoyed did not necessarily help them advance in the organization; and tended to be motivated by the same things as their less effective colleagues, but differed in the styles and strategies with which they approached their work. Carrying the findings a bit further concerning sources of motivation, Pelz and Andrews found that researchers (particularly in the university setting) were strongly interested in advancing science; somewhat higher than others on an over-all index of professional orientation; and much less interested in climbing a status ladder rather than engaging in activities that they liked. In reviewing the Pelz and Andrews work as it related to his own work concerning research management, Hood (1973) notes that complete protection of the technical staff from administrative duties may be a mistake resulting in lower research productivity.

A survey of the faculty of five midwestern universities to determine incentives for submitting outside proposals for funding of research revealed that personal professional development and the search for new knowledge were the

highest ranked motivators. Other important motivators included released time from teaching for research, and financial aid in publishing research results (Walker, 1972).

Although the results of the studies cited above may vary to a small degree from the present study, as well as among themselves, the general, overall results exhibit strong consistency. This, in turn, suggests that the person seeking information on individual or organizational characteristics conducive to research in any specific area will profit from reviewing the literature of studies concerning researchers outside of his specialized area as well as within. The basic reason for this is, perhaps, best summarized by Gyuro (1969):

> [The] characteristics of productive researchers has direct relationship to stimulation in that stimulation is always directed toward the human being and must interrelate with his surrounding climatic factors. In an effort to understand the individual researcher in his particular environment, one begins to formulate the idea that the outcomes of a stimulation process are predicated upon the unique interaction of the individual and the climate within which he operates.

Investigators' Comments

This section appears in the report primarily due to the nature of the study. There was no intention in undertaking the study to assemble irrefutable evidence to support a stated point of view or to treat the subject in such a manner that its conclusions would be considered to be nearly incontestable. Rather, it was our purpose to "take a look" at curriculum research to assess selected matters related to it. Our "look" has established some more or less objective conclusions and it has also provided some rather personal notions. The latter of these are presented at this point which is, presumably, beyond the more formal strictures of the study.

The first of these "notions" relates to the usefulness of curriculum research as a means of changing the curriculum and/or techniques of instruction. It seems that not only is it not a prevalent practice to attempt such research, it is even more prevalent to expect it to have little influence. Without commenting on the merits of this condition, it appears appropriate to comment on its often negating effect on curriculum and instructional changes. While few engage in such research, and still fewer assign to it any value as a change agent, in the experience of the investigators proposed changes have often been blocked by the cries of those engaging in the academic enterprise that no evidence exists to support the proposed change. (Little does it matter that

often no evidence exists to support the practice for which a change is proposed.) Thus it would seem that "research" and "evidence" should assume a less prominent place in our deliberations concerning curriculum and instructional techniques or that appropriate action should be taken to increase its productivity.

As early as 1903, Joseph Rice observed that "it is becoming quite generally appreciated that the results of our various educational experiments should be recorded and systematized in accordance with the dictates of science, so that practical school people might be able to formulate their plans of instruction upon a more substantial basis than mere personal opinion." It appears that, to realize Rice's early optimism, we must concentrate on means by which the confidence in methodology and results of curriculum research can be communicated to those who actually influence curriculum change.

Secondly, the matter of the location of the core of influence comes to mind. It is certainly no surprise that academicians place their confidence in themselves and those who share their immediate concerns for their discipline and its management in the institutional structure. Put in less formal language--the department is where it's at! Thus, any meaningful change will require individual and departmental initiation and/or concurrence. The influence of other persons or groups in the institution is most likely to be negligible if acceptance isn't present at the departmental level. Therefore, it would seem that standard notions regarding authority and responsibility applied to leadership, should be more realistic and reflect the dominating role of the individual and department as positive forces for change.

A third impression stemming from this study that communication within institutions and even the expanded college community is in need of vast improvement. The incidence of persons reporting that they were unaware of practices, policies, and influences reflect this need. It is not acceptable to the investigators that members of faculties do not know about important matters within their institutions or about the forces affecting their institutional policies. Some important matters must be determined, communicated and understood and all those involved must be made aware of their respective responsibilities for determining, communicating and understanding.

Finally, a word should be said about the unreported responses written on the questionnaires. The largest number of these indicated that many faculty members feel that they practice in an academic wasteland where

pressures for "sameness" abound and are more often the product of their relationships with fellow faculty members. A few expressed a fierce resistance to engaging in the study. Whether their remarks were aimed at the techniques of the study or uncertainity of respect to its potential uses, they seemed to reflect a lack of personal confidence in their role in higher education. This latter possibility--lack of personal confidence--deserves further consideration. In a study of university setting and faculty perceptions relative to the full spectrum of university research, Fincher (1965) found that nearly half the respondents considered research as important as teaching; another 40 percent thought it more important; nearly all thought it a major influence on institutional growth and development; and a majority saw themselves as having the necessary skills and competencies for research. However, fewer than half thought they were better than average in planning and developing research projects; fewer than one-third thought conducting independent research a source of rewards at their institutions, and most judged the institutional facilities and resources for research as inadequate.

A reconciliation of the aforementioned difficulties might be achieved, in part, by a better understanding by all parties of their respective roles and role expectations. If, instead of perceiving the academic vice president and the governing boards as low in interest and influence in curriculum change, the perceptions by the faculty, as well as the academic vice president and the members of the governing boards, would be a role of establishing an environment for change and improvement in curriculum and instructional techniques, we may be closer to reality, and certainly would be closer to constructive change. Complementing this role realization would be the roles of others in the college: the president as spokesman and leader in establishing both the direction and the organizational system at the sub-unit and disciplinary levels; and the individual faculty member in the actual process of working with and effecting change in curriculum and/or instructional techniques. This, in effect, would be the "role corollary" of the integrative aspect of policy development described by Buchtel (1973):

> The four major ingredients in policy development in general are the organizational philosophy, goals, policies, and resultant procedures... ...Each influences the other. ...Whether they are written or unstated, [the individual] will be able to perceive the actual philosophy and goals from the conduct of the university, its program, and its reward system.

> The policies that are derived from the philosophy and goals are then translated into procedures. ...As it is developed, the policy provides the operational and behavioral framework within the organization by which the philosophy and goals can be implemented through described procedures. ...we must [also] consider the "influences" on procedures which can be, for example, temporal, social, or organizational. ...
>
> [There are also] ... subintegrations which are formal and informal, external and internal influences on each of the components of the total integration.

In summary, improvement in curriculum and/or instructional techniques will be best achieved by: (a) increasing the confidence of faculty members and administrators in the proper use of the results of curriculum research; (b) providing more recognition to the key function of the department and the individual faculty member in effecting curriculum and instructional change; (c) providing better means of determining and communicating policies and practices influencing and assisting curriculum change; and (d) identifying and fulfilling the complementary roles of all within the college as they influence curriculum improvement.

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