

# RESEARCH IN HIGHER EDUCATION: Fifteen Years of Scholarship

J. Fredericks Volkwein, David A. Carbone,  
and Edward A. Volkwein

.....

A descriptive analysis is given of the authors and articles appearing in *Research in Higher Education* (sponsored by the AIR), since the journal was founded in 1973. The analysis compares the 1980s with the 1970s according to subject matter, methodology, authors and institutions. The data suggest that coverage of higher education topics and research methodologies both are increasing, along with the variety of authors and the diversity of institutions. Institutions and authors are ranked according to their "productivity" of authorship.

.....

Scholars in many disciplines have produced rankings and ratings of programs based upon faculty publications in refereed journals. The field of education has produced a few analyses of scholarship (West, 1978), but there have been only a small number in higher education. Building on earlier work by Walsh et al. (1969), Kuh and his associates (1980, 1986) produced two analyses of journal publications in the field of student affairs. There has been no analogous effort in the field of institutional research. *Research in Higher Education*, sponsored by the Association for Institutional Research (AIR), began with Volume 1 in 1973 and has served as the leading source of, and outlet for, scholarship aimed at improving the efficiency and effectiveness of colleges and universities as complex organizations. *Research in Higher Education (RHE)* is one of the "core" journals identified by Bayer in his 1983 study. To date, there has been no attempt to analyze the scholarship appearing in this journal. As a scholarly teenager, *RHE* is growing from childhood toward adulthood, and fifteen years seems like an appropriate age to analyze its progress.

Presented at the annual meeting of the Association for Institutional Research, Phoenix, Ariz., May 1988.

J. Fredericks Volkwein, Office of Institutional Research, University at Albany, State University of New York, Albany, NY 12222. David Carbone, University at Albany, SUNY. Edward A. Volkwein, Harvard University.

The objectives of this paper are to summarize the scholarship appearing in *RHE* since 1973 to analyze the changes over time in topics and methodologies, and to develop a productivity ranking of institutions and authors.

## METHODS

We analyzed the first 26 volumes of *RHE*. A total of 648 articles have been published, excluding 62 contributions to "AIR Between Forums," most of which have been written by Cameron Fincher at the University of Georgia. To carry out this project, we designed a classification system for topics and methodologies and assigned a weight for each author and institution in cases of multiple authorship. Then we designed a database program which received the information and facilitated the analysis. The methodology and data gathering techniques in this study combine some of the elements used by Kuh and Bursky (1980), by Bradley, Coomes, and Kuh (1984), and by Kuh, et al. (1986).

Publications were classified according to their topics and methodologies by making shared judgments. We examined a number of alternative classification strategies including Silverman's (1982, 1985, 1987). We decided to assign each article one to three topics based upon a 26 category list which was adapted from the Association for the Study of Higher Education (ASHE) list of teaching and research interests in higher education. We added some categories and revised others based upon our review of many hundreds of published articles. The average number of topics per article is 1.8.

Each article also received one to three methodology descriptors from a list of 21 categories which evolved from our analysis. We developed four groups of essays, eleven types of empirical studies, and six categories of theoretical contributions. The average number of methods per article is 1.4.

Many analyses of scholarship have tabulated the authors of journal articles and their institutional affiliations. Multiple authorship has been treated in a number of different ways in various studies (Eash, 1983; Jones and Doss, 1977; Skovholt, Stone, and Hills, 1984). After reviewing a number of alternatives for weighting multiple authorship, we adopted the system shown in Table 1.

TABLE 1. Weight Given to Each Author

<i>No. of authors</i>	<i>1st</i>	<i>2nd</i>	<i>3rd</i>	<i>4th</i>	<i>5th</i>	<i>6th</i>
1-	1.0					
2-	.6	.4				
3-	.5	.3	.2			
4-	.5	.2	.2	.1		
5-	.5	.2	.1	.1	.1	
6-	.5	.1	.1	.1	.1	.1

The data base program was used to analyze the weighted and unweighted list of authors and institutions for various time periods. The database also contains our shared judgments about topics and methodologies represented in each article.

## RESULTS

Table 2 indicates some of the statistics we collected. The 648 articles contained the names of 822 authors representing 253 separate institutions. They were judged by our review to have made 1,202 contributions to 23 topic categories and 948 contributions to 17 methodology categories.

Under the guidance of a single editor, Charles Elton, *RHE* has for 15 years exhibited fairly consistent statistical profiles. As shown in Table 2, we examined data from 1974, 1980, and 1986 to reveal any trends that might be present. While the number of articles per year has grown modestly, the number of authors, topic categories, and methodologies has fluctuated little over the years. The growth in institutional affiliations parallels the increase in articles.

The acceptance rate of submitted manuscripts has risen steadily over the years and now is one of the most rigorous in the field at 22%. The "Impact Factor" as reported in the Social Science Citation Index has grown to .36, which is less

**TABLE 2. Research in Higher Education: Editorial Statistics 1973-87**

	1974	1980	1986	1973-87
Articles	35	36	42	648
Authors	51	49	50	822
Institutional affiliations	31	30	38	253
Topic categories	13	15	14	23
Methodology categories	9	13	11	17
Acceptance rate (%)	45 <sup>a</sup>	33 <sup>a</sup>	22	
SSCI impact factor	n/a	n/a	.36	
SSCI half-life	n/a	n/a	5.6	
<i>Editors</i>				
# Editors/consulting eds.	17	29	34	
Editors in top 10 1970s	1	4	3	
Editors in top 10 1980s	0	3	4	
Editors w/improved rank	0	3	5	
<i>Editors' institutions</i>				
# Inst. rep. by editors	17	23	26	
Ed. inst. in top 10 1970s	3	7	7	
Ed. inst. in top 10 1980s	2	8	8	
Ed. inst. w/improved rank	1	6	7	

<sup>a</sup> Estimated by the editor.

than the leading .67 reported for the *Journal of Higher Education (JHE)*, but above most other journals in the field. The 5.6 year "half-life" for *RHE* articles compares to 6.2 for *JHE*.

In his study, Eash (1983) noted the tendency of some refereed journals to publish more frequently the work of authors who were from institutions represented by the editors. The data reported by Volkwein et al. (1987) showed that the University of Nebraska and the University of Kentucky displayed a higher pattern of productivity in the journals edited at those institutions than in other refereed journals in higher education, but the cause and effect relationship is not clear. Certainly both Nebraska and Kentucky have a number of productive higher education scholars.

In spite of the practice of "blind" review of manuscripts, the work of colleagues in a relatively small field like higher education becomes recognizable to the consulting editors. To search for evidence of bias, whether intentional or unintentional, we examined the editorial statistics shown in the lower half of Table 2. The number of consulting editors has doubled over the fifteen-year period, but only three or four of them occupied a rank in the top ten authors in either the 1970s or the 1980s. There also is no particular evidence that being a consulting editor in 1980 led to increased article publication in the 1980s versus the 1970s. Only 3 of 29 1980 editors and 5 of 34 1986 editors improved their weighted productivity ranks in the 1980s.

A similar pattern is seen in the data for the institutions represented by the consulting editors. Only 6 of 23 in 1980 and 7 of 26 in 1986 displayed improved productivity in the 1980s. While the top 10 producers were heavily represented in 1980 and 1986, they were not in 1974. This suggests that consulting editors were selected to represent productive institutions, perhaps after significant scholarship had appeared by them in this and other higher education journals. In any case, the data do not leave the impression of systematic bias.

Table 3 displays the percentage of *RHE* articles which we classified as falling into the listed topic categories. To be included in the table, topics had to receive coverage in at least 1% of the articles over fifteen years. There are sixteen topics, exclusive of the miscellaneous category, which meet this criterion. More articles dealt with faculty issues (such as promotion and tenure, instructional work load, teaching styles, faculty attitudes, and departmental leadership) than any other category. While there was almost a 6% decline in the proportion of these articles between the 1970s and the 1980s, three out of ten studies still fall into this category.

The next three topic categories each appeared in approximately one out of four published articles. Studies of administration, management, and governance included such topics as planning and budgeting, leadership and decision making, senates and trustees, and collective bargaining. Research issues included statistical measurement, evaluation methods, and quality ratings.

TABLE 3. Research in Higher Education: Topics for Scholarship

Topics	1973-1987 (N = 648) <sup>a</sup>	1970s (N = 296)	1980s (N = 352)	Difference
Faculty issues	32.9%	36.1%	30.2%	-5.9%
Administ./mgmt./govern.	24.7	25.2	24.3	-0.9
Research issues/meth.	24.5	21.9	26.8	+4.9
Student serv./issues	23.5	27.8	19.8	-8.0
Curriculum/instruct.	20.9	25.5	17.0	-8.5
Outcomes/growth	16.1	14.6	17.3	+2.7
Economics/finance	8.9	5.6	11.7	+6.1
Sociology/demographics	6.2	5.3	7.0	+1.7
Organiz. effect/climate	5.6	5.0	6.1	+1.1
Gender/minorit./aff. act.	5.0	3.6	6.1	+2.5
Community colleges	2.4	2.6	2.2	-0.4
International/comparat.	2.1	2.6	1.7	-0.9
Legal/ethical	2.0	2.3	1.7	-0.6
External relat./envir.	1.8	3.0	.8	-2.2
Adult/non-tradit ed.	1.2	1.4	1.1	-0.3
Technology/info. syst.	1.2	1.0	1.4	+0.4

<sup>a</sup> Excludes "AIR Between Forums."

Reflecting the institutional research orientation of this journal, these research topics grew in emphasis during the 1980s. Student services and issues included studies of admissions and financial aid, student attitudes, counseling needs, and student choice. The proportion of published manuscripts in this category has dropped from over one in four to under one in five between the 1970s and 1980s.

A fifth category which appeared frequently related to curricular and instructional concerns. This included articles on academic advising, student ratings of instruction, and undergraduate requirements, among others. This category has witnessed the largest decline in attention between the 1970s and 1980s (-8.5%).

Approximately one article in six focused on educational outcomes, such as assessment of learning and growth, academic performance, and attrition/retention. There has been recent growth in this area. The area of greatest growth, however, is in the topics devoted to economics and finance. Perhaps a reflection of the state of higher education, the articles appearing in the 1980s displayed increases in the number of salary analyses, budgeting strategies, retrenchment, fund raising, and similar studies.

Looking at the table as a whole, we see that *RHE* appears to be shifting slightly away from its 1970s concentration on faculty, academic, curricular, and student centered topics and instead is diversifying into new topic areas, such as

research methods, financial concerns, the impact of college on learning and growth, and subjects related to affirmative action.

Table 4 shows the percentage of articles falling into selected methods categories. Dominated (90%) by empirical work, *RHE* has seen little change in the proportion of studies which use sophisticated multivariate techniques, as distinct from descriptive statistics. The number of historical and case studies has grown but still represents only one in 20 articles. Experimental methodologies and meta-analyses only account for 3% of the published work.

Theory driven articles have grown in frequency from 4 in 10 in the 1970s to almost 6 in 10 in the 1980s. This suggests that authors increasingly are submitting manuscripts which contribute to the development of theory in the field. The number of articles which develop or refine a formal model, taxonomy, or typology has grown from 1 in 10 to 1 in 4.

Table 5 lists the authors who have made the most contributions to *RHE* over the 15-year period. The first column indicates the number of publications weighted for multiple authorship. The second and third columns indicate each person's weighted rank during the 1970s and 1980s, respectively. To be included in this table, authors' names either had a weighted frequency greater than 3.0 or possessed a weighted rank in the top ten during either the 1970s or 1980s.

The names of only 17 authors out of 822 meet these twin criteria. This suggests that authorship is quite dispersed. In fact, 663 names appear only once in 15 years. Four authors appeared among the top ten in both decades (Smart, McLaughlin, Pascarella, and Feldman), so their work appears to have met the test of durability. Neumann and Hoyt are two examples of authors whose contributions placed them among the ten most productive in the 1970s, but not in the 1980s. Baird, Dorfman, and Terenzini are examples of authors whose recent works have made them eligible for this list.

We also examined the data on gender. As shown in Figure 1, the proportion

**TABLE 4. Research in Higher Education: Methodological Emphasis**

	Percentage 1973-87 ( <i>N</i> = 648)	Percentage 1970s ( <i>N</i> = 296)	Percentage 1980s ( <i>N</i> = 352)	Percentage Difference
Empirical:	90.1	92.9	88.8	-4.1
Multivariate	53.5	56.4	57.1	+0.7
Hist./ethno./case	3.2	2.4	5.7	+3.3
Experimental/meta.	3.2	3.3	3.1	-0.2
Theoretical	50.3	40.9	58.5	+17.6
Model/tax./typol.	18.4	9.5	25.9	+16.4

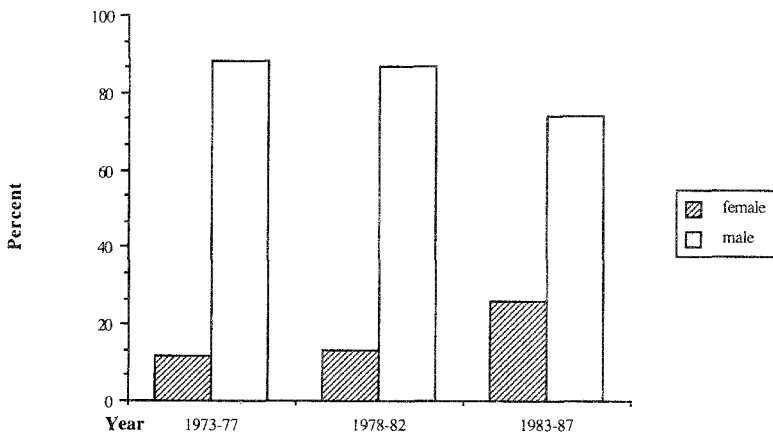
**TABLE 5. Research in Higher Education: Author Productivity<sup>a</sup>**

Author	Weighted Frequency <sup>a</sup>	Weighted Rankings	
		1970s	1980s
Neumann, Y.	11.1	1	19
Smart, J.	10.9	6	1
Feldman, K.	9.0	2	5
Pascarella, E.	8.6	5	3
McLaughlin, G.	7.0	4	9
Hoyt, D.	5.5	3	48
Baird, L.	5.0	—	2
Terenzini, P.	4.8	46	8
Boice, R.	4.6	—	4
Hesseldenz, J.	4.2	7	50+
Dorfman, L.	4.0	22	6
Renner, K.	4.0	—	7
Richards, J.	4.0	8	50+
Silverman, R.	3.6	34	30
Biggs, D.	3.3	9	50+
Bean, J.	3.0	—	10
Long, S.	3.0	10	—

<sup>a</sup> Excludes contributions to "AIR Between Forums."

of female authors remained at a level of about one in eight until quite recently. Female authors have doubled in the past five years to 26%.

Table 6 lists the institutional affiliations of the various authors. Recognizing that authors will sometimes move from one campus to another, we were unable to do more than record the institutional affiliation indicated at the time each



**FIG. 1. RHE: Comparison of male and female authors.**

**TABLE 6. Research in Higher Education: Institutional Productivity<sup>a</sup>**

Institution	Weighted Frequency <sup>a</sup>	Weighted Rankings	
		1970s	1980s
VPI	34.2	4	1
Kentucky	24.4	1	2
Minnesota	23.1	2	4
Penn State	18.5	6	5
Michigan	14.7	11	6
Ill.-Urbana	14.1	5	21
Ohio State	13.4	12	8
Boston Univ.	12.5	3	50+
Albany	11.6	50+	3
Stony Brook	9.6	13	20
UCLA	9.3	7	50+
ETS	9.2	29	10
Ill.-Chicago	8.5	50+	7
Kansas State	8.3	10	50+
Nebraska	8.3	22	14
So. Ill. U.	8.2	18	16
Iowa	7.8	50+	11
Houston	7.6	50+	9
Syracuse	7.6	9	50+
Maryland	7.3	21	23
Buffalo	7.0	8	50+
Percentage of articles by top 10:		31.3%	32.7%

<sup>a</sup> Excludes contributions to "AIR Between Forums"

article was published. Eligibility for the list in Table 6 was limited to those institutions with a weighted frequency of 7.0 or greater. This includes all the top ten institutional sources of articles both in the 1970s and in the 1980s.

Only four universities appeared in the top ten in both decades (VPI, Kentucky, Minnesota, and Penn State). Michigan, Ohio State, Albany, Illinois-Chicago, Houston, and the Educational Testing Service moved into the top ten in the 1980s, while Illinois-Urbana, Boston University, UCLA, Kansas State, Syracuse, and Buffalo dropped out of the top ten. These shifts may reflect changes in personnel or program, or both. For example, the University of Illinois-Chicago became a significant source of scholarship in higher education by attracting Ernie Pascarella (and, more recently, John Smart). On the other hand, Boston University, by failing to hire replacements, serves as the opposite example.

Some of the results in both Tables 5 and 6, of course, may be explained by



authors' journal selection. For example, Silverman (1985) points to the tendency of some scholars to feel closer to certain journals than to others.

One interesting finding is the tendency for productivity to correlate with the 1987 Carnegie classifications. In Table 6, for example, eleven of the first twelve campuses are classified "Research University I," whereas only two of the last eight are so classified. For the other 200+ campuses there is a similar tendency for their productivity as a group to be roughly congruent with the Carnegie classification. Also worth noting is the concentration of productivity in a relatively small number of universities. Both in the 1970s and in the 1980s, the top ten campuses produced almost one-third of the articles.

These productivity results are not consistent with recent reputational studies in higher education. The "top ten" programs identified in the reputational surveys by Johnson and Drewry (1982) and by Keim (1983) overlap with the Table 6 top ten in only two cases (Michigan and Penn State). In fact, only two other universities on their lists (UCLA and Buffalo) appear in all of Table 6. While *RHE* constitutes only one of many journals in the field, Galli (1987) tabulated the contributions to *Review of Higher Education* with a similar result. Only four of the top 20 contributors to *Review of Higher Education* appear on the two reputational lists. While there are many forms of scholarly recognition in the field (Barnes, Creswell, and Patterson, 1986), we expected a greater degree of congruence between this measure of productivity and the reputational studies.

## CONCLUSIONS

Taken together, the data presented in this analysis suggest that *RHE* is a journal which is expanding its coverage of the field through authors who use largely empirical methodologies to address topics of increasingly theoretical significance. Only a small number of authors appear to use this journal as a regular outlet for their work, and there is evidence that the diversity of authors is increasing. A variety of institutions are represented among the sources of scholarly contributions, but only four rank among the top ten in both the 1970s and the 1980s. While the total number of institutional affiliations of authors appears to be expanding, frequent contributors have consistently tended to concentrate in a small number of leading campuses. An analysis similar to this one but including a wider selection of the higher education journals is underway and may give a more conclusive picture about these trends.

## REFERENCES

- Barnes, M. W., Creswell, J. W. and Patterson, R. A. (1986). Correlates of scholarly recognition in the field of higher education. *The Review of Higher Education* 9(2): 159-175.

- Bayer, A. E. (1983). Multi-method strategies for defining "core" higher education journals. *The Review of Higher Education* 6(2): 103-113.
- Bradley, R. K., Coomes, M. D., and Kuh, G. D. (1985). A typology for classifying student affairs knowledge. *Journal of College Student Personnel* 26(1): 11-18.
- Eash, M. (1983). Educational research productivity of institutions of higher education." *American Educational Research Journal* 20(1): 5-12.
- Galli, M. J. (1987). *Review of Higher Education* content analysis: volumes one through nine. Unpublished manuscript, University of Utah.
- Johnson, J. A., and Drewry, G. N. (1982). A profile of faculty of doctoral programs in the study of higher education in the United States. University, Ala: Institute of Higher Education Research and Services.
- Jones, William A., Jr., and Doss, C. Bradley, Jr. (1977). Contributions to the Public Administration Review: 1966-1975. *Public Administration Review* 37(3): 270-175.
- Keim, M. C. (1983). Exemplary graduate programs in higher education. *Educational Research Quarterly* 8(1): 4-11.
- Kuh, G. D., and Bursky, M. (1980). Knowledge dissemination by publication in student affairs: Who publishes what where? *Journal of College Student Personnel* 21(4): 487.
- Kuh, G. D., Bean, J. P., Bradley, R. K., Coomes, M. D., and Hunter, D. E. (1986). Changes in research on college students published in selected journals between 1969 and 1983. *The Review of Higher Education* 9(2): 177-192.
- Shovholt, T. M., Stone, G. L., and Hill, C. E. (1984). Institutional affiliations of contributors to scholarly and professional activities in counseling psychology: 1980-1983. *Journal of Counseling Psychology* 31(3): 394-397.
- Silverman, R. J. (1987). How we know what we know: a study of higher education journal articles. *The Review of Higher Education* 11(1): 39-59.
- Silverman, R. J. (1985). Higher education as a maturing field. *Research in Higher Education* 23(2): 150-183.
- Silverman, R. J. (1982). Journal manuscripts in higher education. *The Review of Higher Education* 5(4): 181-196.
- Volkwein, J. F., Carbone, D., Maiello, T., and Volkwein, E. (1987). Scholarship in higher education 1977 to 1986. A paper presented at the annual meeting of the Association for the Study of Higher Education, Baltimore.
- Walsh, W. B., Passons, W. R., and Pritchard, M. C. (1969). Publishing patterns in the Journal of College Student Personnel. *Journal of College Student Personnel* 11(4): 403-407.
- West, C. K. (1978). Productivity ratings of institutions in the journals of the American Educational Research Association: 1970-1976. *Educational Research* 7(1): 13-14.

Received May 17, 1988