1980

A SYSTEMATIC EVALUATION OF PUBLICATIONS FOR PROMOTION OF MIS ACADEMICS

Gordon B. Davis
University of Minnesota, gdavis@csom.umn.edu

A SYSTEMATIC EVALUATION OF PUBLICATIONS
FOR PROMOTION OF MIS ACADEMICS

GORDON B. DAVIS

Graduate School of Business Administration
University of Minnesota

ABSTRACT

This article examines the role of publications as evidence for university promotion and postulates reasons why the academic "publish or perish" rule applies. A systematic approach to evaluation of an academic's publication portfolio is described. The approach uses a four-step process for evaluating each publication:

1. Ranking of journal where article appeared or classification of book

2. Ranking of quality/impact

3. Evaluating effect of coauthors

4. Evaluating effect of multiple publication of same basic material

Following the individual item evaluation, there is an overall evaluation of the publication portfolio for mix of articles and for rate of output. A method is suggested for applying this procedure in evaluating one's own portfolio and developing a personal publication strategy for promotion.

INTRODUCTION

Senior professors in MIS typically receive several requests each year from other universities to evaluate the publication record of MIS academics who are being considered for promotion. Although I have done this many times, I am not comfortable with the task, not only because I do not like to make judgments affecting the future of my colleagues, but also because the objectives and criteria for the evaluation are not clear. In this paper I describe the results of some thinking to clarify objectives and to formulate a more systematic approach to evaluating publication records for promotion purposes. A systematic method with clear criteria may not produce better results than a fuzzy one, but it is easier to explain why the evaluation turned out the way it did. Also, the trend to legal challenges of promotion processes may make it necessary to have a well-defined process. The evaluation method is general and can be applied outside of the MIS area; the emphasis in this paper is on its application to MIS academics.

WHY THE "PUBLISH OR PERISH" RULE APPLIES

The underlying criterion for promotion is whether or not (based on evidence to date) the person is expected to be productive in those activities that help to achieve the goals and objectives of the university department making the promotion decision.

The evidence for promotion is often stated as a performance in the three activities of teaching, service, and research. In practice, the publication record of the individual is often used as the only real measure of performance. Very few academics are promoted for outstanding classroom teaching, excellent service, or research activities (not resulting in publications) and only a few are not promoted or terminated for poor teaching, poor service record, or absence of research activity.

Publications are sometimes equated with research, but, in fact, publications can be related to teaching or service as well as research. The relationship of publications to the three areas of activity are:

Area of activity	Examples	Relationship of Publications to Area of Activity
Teaching	Classroom performance Instructional development Publication of teaching materials	Dissemination of teaching ability and instructional development to larger academic community
Service	Committee service Professional organization service Publication of practitioner-oriented articles, books, etc.	Dissemination of knowledge to practitioners to aid practice, practitioner development, etc.
Research	Doing research projects Directing research projects Sponsoring of research Aiding research by review, criticism, suggestions, etc.	Dissemination of research results. There is no useful research that is not published.

In other words, within each of the three areas of teaching, service, and research, publication is an important measure of performance because it represents a dissemination of what an academic knows (or does) to a larger community of academics and practitioners.

The academic institution appears to value publications more than it values direct performance at the institution. One reason for this may be the existence of a global, idealistic view shared by educators about the nature of education; another may be a specific organizational objective. The global, higher education objective of publishing is the dissemination of knowledge, etc. Dissemination of knowledge is a powerful motive because of the shared ideal in universities that this is important.

A narrower objective is to further the development of the specific educational unit by establishing and maintaining a reputation for scholarly performance. The reputation assists in attracting resources. In achieving this objective, publications do not tend to be important to the short run operastional performance of a department, but they are very significant for medium-term tactical and long-term strategic reasons.
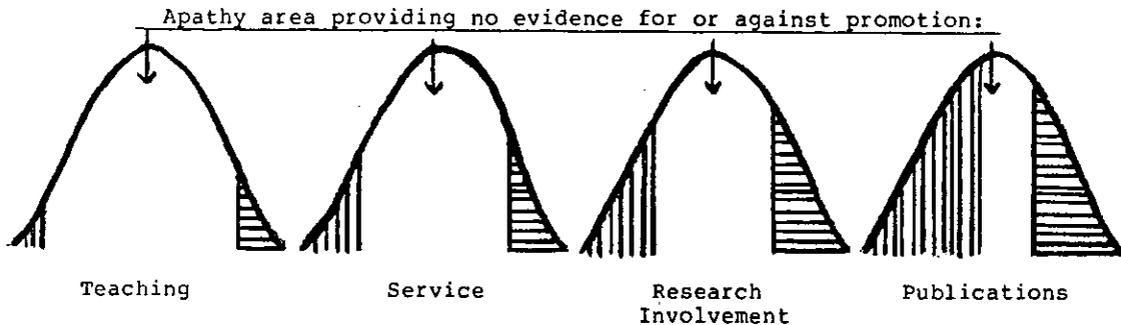
Another reason the publish or perish rule applies is that university faculties accept rather large variations in teaching, service, and research activities, but they have established fairly narrow acceptable limits for the publication record. This difference in acceptable limits may be due to a well-established fairly narrow acceptable

limits for the publication record. This difference in acceptable limits may be due to a well-established human propensity to over-value concreteness (as evidenced by publications) in decision making. Another possibility is that publication records of past promotees provide the only well-defined anchor point for new promotion decisions. Whatever the reason, the result is that the band of acceptable performance for teaching, service, and research involvement other than publication is very wide -- only at the extremes does performance suggest promotion or termination. Performance in the acceptable range represents an apathy area that provides no basis for promotion or termination. For publications, however, the apathy area is quite small. Achievement at or beyond a narrow band of publication activities provides a strong basis for promotion; publications less than the apathy area represent insufficient publications for promotion and may be the basis for termination. (Figure 1)

ACADEMIC VERSUS PRACTITIONER PUBLICATIONS AS EVIDENCE FOR PROMOTION OF MIS ACADEMICS

Some schools reject all publication evidence from publications that are not perceived as "academic". In some cases, lack of a publication in the academic journal is a serious impediment to promotion. I argue against that position, especially for MIS, on the basis of dissemination of knowledge and reputation objectives.

Figure 1 The distribution of performance (quantity/quality)

as it affects promotion

Apathy area providing no evidence for or against promotion:

Teaching   Service   Research   Publications
                                       Involvement

MIS is an academic field closely coupled to MIS practice. Considerable MIS academic work is aimed at applying explanatory theories and taxonomies to MIS practice. Academic research need not always be relevant for practice, but if research has useful implications for practice, it should be disseminated by being published in journals that practitioners read in a form that is understandable to them. I therefore give equal weight to an article in an academic journal and an article of comparable quality in a practitioner journal having comparable practitioner stature. For example, I count a good article in the Havard Business Review as equal to a good article in Management Science.

The MIS area is changing rapidly and there is a real need for educational material. There are clearly some texts that do not "add" to the real alternatives, but I have been impressed by the fact that in a field that appears to be saturated (such as FORTRAN programming), there are new texts that are innovative and provide real alternatives in content and teaching methodology.

The reputation objective for MIS extends to practitioners because they provide interaction that is important to our knowledge base and provide field test and other research opportunities. "A man is not a prophet in his own homeland" applies in the practitioner world as well. Therefore, the surest method for an academic to achieve a national/interantional reputation with practitioners is to publish in well-regarded practitioner journals having national or international circulation.

CRITERIA FOR EVALUATION OF EACH ITEM IN MIS FACULTY PUBLICATION RECORD

In the systematic methodology being proposed, the objects of publication evaluation are divided into the two major categories of articles (journal article, proceedings, chapters in handbooks, etc.) and books (textbooks, monographs, and professional/ practitioner books). The evaluation criteria applied to each publication are:

1. The journal or publication where the article appeared or nature of the book

2. The quality/ impact of the article or book

3. The number of authors

4. The number of times the author/s have published essentially the same material

THE PUBLICATION WHERE ARTICLE APPEARED OR NATURE OF BOOK

There are differences in quality of desirability of journals and other publication outlets. These relate to:

- Objectives of journal, book, etc., in terms of content and audience.

- Reputation of organizational sponsor for journal, book, etc.

- Reputation of journal, proceedings, series, etc. for quality

- Circulation (numbers and percent of relevant professional group)

- Availability as a source (available in libraries, indexed, etc.)

Based on the above differences, I have established four categories for publications and ranked them A+, A, B, and C (Figure 2). Note that my ranking assumes that an article in an academic-oriented journal and an article in a practitioner-oriented journal have the same "journal" weight if both journals are in the same A+, A, B, or C category. For academic texts and professional/practitioner texts, a similar classification is used.

THE QUALITY/IMPACT OF THE ARTICLE OR BOOK

Quality/impact is hard to define and is always relative to the audience for which the article was written. It consists of a level of quality and amount of impact. In the absence of other measurements, a subjective evaluation must be used. However, it is usually possible to use both subjective evaluation plus evaluation based on objective evidence such as:

1. Citation count. The frequency with which a publication is cited is a good indicator of its quality.

2. Reprinting and translation. Good articles are frequently reprinted in readings books. Good texts and articles may be translated and printed in other languages.

3. Sales. The market test. If there are 100 FORTRAN texts, then the top five or so in sales reflect a market perception of quality. A similar market test is reprint sales by journals that sell reprints.

The burden of proof for quality/impact is usually on the person preparing the evidence for promotion. If such evidence is missing, I use the journal or book ranking as a surrogate for quality/impact and essentially omit this factor unless I have personal knowledge that the quality/impact exceeds the journal or book ranking. For example, an article in the Proceedings of the National Computer Conference (a B classification publication) may make a major impact and be cited frequently.

NUMBER OF AUTHORS

Co-authoring is good and should be encouraged, but I feel greater uncertainty when evaluating a record with no single-authored publications. The individual work of n co-authors who work equally is generally not 1/n; it is more likely to be 1.5/n. But not all co-authors work equally hard; there are sometimes honorary co-authors, and this may need to be evaluated. I note that honorary authorship is rarely the case for junior faculty and therefore this may be a moot point for their promotion and tenure.

NUMBER OF TIMES MATERIAL PUBLISHED

Multiple publication of the same basic material to different audiences is to be encouraged but perhaps less than full publication credit should be given for the second, third, etc. publications of the same report, same results, etc. In the case of publication of dissertation results, it appears there is a tendency to give little publication credit. I feel this is wrong. A dissertation report should, at worst, be ranked as the second publication of the same material. I tend to value it as a first publication of the material.

OVERALL PUBLICATION PORTFOLIO ASSESSMENT

The assessment of each publication is followed by an overall assessment of the portfolio. This assessment focuses on mix and rate.

PUBLICATION MIX

The mix, as I view it, should contain some research. Others may insist on having some of the portfolio in academic journals. It may be useful to classify the content in terms of a simple classification such as the matrix in Figure 3.

If the research is significant, it may be classified by the following:

A. Concept or theory formulation (non data or use of secondary data)

B. Empirical (data research)

    1. Case studies
    2. Field studies
    3. Field tests
    4. Laboratory studies (simulation, small group, man/machine, and prototype experiments)
    5. Action research

RATE OF PUBLICATION

The rate of appearance of publications does not translate directly to an evaluation of rate of progress because of different preparation times and publication delays. Therefore, rate must be considered within the context of the type of article or book published. A set of publications having the same appearance date will have different times over which activity leading to publication probably has occured, as illustrated in Figure 4. The figure may also suggest a strategy for an assistant professor in order to demonstrate an adequate rate.

Figure 2 Ranking of journals and books for promotion purposes

RANKING FOR JOURNALS AND PROCEEDINGS

Rank	Academic/Professional Journals and Proceedings	Professional/Practitioner Journals
A+	Generally recognized as best in field by relevant academic group. Strong refereeing process.	Broad recognization as outstanding plus large readership
A	Established scholarly journals. Refereed, available, and frequently cited.	Established, well-regarded professional and practitioner journals having large readership and substantial availability. Referenced frequently.
B	Refereed journals that are new or have low circulations or low availability. Refereed proceedings of regularly scheduled conferences.	Well-regarded professional/practitioner journals with solid content but relatively low circulation.
C	Regular conference proceedings not refereed. Conferences not regularly scheduled, whether or not refereed. Working papers if part of a regular series.	Practitioner-oriented, survey-type content.

RANKING FOR BOOKS

Rank	Academic Textbook	Practitioner/Professional Book
A+	Outstanding, seminal academic text on the topic.	The authoritative work on the subject for professionals in the field.
A	Innovative text with respect to content, teaching methodology, et.	One of a few top, well-regarded professional books on the topic.
B	Replication of standard coverage. Casebook and reading books with innovative content.	One of many "how to do it" professional books.
C	Simple collections of readings, cases, etc. Study guides.	Compilation of articles

Content Orientation	Orientation of Journal, etc.	
	Academic	Practitioner
Teaching (academic)		
Service (practitioner and curriculum)		
Research		

Figure 3   Classification to show mix of publications

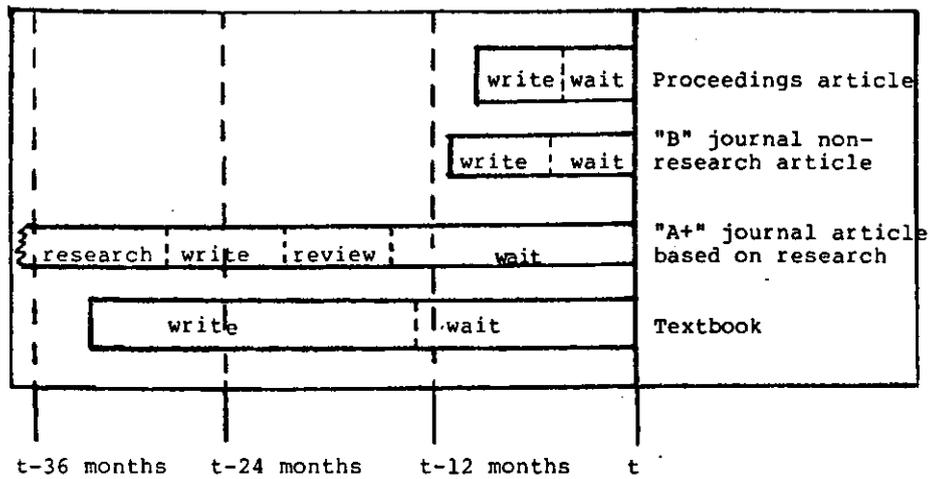t-36 months   t-24 months   t-12 months   t

Figure 4   Comparison of activity required prior to publication
appearance for four publications appearing in same
month

IMPLEMENTATION NOTE

The methodology defined in the paper is more of a logical procedure than a physical procedure. In other words, I may follow the general logic without performing all of the physical procedures implied by the logic. The extent to which the logical procedure is transformed into a physical procedure may depend on the nature and purpose of the review. As an external receiver, I cannot be expected to go to the same extent in terms of documentation as an internal review process. A disputed promotion may require more detail than an obvious promotion.

The logical process flows from the premises of the paper regarding publications and promotion, as summarized below:

1. The objectives of publications are:

   a. To disseminate knowledge beyond the institution.

   b. To provide institution a reputation for scholarly activity and thereby attract good students, good faculty, and adequate resources.

2. Publications are evidence of dissemination of knowledge in each of the three areas of activity: teaching, service, and research.

3. For an applied field such as MIS, good practitioner-oriented articles and books should be valued equally with academic articles and books in same classification.

4. The evidence that articles and books disseminate knowledge and enhance the reputation of the institution comes from:

   a. The nature and reputation of the journal.

   b. The publisher, type of book, and reputation of series.

   c. Evidence of impact other than impact assumed by (a) & (b).

5. The evidence of scholarly activity from a publication record is qualified by the effect of co-authors, number of times the same material is published, and the time required before publication.

THE EVALUATION PROCESS FOR PERSONAL PLANNING

A personal use of the method prescribed in this paper is to apply the basic framework to discover the values attached to each factor at one's school. Another use is to clarify one's own evaluation criteria and the weights attached to them. The discovery or clarification may use portfolios of recently promoted faculty or one's own portfolio of publications. The personal discovery and planning use may be aided by forms explained below.

To recapitualte, the evaluation procedure consists of two parts with four steps in part A.

A. Evaluate each published article and book (Figure 5).

   1. Classify the publication where article appeared or classify nature of book into one of four classes or groups. Note these are two, separate, equally-weighted sets of four classes for articles in academic and professional/practitioner publications. It is useful to have a tentative classification of journals for this purpose. The one I use is in Figure 6. There are also two sets of four classes for academic and practitioner books.

   2. Rank quality/impact using both subjective ranking and quantitative measures such as citation count, use in reprints, translations, and sales.

   3. Evaluate effect of coauthors.

   4. Evaluate effect of number of times same material published.

B. Evaluate mix and rate of publications.

   1. Mix evaluation using simple tally for each classification (Figure 7).

   2. Rate of publication. I do this subjectively, but where significant delays are relevant, a simple segmented bar chart may be useful.

SUMMARY

The paper is based on personal observation and introspection rather than on systematic data collection. I present a logical framework for the evaluation of a publication record.

- Objectives of publications including reasons why publication record is more significant to promotion than direct performance of teaching, research, and service.

- The use of practitioner articles and books as promotion evidence.

- Four criteria for evaluating item.

- Overall publication portfolio assessment based on mix and rate.

The logical process can be used to guide evaluation and may be implemented by differing levels of physical procedures depending on the type of review and reviewer.

Figure 5 Analysis form for publications

Item

Type of Content — Article, Book — Teaching, Service, Research
Audience — Academic, Practitioner
Journal Book Outlet/ Type — A+, A, B, C
Quality/Impact — Excellent, Good, Average, Fair, Poor
Number of Co-authors — None, One, Two, Three or more
Number of Times Material Published — First, Second, Third, Four or more

Figure 6 Classification of Some Representative Journals for Evaluation of
Management Information Systems Faculty Writings

	SCHOLARLY	PRACTITIONER
PREFERRED HIGHEST — Best exposure	**A(1) +** Management Sciences Communications of ACM	**A(2) +** Harvard Business Review
HIGHEST — Refereed, prestigious, established scholarly/professional journals	**A(1)** MIS Quarterly Computer (IEEE) Computing Surveys Journal of Computing Transactions on Database Systems Transactions on Software Engineering Transactions on Programming Languages and Systems Database Omega Decision Sciences Information & Management Information Systems	**A(2)** Datamation Computerworld (in depth articles) — Well-regarded, widely distributed practitioner journals providing desirable exposure
INTERMEDIATE — 1) New refereed journals without established reputation or limited distribution 2) well-regarded refereed proceedings	**B(1)** Accounting, Organizations & Society The Journal of Systems and Software Systems, Objectives, Solutions Policy Analysis and Information Systems The Information Society Proceedings of ACM and other well-regarded, refereed conferences	**B(2)** Business Horizons Journal of Business Sloan Management Review Interfaces — Scholarly practitioner journals with limited distribution
LOWEST — Non-refereed proceedings	**C(1)** Proceedings of conferences not refereed	**C(2)** Infosystems Computer Decisions Journal of Data Management Journal of Systems Management Mini-Micro Systems EDP Auditor Canadian Data Systems Small Systems World Byte and others — Non-refereed practitioner journals

SUMMARY TALLY AND DISTRIBUTION OF PUBLICATION PORTFOLIO

I. RANKING OF OUTLET

Ranking of Journals		Ranking of Books	
Academic	Practitioner	Academic	Practitioner
A+		A+	
A		A	
B		B	
C		C	

II. Quality/Impact

	Articles	Books
Excellent		
Good		
Average		
Fair		
Poor		

III. Number of Co-authors

	Articles	Books
None		
One		
Two		
Three+		

IV. Number of Times Material Published

	Articles	Books
1		
2		
3		
4+		

V. Mix of Publications by Content

	Articles	Books
Teaching		
Service		
Research		

Type of Research

A. Conceptual _____
   (non-data)

B. Empirical

   1. Case studies _____
   2. Field studies _____
   3. Field tests _____
   4. Laboratory studies _____
   5. Action research _____

Figure 7 Summary form for tallying characteristics of publication portfolio