

IDENTIFICATION OF FACTORS THAT INFLUENCE AUTHORSHIP NAME PLACEMENT AND DECISIONS TO COLLABORATE IN PEER-REVIEWED, EDUCATION-RELATED PUBLICATIONS

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Abstract

In many universities authorship credit plays an important role in academic decision-making, such as for tenure and promotion. The purpose of this study was to identify factors that influence the placement of names in coauthored works in specific education-related journals, and to identify perceived benefits of single and coauthored publications. Results indicate that both contribution amount and idea origination were typically used to determine name placement, but respondents also noted that authorship credit was assigned based upon other criteria, such as seniority and assistance to colleagues. A number of benefits for both sole and coauthored publications were also found.

It is no secret in higher education that name placement in publications is an indicator of academic performance. In colleges and universities in the US, for example, successful dissemination and communication of research findings is rewarded by career advancement through promotion, tenure, or heightened administrative status (Endersby, 1996; Jones, 1999). For academics the traditional reward system has been geared toward the successful single author who demonstrates the ability to pose a significant problem, selects the appropriate method for problem solution, and then clearly interprets the results. However,

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despite the image of the independent scholar, "...there is a longstanding recognition in the academy that one does not write in a vacuum" (Smagorinsky & Smith, 1999, p. 5). Rennie, Yank, and Emanuel (1997), writing in the *Journal of the American Medical Association*, note that while multiple authorship is now the norm, this trend has created problems in both accountability and credit, especially regarding tenure and promotion decisions (Gelman & Gibelman, 1999). Fine and Kurdek (1993), for instance, claim that first-authored publications often receive more credit, and a cursory Internet search supports this claim. Some colleges and universities have faculty evaluation policies that apply differential weighting for authorship credit, or that require coauthors to explain their role or the acceptable norms in their discipline for coauthorship, in such publications (e.g., California State University at Long Beach, 1996; Department of Counseling and Educational Psychology, Kansas State University, 1999; University of Surrey, United Kingdom, 2003; University of Texas at Austin, 2002; University of Western Australia, 2004). As an example, the University of Canberra's (2004) "Promotion Policy for Academic Staff" states the following: "In the case of multi-authored work, the candidate must explain his/her specific contribution" (section 8.3, Professional Attainment).

Historically, single authorship in the sciences was the norm until the 1950s when the number of multi-authored publications, especially in medicine, began to rise as scientific technology and complexity increased (Brumback, 2001; Rennie et al., 1997). Indeed, the National Science Board (1998) notes that coauthored publications in which authors come from multiple institutions increased from about 33% in 1981 to 50% in 1995. Similar trends in the number of multiple authored publications have also been noted in other disciplines, such as the social sciences (Endersby, 1996), political science (Fisher, Cobane, Vander Ven, & Cullen, 1998), higher education (Isenberg, Jalongo, & Bromley, 1987), finance and economics (Beattie & Goodacre, 2003; Hudson, 1996; Tompkins, Nathan, Hermanson, & Hermanson, 1997), and social work (Gelman & Gibelman, 1999).

Researchers who studied this development often point to the benefits of multi-authored publications to help explain the rise in coauthorship. For example, Isenberg et al. (1987) found that among authors published in education-related journals, the most prominent reasons for collaboration included promoting growth/collegiality among colleagues, improved quality of the research and written result, increased efficiency of work, and capitalization on coauthors' strengths for complex research. Gibelman and Gelman (2000) also noted that social work researchers who collaborated recognized several benefits from multi-authored publications not unlike those listed by Isenberg et al. In a study of finance faculty and chairs' perceptions of coauthored publications, Tompkins et al. (1987) also found similar benefits, such as higher quality of research, capitalization on complementary strengths of coauthors, increased productivity, and enhanced collegiality within one's department. Additionally, Hart (2000) found that academic librarians tended to rate the following as important reasons for coauthorship: improved quality of final product, expertise of coauthors, valuable insight/ideas from coauthors, division of labor among coauthors, and enhanced productivity in terms of publications. These studies, from diverse fields, show that there is much commonality in perceived benefits of multi-authored publications.

As previously noted, certain benefits are often bestowed upon the principal author, and the determination of authorship order can, at times, create a vexing problem for

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academics. An important issue, therefore, is the identification of appropriate criteria for determining authorship credit. Numerous studies and formal policies exist. For example, Hamilton (1997) reported survey results from higher education business faculty who believed that colleagues should be included as coauthors for major editorial revisions, literature searches, conceptual contributions, and data collection, manipulation and interpretation. Hart (2000) found that academic librarians agreed that authorship credit should reflect order of significant contribution, but a sizable number of respondents to his survey also stated that other methods were used as well, such as alphabetical order, or listing names in order of those who most needed first authorship for promotion or tenure. Winston (1985) offered a formal, point-driven method for determining authorship. His method awards, for instance, 50 points for "conceptualizing and refining research ideas," 30 points for "creating research design," and 10 points for "editing manuscript" (p. 516). This issue is also important in medical research. The International Committee of Medical Journal Editors (1997) has developed a set of uniform requirements for authorship for manuscripts submitted to any of more than 500 journals that have adopted the standards. The American Psychological Association (APA; 2001) also provides a brief statement on determining authorship credit, and Fine and Kurdek (1993) offered suggestions with case studies for authorship credit in psychology. As these examples show, the determination of authorship credit has received considerable attention from academics, yet the issues driving these research studies, models, standards, and case studies still persist.

Publication success is important for a number of reasons, with tenure and promotion certainly being two of the more prominent, and it is also clear that in many situations sole authorship, or lead authorship on joint-authored publications, is given considerable weight in such decisions (Fine & Kurdek, 1993; Gelman & Gibelman, 1999). Given the importance placed on lead authorship in many disciplines, and given the guidelines for coauthorship specified by the APA and other professional organizations, what are the contributions identified by a selected group of authors that determine the placement of names in coauthored publications in education, and how do educational researchers view the rewards and drawbacks of such collaboration? The purpose of this study was to address these questions and determine what authors of articles published in a set of education journals perceive to be the benefits of single and multi-authored publications, and the criteria used in deciding name placement in publication bylines.

Method

The sampling frame for this study consisted of authors who appeared in the year 2000 in one of the following American Educational Research Association journals: *American Educational Research Journal*, *Educational Evaluation and Policy Analysis*, *Educational Researcher*, *Review of Educational Research*, and *Review of Research in Education*. A total of 196 individuals appeared in these volumes, with 22 from outside the USA and the remaining 174 authors with addresses within the USA. We mailed the questionnaire (described below) and a postage-paid return envelope to the 196 authors identified. We asked authors to respond to the questionnaire within four weeks. At the end of five weeks, we again mailed the questionnaire with a return envelope to all authors who

did not respond to the first mailing. The final sample consisted of 60 respondents, 6 from authors with mailing addresses outside the USA and 54 from authors within the USA.

We developed the questionnaire employed in this study to collect information on factors used to determine name placement, benefits of coauthorship, and benefits of single authorship. After developing questionnaire items, we asked several academics in the field of education with publication experience to critically review the items. Their feedback led us to make revisions in the questionnaire, and the revised questionnaire was then pilot tested by a second group of academics in education. As a result of this second pilot test, we made additional revisions to the questionnaire. The final questionnaire contained the following items: (1) How many refereed publications have you authored or coauthored in the past five years? (For purposes of this study we refer to refereed publications, or manuscripts in-press, to include journal articles, book chapters, or books.) (2) How many of the publications listed in response to question #1 were coauthored? (3) Of your last three coauthored publications, list specifically what reasoning or criteria were used to determine the placement order of author names for each of these three publications. (4) What do you think are the benefits of coauthored publications? (5) What do you think are the benefits of single authored publications?

Analysis of data collected from the questionnaire followed a format similar to that described by LeCompte (2000) for the analysis of qualitative data. The first step was to attempt to develop taxonomies of responses; that is, find common themes or categories among participants' responses. We first developed general taxonomies based on what we expected to find. We then sampled responses from participants to further refine and add to these taxonomies. As we began analysis in earnest, further additions and refinements occurred to the classification system used to construct coding categories. We developed a code sheet to classify each set of responses based upon these refined categories. Both authors then coded all responses to the instrument, and disagreements were discussed until consensus was reached.

Results

Respondents demonstrated considerable variability in total number of publications authored or coauthored over the past five years. The total number of publications ranged from a low of 1 to a high of 70 ($M = 15.6$, $SD = 14.8$), and the number of coauthored publications ranged from 0 to 66 ($M = 10.6$, $SD = 11.7$). On average respondents reported that about 68% of their publications were coauthored.

The question about the reasoning or criteria used to determine name placement in coauthored publications elicited a variety of responses, which are summarized in Table 1. Of the 60 respondents, 92% indicated that contribution amount (e.g., written amount, data collected, data analyzed, time devoted, etc.) was one of the factors used in determining name placement for at least one of their most recent publications. Within contribution amount, the response provided most often centered on amount of work or contribution level offered by coauthors in determining name placement. For example, sample responses explaining coauthorship name placement due to work contribution included these: "amount of work contributed," "order of effort and responsibility," "the quality and quantity of the contribution to the study," and, simply, the "person who did most of the work."

Table 1: Reasons Identified for Coauthorship Recognition

	Percentage of Respondents ¹	Number of Times Category Referenced ²
Contribution Amount	91.7 (55)	
Work/effort Contributed		36
Written		27
Data Collection / Fieldwork Analyzed		12
Ideas Provided		7
Time Devoted		3
Responsibility		1
Linked Results to Theory		1
Other Contribution		1
Idea Origination	36.7 (22)	
Conceptualization of Study		18
Initiated Study		5
Mechanical Decision	20.0 (12)	
Alphabetical Order		10
Rotated Authorship		2
Other Mechanical Decision		2
Assist Colleagues	16.7 (10)	
Tenure		5
Novice Scholars/Colleagues		3
Based upon need		2
Promotion		2
Other Assist Colleagues		1
Seniority/Leadership	15.0 (9)	
Rank of Authors		2
Guidance/Leadership		2
Other Seniority/Leadership		6
Grant Recipient/PI	10.0 (6)	
		6
From Thesis/Dissertation	8.3 (5)	
		5

Note: The "Other" category of responses represents responses that could be classified into a given main grouping (such as Contribution Amount, Assist Colleagues, etc.), but could not be determined to fit within one of the sub-categories for that grouping.

¹ Numbers in parentheses indicate the number of respondents out of 60 who provided a response that fit within a main grouping, e.g., 55 respondents indicated that some aspect of "Contribution Amount" was used to determine coauthorship.

² This column is a simple count of the number of times a specific reason was given for recognition of coauthorship. This column may sum to more than 60 since multiple reasons were often listed by each respondent.

Another common determinant for name placement was idea origination. About 37% of respondents indicated that the individual who conceptualized the study received credit as lead author. Several other criteria, however, were also used in determining name placement. For example, 17% of the respondents noted that an author's name was placed

(or included) on a recent publication to assist colleagues (e.g., help those seeking tenure or promotion, help junior or novice writers). Similarly, 15% of respondents indicated that name order was based upon seniority of authors, rank of authors, or leadership position, and 20% stated that authorship name placement was based upon mechanical decisions (i.e., alphabetical or rotated). A smaller percentage of respondents wrote that name placement was based upon which individual received a grant for the study (10%) and whether the study stemmed from a thesis or dissertation (8%).

Table 2: Perceived Benefits of Coauthored Publications

	Percentage of Respondents ¹	Number of Times Category Referenced ²
Quality of Work/Ideas	65.0 (39)	
Diversity of Perspective in Work/Ideas		20
Clearer Thinking/Stronger Presentation/Better Written Work		17
Coauthor Peer Review of Work/Ideas		9
Other Quality of Work/Ideas		4
Synthesis of Ideas		3
Division of Labor/Workload	41.7 (25)	
Synthesis of Specialist Skills/Complementary Contributions of Authors		16
Shared Responsibility		2
Other Division of Labor/Workload		9
Collaboration	38.3 (23)	
Sharing of Ideas		8
Builds Community among Academics/Interaction Among Colleagues		5
Emotional Support		4
General Enjoyment of Collaboration		3
Enables More Extensive Research		2
Motivation to Complete Task		2
Other Collaboration		5
Professional Development	30.0 (18)	
Mentor Novice Writers		9
Learn from Experienced Professionals		5
Enhanced Vita with Less Work		4
Other Professional Development		2

Note: The "Other" category of responses represents responses that could be classified into a given main grouping (such as Professional Development, Collaboration, etc.), but could not be determined to fit within one of the sub-categories for that grouping.

¹ Numbers in parentheses indicate the number of respondents out of 60 who provided a response that fit within a main grouping, e.g., 18 respondents indicated that some aspect of "Professional Development" was used to determine coauthorship.

² This column is a simple count of the number of times a specific reason was given for recognition of coauthorship. This column may sum to more than 60 since multiple reasons were often listed by each respondent.

When asked of the benefits of coauthored publications, 65% of respondents stated that coauthored publications enhanced the quality of the written work (e.g., provides diversity of perspectives, allows for immediate peer review, demonstrates clearer thinking and writing), 42% noted the division of labor (i.e., synthesis of specialist skills, shared responsibility), 38% indicated enjoyment from collaboration (e.g., enjoy collaborating with colleagues, builds community among academics, sharing of ideas), and 30% stated that coauthored works offer professional development opportunities (e.g., enables one to mentor novice writers). These results are presented in Table 2.

Finally, the responses concerning the perceived benefits of single authorship are summarized in Table 3. Respondents noted the benefits of single authorship as the following: 48% stated that one individual takes all responsibility (and blame) for the work and shows that the individual is able to work independently; 42% wrote that single-authored work enables one to control ideas, content, and process of the study; 27% noted that single-authored publications are better for administrative review purposes (e.g., tenure and promotion considerations); and 25% enjoyed working independently because it facilitates development of the written work (i.e., it is faster, easier, allows one to work on one's timetable, and is more focused).

Table 3: Perceived Benefits of Single Authored Publications

	Percentage of Respondents ¹	Number of Times Category Referenced ²
All Responsibility/Credit/Blame to Single Author	48.3 (29)	
Shows One Can Work Independently		10
Self-promotion		4
Other All Responsibility/Credit/Blame to Single Author		15
Control of Ideas/Content/Process	41.7 (25)	25
Administrative Review	26.7 (16)	
Tenure and Promotion Committees Prefer Single Authored Work		12
Publication Held in Higher Regard		3
Other Administrative Review		4
Facilitates Development of Paper	25.0 (15)	
Own Timetable		6
Easier		5
Faster		4
More Focused		4
Other Facilitates Development of Paper		5

Note: The "Other" category of responses represents responses that could be classified into a given main grouping (such as Administrative Review, etc.), but could not be determined to fit within one of the sub-categories for that grouping.

¹ Numbers in parentheses indicate the number of respondents out of 60 who provided a response that fit within a main grouping, e.g., 16 respondents indicated that some aspect of "Administrative Review" was important to single author publications.

² This column is a simple count of the number of times a specific reason was given for recognition of coauthorship. This column may sum to more than 60 since multiple reasons were often listed by each respondent.

Conclusion

The findings of this study show that contribution amount (e.g., writing various drafts, general level of work expended) and idea origination are the two most commonly used factors in determining name placement by the sample of authors surveyed. These results support Winston's (1985) model of authorship order. His top two activities, in terms of points awarded for determining authorship, are idea conceptualization and crafting the first draft of the manuscript. The findings of this study also support the logic implied in the authorship evaluation policy held at many universities, i.e., that differential weighting is given for order of authorship credit (with first author receiving more credit). The evidence from this study suggests that often the lead authors have made the more significant contribution to the publication, therefore policies of differential weighting employed at some universities for awarding more credit for lead authors appear warranted to some degree.

However, for a number of authors contacted in this study, name placement was determined by factors other than contribution amount or idea origination. For example, seniority, need (for tenure and promotion considerations), and mechanical decisions (e.g., alphabetical order) often played a role in shaping byline credits. The results obtained here are similar to those reported by Hart (2000) in his study of academic librarian scholarship, so there appears to be consistency across disciplines and this provides some validity to the findings obtained in the present study. The results of this study also allow us to understand better the parameters affecting name placement decisions for coauthors. For example, second, third, or lower ranked authorship does not necessarily mean a lesser role in the development of the publication, and this is important information for individuals conducting reviews for tenure, promotion, and merit decisions. Administrative policies that require explanation of roles undertaken for publications (e.g., University of Canberra, 2004) may prove important in some instances since these policies allow individuals to explain the extent of their involvement, which may be very extensive, in publications in which they received second, third, or lower authorship credit. Certainly such policies are to be recommended when evaluating scholarship and assigning credit.

Although most authors appear to be aware that the reward system in higher education clearly advantages the single author, our respondents tended to engage frequently (68% of the publications) in coauthored endeavors. This finding might be explained by the perceived benefits derived from collaborative work as indicated by our respondents. The most frequently cited benefits of engaging in collaborative publications include enhancing the quality of work and ideas, an efficient division of labor, collaboration and working with colleagues (building collegiality), and professional development (e.g., mentoring). The general categories listed here, and the specific sub-categories found within Table 2, show remarkable consistency to the findings in other disciplines as noted in the works of Isenberg et al. (1987), Gibelman and Gelman (2000), Tompkins et al. (1987), and Hart (2000). This consistency further validates the results obtained here.

In addition to benefits for working collaboratively, the benefits of working alone were also examined. The two most prominent benefits cited were the ability to control the process (i.e., ideas, timeline, etc.) and to receive credit/responsibility for the work published. Certainly sole authorship means more recognition for the author than would be

afforded by coauthored publications, and rewards that may go beyond tenure and promotion (e.g., consulting and conferencing opportunities). Of course, as some respondents explained, having greater credit/responsibility from solo-publications may also be a liability should the published work later be discredited. In that case, one does not have a convenient colleague with which to share the blame. Finally, this study led us to devise categories for the reasoning used to determine name placement as well as categories regarding the benefits of coauthored and single authored publications. These categories may serve as useful guides in future research and in helping scholars consider collaboration.

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