

STUDENT-FACULTY JOINT-AUTHORSHIP: MENTORSHIP IN PUBLICATION

Suzan Banoub-Baddour and Lan T. Gien

As nurses pursue knowledge and their research becomes increasingly complex and sophisticated, collaboration among nurses with various kinds of expertise becomes a necessity. This trend is clearly reflected in the multi-authored articles that are published in many nursing research journals. Brown, Tanner, and Padrick (1984) reported an increase in the percentage of such articles, from 7% in 1952-53 to 40% in 1980.

Collaborative research and resulting multiple authorship have usually developed among colleagues from within the nursing community and from other disciplines. This joint-authorship process has been defined by Nehring and Durham (1986) as "collaboration between two or more persons with a common goal of producing a published professional journal article" (p. 15). While the issue of co-authorship among colleagues has received some attention in the literature, the role of this process in guiding or mentoring students to meet the demands of their future working world has not received much emphasis.

In this paper, we will propose a concept of student-faculty joint-authorship, outlining some advantages for both the faculty mentor and the students. As well, we will explore the potential problems of such joint-authorship and its implications. Finally, based on the literature review, on the results of a small, informal survey of Canadian faculty members, and on our own personal experiences, we will discuss principles for assigning credits and suggest guidelines to deal with those problems.

Advantages of joint-authorship among faculty and students

Nursing graduates often find themselves in positions that demand frequent publications and involvement in scholarly works as part of the requirements for their professional advancement. Furthermore, with increasing emphasis on interdisciplinary work as one of the criteria for receiving research grants, the new graduates are often ill-prepared for this collaborative process. This is

Suzan Banoub-Baddour, R.N., D.N.Sc. and Lan T. Gien, R.N., Ph.D. are both Associate Professors in the School of Nursing, at Memorial University of Newfoundland, in St. John's.

mainly because of the graduates' lack of exposure to the joint-authorship process, coupled with their often limited understanding of the etiquette of assigning credits in publication. Thus, graduate nursing programs should make stronger commitment to help students meet this reality in their future working world. This objective could be partially met by encouraging co-authorship between students and faculty in papers arising from a thesis or other scholarly work. Collaboration would not only provide students the needed mentorship in publication and rightful recognition for all contributions, but would also improve the scholarly productivity of all involved. Faculty members, especially those directly involved in graduate education, would have opportunities to reconcile their teaching requirements with research and scholarly productivity by initiating joint-authorship processes with their students. Thus, the two functions of teaching and scholarly productivity would, indeed, be complementary, instead of just being convergent in principle and divergent in practice (Cameron, 1985; Tebbutt, 1973).

In contrast to most doctoral students, few master's candidates reach a level of conceptual clarity while writing their thesis proposals and final reports. It is those writing skills that Allen, Bower and Diekelmann (1989) believe must be improved in order to reach conceptual maturity. Just writing the thesis report, although a complex task, may not always provide sufficient learning experience. Graduate students are often reluctant, ill-prepared and unmotivated to publish their research, and poorly socialized about the importance of publishing and the etiquette of co-authorship. Therefore, writing for professional publication with the mentorship of a faculty joint-author and exposure to peer review is essential to a quality education. Co-authoring with a faculty supervisor, and with other thesis member(s) who have been closely involved, offers and sustains the much-needed motivation. Indeed, joint publishing with the faculty supervisor allows students to benefit from a mentorship experience that unfortunately has not been well developed, either in academic or in clinical nursing settings (Powell, Roskoski & Ostmo, 1979). More importantly, the inspiration offered by their teachers can get these graduates to be "research-minded" and later involved in clinical research (Ritchie, 1988).

Potential problems of joint-authorship

Despite many advantages, joint-authorship involves problems arising from differences in power base, personality, writing style, level of motivation and working pace. Other difficulties may arise from problems not anticipated at the beginning of the student-faculty contract (e.g. smaller sample size, poor reliability of instrument, inability to complete the project within a reasonable time-frame). As well, incorrect assignment of authorship credits has generated much discussion and therefore, will be discussed at length in this article.

The process whereby researchers "record officially their methods and results in the archives of science" (Downs, 1989, p.195) can occasionally lead to "irresponsible authorship" (Jackson, 1984, quoted in Huth, 1986a, p. 273). There have been, for instance, situations in which individuals listed among the authors were unaware that their names had been included or had not approved the submitted manuscript. In one case, each one of the two co-authors had independently submitted the manuscript to a different journal (Yankauer, 1987). Authorship has also sometimes been assigned for reasons of reciprocity or autocracy, rather than on the basis of real contribution. In other instance, persons who made major contributions to the work were not given recognition.

The editor of the *American Journal of Public Health* has complained that, "it is not always easy these days to know who is the author of a paper" (Yankauer, 1987 p.272). He points out that this may mislead both readers and members of tenure review committees; further, potential employers of graduating students may be misled in case of student-faculty collaborative research and joint publication.

More than just irresponsible authorship, the issue at hand is one of "intellectual property and research coordination" (Cameron, 1985, p.69). Although it is believed that ideas cannot be owned (Hanson, 1988), the thorny issue of intellectual property is, and has been, the focus of much debate among scholars. It has constituted the central theme of two workshops conducted during the 25th annual session of the Canadian Association of Graduate Schools, in 1985. The concept of intellectual property, according to Morin (1985, p. 13), stems mainly from the seventeenth-century conception of the individual as "essentially the sole proprietor" of his or her own person and capacities, and owing little if anything to society. Based on this concept, the proof of existence and originality of such intellectual property becomes vital. Inspired by the 1984 federal government's White Paper On Copyrights, entitled *From Gutenberg to Telidon* (Minister of Supply and Service Canada, 1984), Morin (1985) further discussed the elements of fixation and originality which the White Paper describes as the "two basic criteria for copyright protection" (p.5-6). Proof of existence for an intellectual property means that the creation or idea is being "fixed in material form", publicly visible and accessible. Originality does not refer, in this White Paper, to originality in thought but rather to "originality in expression and independence of effort".

Therefore, can most nursing master's students claim the right to be sole proprietor of publication arising from their thesis work? Does the professor who guides a student in a thesis research, or even invites student's participation in his or her own research, ultimately loose all claim to authorship in such publications? Faculty members who have made significant intellectual

contribution to a student's thesis should consider its "fixation in material form" by co-authoring it with that particular student. Furthermore, Kirkland (1989) suggests that, should the student fail to publish within 18 months of project completion, the professor also has the right to complete an article and submit it for publication - with the student as second author - provided, however, that the student agrees to this course when the project is initiated.

Various viewpoints regarding student-faculty joint-authorship issue

Some nursing professors consider it "unethical" for the faculty to expect any authorship credit in papers arising from theses (Gay, Lavender & McCard, 1987). Supporters of this view see the supervisor's assistance to students in the development of their research as the normal role of a teacher; as such, the contribution is recognized and rewarded with salary. They perceive the faculty member's role in thesis supervision, or in any related publication, as a mere teaching responsibility, possibly implying just "supervising" with minimal or no added creation, input or actual sharing of the faculty member's intellectual property.

Others argue that co-authorship is, in some instances, a normal expectation and, depending on his or her contribution in the mutual endeavor, even the right of the thesis supervisor. They argue that the faculty member's contribution to a student's thesis may vary widely. This is in accordance with the distinctions made by Leyerle (1985) between laboratory sciences and the humanities and social sciences. The style of supervision in these latter disciplines has been described as "hands-off," while it is identified in the laboratory sciences, as "hands-on" (p. 53). In research done in the laboratory sciences, the "graduate student typically works on one or more aspects of his/her supervisor's project and has steady direction and encouragement... The resulting research is published by co-authorship ... and time is of essence in every aspect of the work" (p. 51-52). However, in the humanities and social sciences the thesis topic may not be related to the professor's own research. In such cases co-authorship is not the rule.

We believe that nurse educators practice either the "hands-on" or the "hands-off" supervision styles: there are no universal rules. One single element would, in our view, legitimate student-faculty co-authorship in publications arising from the thesis: that is, that the faculty member's contribution to the student's thesis research conception and development has been significant. When it is deserved, acknowledging the faculty member's contribution by joint-authorship is vital, lest the students misrepresent themselves as being the sole authors responsible for all that an article represents.

Not surprisingly, the debate regarding student-faculty co-authorship has not yielded a common consensus across disciplines - not even within the

same discipline. As Rossner (1987) describes it, there are a number of local and institutional rules, some formal or informal, as well as many unspoken rules and beliefs that have never been ratified. The difficulty in formulating detailed guidelines to fit every possible situation of research collaboration has been described in the study by Werley and her colleagues (1981). In a national survey of 1,693 American nurses aimed at assessing their views on publication credit assignment, Werley and her team identified ten points of agreement which were summarized as possible guidelines for publication credit assignment. Three such points dealt with the professor-student co-authorship issue. Respondents included nurses from the American Academy of Nurses and the Council of Nurse Researchers, deans of nursing schools, authors, and nursing doctoral students. They agreed that a professor must make an important contribution to the student's work, if that professor were to be cited as a co-author. There was even an agreement over the time spent by the dissertation adviser in actual consultation with the student (more than 15 hours over a 16-month period) that would qualify the professor for co-authorship. Although we agree, in principle, with the time factor as one possible indicator of the faculty member's contribution to the student's work, we believe that there are additional elements that should be determined and agreed upon.

Faculty expectation of co-authorship with students - the Canadian context

We decided, in the Fall of 1988, to conduct a small opinion poll within our own university community. About ten coordinators of graduate studies in the various schools and departments were contacted. Despite the absence of a formal written policy, there was general consensus that faculty expected to be cited as co-authors if the degree of faculty's intellectual contribution warranted. Those who definitely expected co-authorship were mostly from science faculties. This seemed to arise from their experiences with their own thesis supervisors, and is consistent with the literature cited above. We did not, however, discuss with these coordinators their definitions of intellectual contribution.

The topic of intellectual contribution was addressed in a national mailed opinion poll conducted by Hardy at the end of 1988 (L.K. Hardy, personal communication, January 23, 1989). All deans or directors of the 11 Canadian schools of nursing with master's programs were sent a short questionnaire. The questions sought information on formal or informal policies regarding faculty co-authorship on publications arising out of the students' theses, and when and how the policy was conveyed to the students. As well, non-nursing faculty members at Memorial University who were involved in students' thesis committees were sent the same questionnaire.

A total of 15 responses were received (seven nursing deans and eight non-nursing faculty). Among the seven nursing schools that responded, only two

had policies regarding student-faculty co-authorship (one formal, the other informal). Three other schools had an "understanding" that co-authorship would occur, another felt it was a matter left between the student and supervisor and one school had yet to address the issue.

Of the eight responses received from the non-nursing faculty, six were in favour of co-authorship. Four of these further specified that a major contribution on the professor's part actually "deserved, if not demanded, co-authorship". One member referred to the guidelines of the *Publication Manual* of the American Psychological Association (1983).

It is evident from this small survey that no consensus on the student-faculty co-authorship issue exists, and that the nursing schools' commitment to providing mentorship in this process varies widely. It would be interesting to quantify the impact of such different levels of expectation on the scholarly productivity of graduates from various schools, and thus on the overall advancement of the Canadian nursing scientific enterprise. Further research is needed to address the need for mentorship in publications in graduate nursing education, and the resultant co-authorship dilemma. Moreover, sensitive qualitative and quantitative research is needed that will find ways to encourage students to speak openly about these issues, thus preventing possible misunderstanding and frustrations.

Recommended principles for student-faculty co-authorship

Because of different opinions and practices, it has been proposed that clearly defined criteria, accepted by all disciplines, are needed (Huth, 1986a, 1986b; Angell, 1986). At the present time, few disciplines appear to have fully developed guidelines for co-authorship. The American Psychological Association (1983), the Council of Biology Editors (1983), the American Chemical Society (1986), and the International Committee of Medical Journal Editors (1985), also known as the Vancouver group, all have published a set of statements either on "authorship" or on ethics of publication based on previously published opinions and guidelines.

Based on the literature review, on the results of the previously mentioned opinion polls and small survey, and on our own personal experiences, we have synthesized the following principles for student-faculty co-authorship. These principles could be applied to situations ranging from multi-disciplinary endeavors to group work within the same discipline. Based on these principles, each school, discipline or group can develop its own guidelines.

Principle 1. The faculty member and student should each have participated sufficiently in the work represented by the article to take public

responsibility for its content. Public responsibility means that an author can defend the content of the article, including the data, other evidence and the related conclusions.

Principle 2. The co-authorship must include three major contributions: conception or design of the work, analysis and interpretation of the data, or both; drafting the article or revising it for critically important content; and final approval of the version to be published.

Principle 3. Faculty who have made minor contributions to the article, are not co-authors, but must be named and their contribution described. Such minor contributions may include supportive functions (e.g. advice; critical review of the proposal, thesis or article or statistical help) and should, with permission, be acknowledged in footnotes. Technical assistance should be acknowledged separately (e.g. assistance in collecting data or modifying or structuring a computer program). A combination of minor contributions, however, may justify authorship (American Psychological Association, 1983).

Based on these principles, we recommend the following guidelines.

1. Students whose supervising professors make significant contributions should include the professor as second author when the manuscript is submitted for publication. A professor has the right to expect the student to publish the results of such work within a mutually-agreed time limit. A multi-staged time span may be proposed. For example, first draft to be completed within eight months following thesis submission, final manuscript submission within 16 months. Past such deadline, and with the student's informed consent, the professor may complete and submit the manuscript for publication, as the first author.

2. If committee members have made major contributions to the student's work, they also should be included as co-authors.

3. A written contract between the faculty member and the student should be made at the outset of the thesis or research project, to avoid misunderstanding about joint-authorship. The contract should allow modifications, as circumstances dictate: for example, in the case of a change in the thesis supervisor.

4. A copy of these principles and the underlying guidelines should be distributed to all graduate students on the first week of classes. Furthermore, graduate courses on research methods should include the discussion of these principles to familiarize students with customary practices.

Conclusion

The pressures to "publish or perish" are mounting, especially for university faculty members. The trend to multi-authorship is increasing. Graduate nursing schools have an obligation to provide mentorship for their students and to encourage student-faculty co-authorship as part of the socialization process. Greater commitment to joint publications would come from a more formal understanding of the expectations and the use of written guidelines and contracts.

Curriculum content of graduate research courses should include thorough discussion of the principles, as well as the etiquette, rights, obligations and ethics of assigning credits. Student-faculty co-authored publications will help disseminate the outcomes of nursing research, improve faculty and student creativity and scholarly productivity, generate nursing knowledge, and, most importantly, promote research in Nursing. We believe that formal co-authorship respects the rights and responsibilities of both faculty and student in the intellectual collaboration, and will benefit the entire nursing scientific enterprise.

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RÉSUMÉ

Co-rédaction étudiants et professeurs: publication et encadrement

Au fur et à mesure que les infirmiers approfondissent leurs connaissances et que leurs recherches deviennent de plus en plus fouillées et complexes, la collaboration s'impose entre praticiens de compétences différentes ou praticiens spécialisés dans des domaines différents.

Cette tendance se reflète nettement dans le nombre d'articles rédigés par plusieurs auteurs qui paraissent dans de nombreuses revues de sciences infirmières. Brown, Tanner et Padrick (1984) signalent que de 1952-53 à 1980, la proportion de ces articles est passée de 7 % à 40 %.

La recherche en collaboration et la co-rédaction d'articles se sont généralement développées entre infirmiers et entre infirmiers et spécialistes d'autres disciplines. Cette démarche fondée sur la concertation de plusieurs auteurs a été définie par Nehring et Durham (1986) comme étant une (p.15). Si la question de la co-rédaction a été abordée à quelques reprises dans la littérature, en revanche, le rôle de ce processus dans l'encadrement des étudiants que l'on entend préparer aux exigences professionnelles du milieu dans lequel ils évolueront n'a été qu'effleuré.

Dans le présent article, nous proposons le concept de co-rédaction par les professeurs et leurs étudiants et soulignons certains des avantages du système tant pour l'enseignant responsable que pour les étudiants. Par ailleurs, nous entendons explorer les problèmes éventuels que soulèvent la co-rédaction et les répercussions qu'elle peut avoir. Enfin, en nous appuyant sur un examen de la littérature pertinente, sur les résultats d'un petit sondage officieux mené auprès de professeurs canadiens et sur notre propre expérience, nous discutons des principes de fond pour l'établissement des unités de valeur et proposons des directives visant à faciliter la résolution de ces problèmes.