Department of Health and Human Performance
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Authorship of Published Work
(36 paragraphs)

Authorship of Published Work

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Preface

0.01 Practices regarding publication and authorship vary across disciplines. It is difficult and perhaps undesirable to attempt to impose a single set of policies on all disciplines.[1] It is, however, prudent for each discipline to offer a set of guidelines intended to inform its members about ethical practice concerning publication of scholarly documents.

0.02 Publication ethics require that all people who make significant intellectual contributions to a research report and accept public responsibility for its content should be listed as authors. Recently, collaborative research and other forces have resulted in different patterns of assignment of authorship than traditional practice. For example, in

[1] University of Alberta (1996).

some disciplines the senior scholar is listed last--suggesting that the last position on the list might indicate significant contribution rather than least--while in other disciplines the author who has made the greatest contribution is listed first. Some teams choose to list authors in alphabetical order.[2] Moreover, there are shifting perceptions of the value of author contribution based on location on the constructed hierarchy of author names and on the number of authors.[3] These varying patterns and perceptions of authorship have complicated understanding of author role.

0.03 The Department of Health and Human Performance presents the following reflections about best practices as a set of principles that are intended to inform its faculty, students and staff about ethical practice in publication.

Principles

Principle 1: Qualification for Assignment of Authorship

1.01 As indicated above, publication ethics require that all people who make significant intellectual contributions to a research report and accept responsibility for its content should be listed as authors. In addition, where there are agreed-upon differing degrees of contribution, principal authorship should accurately reflect the relative creative, scientific, or professional contributions of the individuals involved.[4]

1.02 Various academic and professional organizations have made recommendations regarding authorship requirements. The overarching principles that apply to the standards created by, among many examples, the International Committee of Medical Journal Editors (ICMJE), American Physical Society (APS), British Sociological Association (BSA), American Psychological Association (APA) and the National Institute of Health (NIH) require significant contribution in the following areas: (1) study conception and design, (2) data acquisition or processing, (3) analysis and interpretation of findings, and (4) drafting or writing substantial sections of the paper and/or critically revising the manuscript for important intellectual content.

1.03 It has been recommended that a person whose contribution does not warrant authorship be recognized in an "Acknowledgements" section of the manuscript.[5] For instance, the International Committee of Medical Journal Editors recommends that such roles as acquisition of funding or general supervision of the research group do not, each taken solely, constitute grounds for assigning authorship.[6]

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[2] Albert & Wager (2003).
[3] See Wren et al. (2007) for the following findings: In biomedical research, tendency to perceive first and last author positions as 'key' positions on a paper; shifting value based on number of authors.
[4] American Psychological Association (2010). Hereafter, APA (2010).
[5] Osborne & Holland (2009).
[6] International Committee of Medical Journal Editors (2009). Hereafter, ICMJE (2009).

1.04 It is suggested that all persons listed as authors grant approval of the final version of the manuscript to be published.[7]

Principle 2: Collaborative Research and Agreement on Roles that Lead to Assignment of Authorship

2.01 All paragraphs under Principle 1 apply to joint authorship resulting from collaborative research.

2.02 Determining authorship in collaborative projects should be a consideration early in the process. All researchers should come to agreement about expected relative contributions and author order. To do this researchers are encouraged to, collectively, decide tasks necessary for completing a project, assign roles, and specify tasks or combinations of tasks that warrant authorship.

2.03 Authorship order should be considered at the start of a project and should be re-assessed periodically whether or not the relative contribution of each researcher changes. Best practice also includes listing authors on each draft of a manuscript in order to preempt conflicts about author order at a later time.[8]

2.04 In collaborative work, such functions and roles as simple collection of data, acquisition of funding, institutional standing/position, clerical contribution, contribution of equipment, or general supervision of the research group alone should not be regarded as constituting authorship.[9] A director of a research laboratory should not expect to be an author listed on publications resulting from projects completed within her or his laboratory unless the director has contributed significantly to the research project.

Principle 3: Order of Authors

3.01 It is common practice to list, in descending order according to degree of contribution, authors who have made significant contribution to a paper (See Paragraph 1.02 above). As has been noted above, however, this convention varies from field to field.[10]

3.02 With regard to conference documents (e.g. abstracts, proceedings), it is required sometimes that the author whose name appears first be the author who presents the work at the conference.

3.03 It is recommended that a faculty, student or staff researcher follow acceptable practices or conventions of her or his field.

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[7] Osborne & Holland (2009).
[8] British Sociological Association (n.d.). Hereafter, BSA (n.d.).
[9] ICMJE (2009), Osborne & Holland (2009).
[10] APA (2010).

Principle 4: Credit for Authorship: Hierarchy and Weighting

4.01 Good ethical practice is expected of all faculty, staff or student researchers involved in the publication of scholarly work. It is expected that all persons listed as authors have made substantial creative and productive contributions to the publication. This expectation about qualification for authorship reflects a view held broadly across many disciplines. It is well reflected in the two following statements by the International Committee of Medical Journal Editors:

- *All persons designated as authors should qualify for authorship, and all those who qualify should be listed.*

- *Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.*

4.02 Given that the above conditions have already been met in terms of creative, productive and scientific contribution, the Department of Health and Human Performance recognizes all listed authors as deserving credit and, in an internal performance evaluation, does not award greater credit to one in a way that appears to diminish the effective contribution of others.

Principle 5: Faculty Member's Responsibility in Clarifying Author Role

5.01 In a situation where published work has been documented or submitted for internal evaluative purposes, the Department of Health and Human Performance ascribes responsibility to each faculty member to clearly communicate own contributions to a published paper that bears her or his name.

5.02 Where a hierarchy of contribution exists, it should be so indicated by the faculty member. Where authors have contributed equally, that should also be noted. A manuscript ~~submission~~ suggestion offered by the British Sociological Association is that in the case where it is agreed that all authors have contributed equally, that explanation could be indicated in a footnote included in the submitted manuscript and should thus appear in the published document.[11]

Principle 6: Faculty-Student Research or Project Collaboration

6.01 Two forms of faculty-student collaboration may be distinguished. In the first, a student collaborates with a faculty member on the latter's own research or project with intention of gaining instruction from the faculty member. Here, we suggest that, in case of a publication issuing from the collaboration and depending on extent of the student's role,

[11] BSA (n.d.)

the faculty member may assume lead authorship--if she or he so determines as appropriate--and invite the student to be a collaborating author.

6.02 In a second form of collaboration, a student collaborates with a faculty member in order to advance the student's own research and professional goals. Directed or independent studies, theses and dissertations fall in this category. In this instance, the faculty member should enter the relationship in a *supportive or instructive* creative and productive capacity, the significant intent being to lead the student to a successful accomplishment of that student's goal.

6.03 In both cases described in Paragraphs 6.01 and 6.02 above, an understanding of lead investigative-supportive roles and tasks should be established early and should be consistently reaffirmed throughout the project. A consistent understanding of roles will be useful in assigning authorship claims and order if a manuscript is to be submitted for publication.

Principle 7: Author Order in Faculty-Student Collaboration

7.01 On the surface, an academic supervisor appears to have an advantage in a faculty-student collaboration. When a faculty member initiates a project and invites a student to participate, that faculty member generally stands to occupy the lead role. When a student approaches a faculty member with a research concept, however, that faculty member also generally ends up playing a leadership role in guiding the student through the project. In the latter case, especially, it should not be assumed that the faculty member will automatically be designated as lead author. The student initiator should be allowed to continue to play a prominent role that will hopefully lead to first author position. The faculty member should steadfastly urge the student towards dedication and perseverance.[12]

7.02 In a student-driven project, a supervisor should not automatically be granted authorship. To earn that credit, the supervisor should have made a significant contribution as spelled out in Paragraph 1.02 above.

7.03 When a published article is an outcome of a student's thesis,[13] primary consideration should be to award first author role to the student. This is based on the reasonable assumption that the student's contribution merits a first author position.[14] Generally, it is the expectation that a supervisor of a thesis or dissertation will make necessary effort to hold the student accountable to playing a leading role in the process of successfully completing the thesis.

[12] This argument has been laid out by Louw & Fouche (1999).
[13] Thesis, as used throughout this document, is intended to also refer to a dissertation.
[14] Louw & Fouche (1999).

7.04 When a student's contribution and a faculty member's contribution are generally equal in a project that leads to a publication, it is suggested that the student be awarded first author position.[15]

Principle 8: Corresponding Author in Faculty-Student Collaboration

8.01 It is suggested that in a situation where the first author of a work accepted to be published is a student or fellow, the corresponding author should be an experienced researcher with supervisory responsibilities.[16]

Principle 9: Contracting in Faculty-Student Collaboration

9.01 Faculty members are encouraged to establish an agreed-upon and written contract in a faculty-student collaboration.

9.02 The contract should be reviewed regularly during course of the project.

9.03 It is suggested that the contract contain descriptions of roles, tasks assigned to person in each role, author order and expectations that will enable maintaining one's place in the order of authors.

9.04 It is suggested that a faculty supervisor take the lead in drafting, reiterating and maintaining terms of the contract. The terms, however, should be collectively decided.[17]

9.05 In developing terms of the contract, the faculty supervisor should make it clear to the student that if other role players (e.g. co-supervisors, methodologists) are involved, they might demand recognition as co-authors. Given that, it is encouraged that all role-players be invited to participate in formulating the contract and it is recommended that every role-player sign the contract. All those who are eligible for an author role should have met the conditions stated in Paragraph 1.02 above.[18]

9.06 During development of the contract, it should be explained to the student that all research data will become property of the institution. The faculty supervisor will remain as steward of the data, who will make determination of who and under what circumstances other people might be allowed to gain access to the data.[19]

Principle 10: Fallow Student Data

(*Cross-referenced with Department of Health and Human Performance: Best Practices*

[15] Louw & Fouche (1999).
[16] Medical Physics (2011).
[17] Louw & Fouche (1999).
[18] Louw & Fouche (1999).
[19] Roig (2007).

Compendium 1.02: Thesis Mentorship)

10.01 If a student who has agreed to submit a manuscript for publication based on data gathered during a thesis or research study under supervision of a faculty member does not make adequate progress towards completing the manuscript after a given time frame (see Paragraph 10.02 below), the faculty supervisor may take charge of developing and submitting the manuscript for publication. Based on the amount of contribution the student has made to development of the modified or rewritten manuscript (including original research conceptualization, research design, data collection, data analysis and writing) the faculty member should include the student as first or secondary author.

10.02 The time frame for the faculty member to assume responsibility is recommended to be at 6 months. The six-month countdown begins on the date that the thesis student successfully defends her or his thesis (in the case of a thesis student) or the day the faculty supervisor and student agreed--a signed contract is suggested--to develop and prepare a manuscript for publication (in the case of a research project). This window allows for the data to still be relevant and conditions of the problem being investigated to be relatively fresh in mind such that there will be little or no need to have to go back and re-learn the issues and surrounding conditions.

10.03 An exception to the 6-month window before a faculty member takes charge of preparing the manuscript--described in Paragraphs 10.02 above--should be granted if a student has voluntarily and explicitly declared that she or has no interest in generating a manuscript and, meanwhile, the faculty member deems the work to be of marked import or value because of its potential benefit to the discipline, profession or public. In such a case, it is suggested that the faculty member, who serves as steward of the data and live link to the discipline and profession, may act prudently to make the work publicly available through publication.

10.04 In the two exceptional cases described in Paragraphs 10.01-10.02 (the student has not made "good faith" effort to have a manuscript completed) and Paragraph 10.03 (the student has voluntarily and explicitly renounced interest in generating a manuscript), decision about author order should still be carefully considered. If a significant amount of extra work is involved in preparing the manuscript for publication, the faculty member may assign authorship roles as deemed appropriate. In both cases, however, it is suggested that the original student be invited to be included as an author appropriately placed in the order of authors.

References

Albert, T., & Wager, E. (2003). How to handle authorship disputes: A guide for new researchers. *The COPE Report*. Retrieved from http://publicationethics.org/files/2003pdf12.pdf

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

British Sociological Society (n.d.*). British Sociological Association: Authorship guidelines for academic papers.* Retrieved from http://www.britsoc.co.uk/publications/Authorship+Guidelines+Academic+Papers.htm

Louw, D. A., & Fouche, J. B. (1999). Authorship credit in supervisor-student collaboration: Assessing the dilemma in psychology. *South African Journal of Psychology, 29*, 145-148.

International Committee of Medical Journal Editors (2009). *Uniform requirements for manuscripts submitted to biomedical journals: Ethical considerations in the conduct and reporting of research: Authorship and contributorship*. Retrieved from http://icmje.org/ethical_1author.html

Medical Physics (2011). *New instructions to authors (as of 12/15/2011)*. Retrieved from http://www.medphys.org/

Osborne, J.W., & Holland, A.H. (2009). What is authorship, and what should it be? A survey of prominent guidelines for determining authorship in scientific publications. *Practical Assessment, Research and Evaluation, 14*(15), 1-19.

Roig, M. (2007). *A student-faculty research agreement*. Retrieved from http://teachpsych.org/otrp/resources/index.php?category=Research%20and%20Teaching

University of Alberta (1996). Guidelines for authorship. In University of Alberta, Faculty of Graduate Studies and Research, *Graduate program manual*. Retrieved from http://www.gradstudies.ualberta.ca/gradmanual/10.2.html

Wren, J. D., Kozak, K. Z., Johnson, K. R., Deakyne, S. J., Schilling, L. M., & Dellavalle, R. P. (2007). The write position: A survey of perceived contributions to papers based on byline position and number of authors. *EMBO Reports, 8*, 988-991. [Retrieved from http://www.nature.com/embor/journal/v8/n11/full/7401095.html]

Appendices

Appendix 1: Thesis, Culminating Project and Research Agreement
Appendix 2: Authorship Determination Rating Guide

Appendix 1: Thesis and Research Agreement

Thesis and Research Agreement

The contract below has been adapted from the following sources, listed in order of amount of material adapted from each original document:

Roig, M. (2007). *A student-faculty research agreement*. Retrieved from http://teachpsych.org/otrp/resources/index.php?category=Research%20and%20Teaching

Housman, J. (2011). *HED 4347-5347 - Independent Study in Health and Wellness Promotion Contract*. Unpublished document.

The purpose of this document is to formalize the terms of research collaborations between students and their mentor for the project described below. The **Thesis and Research Agreement** addresses some of the specific tasks, responsibilities, and other relevant issues associated with the conduct of scientific research (e.g., research ethics, data ownership, authorship, etc.). Please read and complete this form.

Title of Proposed Study: _____

Student Identification

Student Name:	Student ID#:
Student Phone:	Student e-mail
Student Major:	Student Minor:

Course Identification

Course Number:
Course Name:
Course Description (e.g. from catalog):

Names of other students involved in project (each student should complete a separate Student-Faculty Agreement):
_____:_____

_____

Name of Faculty Member or Project Supervisor: _____

Adequate description of research project (to be completed by the student):

To be completed by the supervising faculty member.

Independent study objectives:

Required textbooks, readings, or other materials:

Method of evaluation:

Agreement Statement

I, _____ recognize that scientific research is a labor-intensive enterprise that demands a high level of personal commitment, time, and effort. This is particularly true when the research project is being undertaken for academic credit or a professional goal (e.g. publication) and the project must be completed within a set time limit. By signing this document, I promise to dedicate the necessary time and effort to complete this project in accordance to a time and/or schedule agreed upon. I have reviewed our institution's academic integrity policies and I am fully aware of the seriousness of the issues and of the consequences of violating the policies. I will also uphold the principles of scientific integrity as laid out by the university and/or an identified relevant professional body (e.g. the APA). I recognize that any form of data falsification, data fabrication, or plagiarism in the conduct of research is an academically and professionally dishonest act. If this research project involves the recruitment and testing of human subjects, I agree to complete the university's approved course on protection of human subjects before commencing work on the project. Similarly, if the project involves using animals as subjects, I agree to take a tutorial on the use of animals as research subjects.

I shall also abide by the stipulation that all research data (e.g., questionnaires, data files, records, observations) from this project become the property of the institution (i.e. university) and will be

retained by the faculty member, who will determine who and under what circumstances others may have access to such data. I also understand that authorship of any resulting conference presentation or journal article will depend on the extent of my contributions to this project as agreed upon with my faculty supervisor.

Student's signature_____Date_____

Faculty member's or supervising
investigator's signature _____Date_____

Appendix 2: Authorship Determination Rating Guide

The document below has been retrieved (and partially reformatted) from the following source:

Roig, M. (2007). *A student-faculty research agreement*. Retrieved from http://teachpsych.org/otrp/resources/index.php?category=Research%20and%20Teaching

Authorship Determination Rating Guide

Extent of Student Contribution to the Project (to be completed by faculty mentor)

Please circle the item that best describes the extent to which each of the following statements describes the student's performance in the project. Leave blank if not applicable.

Introduction

- Conceptualized the study/origin of idea/hypothesis/variables

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Carried out the literature search (identified relevant literature, retrieved articles, summarized articles)

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

Method

- Made contributions to the research design

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Constructed stimulus materials/Set up-calibrated study equipment/Carried out ratings

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

Data collection

- Recruited and consented subjects

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Ran subjects/Recorded observations

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Debriefed subjects

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

Data analyses

- Entered data in database

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Checked data for accuracy

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Contributed to data analysis decisions

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Carried out data analyses

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

Writing

- Wrote Introduction and literature review

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Wrote Methods section

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Wrote Results section

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Wrote Discussion section

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

Presentation

- Constructed Poster

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Made presentation

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

Other contributions:

- Identified potential confounds

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Identified possible directions for future research

1	2	3	4	5
Not at all	To a little extent	To a moderate extent	To a great extent	To a very great extent

- Organizational Skills

1	2	3	4	5
Very poor	Poor	Fair	Good	Very Good

- Dedication to the project

1	2	3	4	5
Very poor	Poor	Fair	Good	Very Good

- Other 1:_____

1	2	3	4	5
_____	_____	_____	_____	_____

- Other 2:_____

1	2	3	4	5
_____	_____	_____	_____	_____

Additional Notes: _____

_____

_____

_____