Asian Council of Science Editors

Webinar 104

From Research to Manuscript: The Role of Scientific Writing in Institutional Contexts

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Topics

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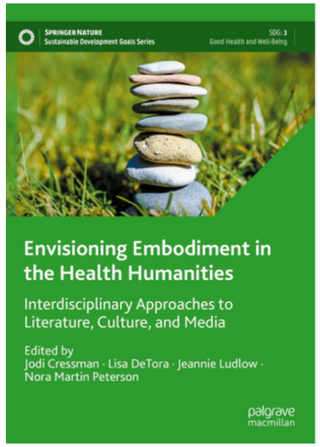
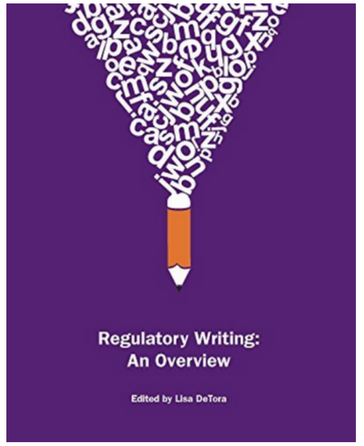
- Role of scientific writing in institutional contexts
- Key qualities of effective writing
- Ethical considerations and collaboration strategies
- Common challenges and tips for improvement

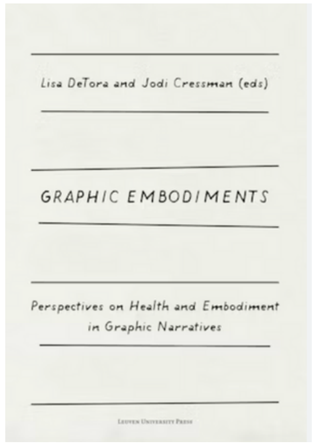
Brief Introduction

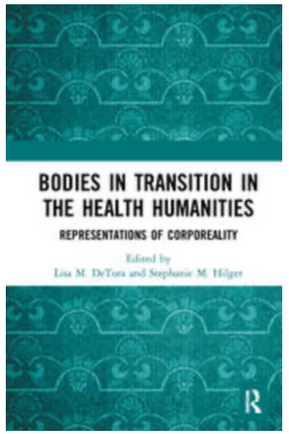
- PhD in English (interdisciplinary studies)
- MS in Clinical Bioethics
- Trained in Narrative Medicine

- Writing contexts:
  - Medicine, bench science, bioethics, publication ethics
  - Medical humanities, health communication, rhetorics of science, health and medicine, technical communication
  - Women's studies, comics studies, science fiction studies, comparative literature







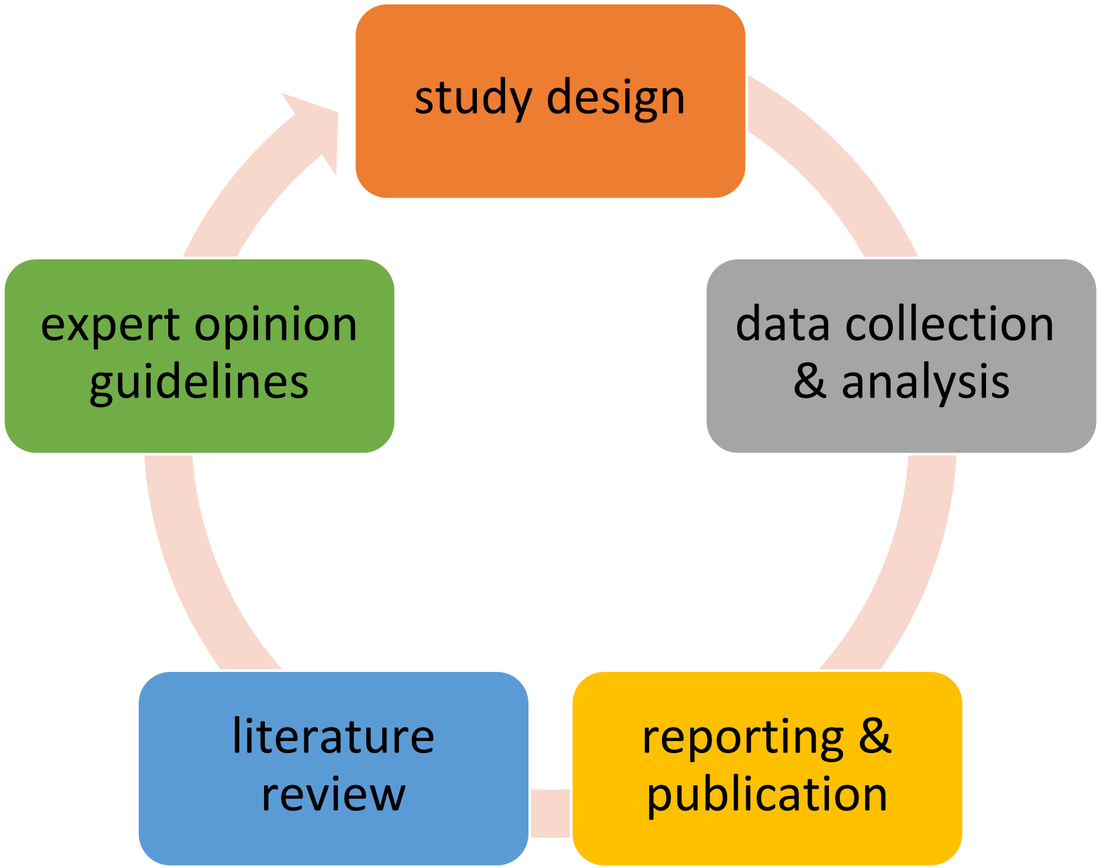


Role of Scientific Writing in Institutional Contexts

- Design and present research data
- Meet regulatory requirements
- Share insights and information
- Build credibility
- Develop a ‘discourse community’
- Reinforce professional values and ethics

*Swales 2017, Composition Forum; ICMJE Guidelines, CSE Guidelines; ICH

Uses of Scientific Writing



- Research
  - design, data collection, reporting, publications
- Teaching
  - reports, data interpretation, literature review
- Communication
  - data sharing, science and health communication, technical communication, expert reviews, editorials, guidelines

Key Qualities of Effective Writing

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Scientific rigor- The science is high quality

- Accuracy, high quality research design and analytical and other methods

Following genre conventions – The text is well presented

- Reports, publications, guidelines, and literature reviews follow recognized rules
- Logical organization and presentation meets audience needs

Clarity – The information is clear to the reader

- Tables, figures, and text are complete and well-organized
- Language is clear and easily readable

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The reader should understand the work **on the first attempt**

Plain language principle

Ethical Considerations

- Research ethics
  - Research follows established ethical principles like Declaration of Helsinki, Good Practice (GLP, GCP, GMP)
- Writing/academic ethics
  - Writing is transparent, presented honestly, with credit for contributions
  - Eligible authors are included
- Publication ethics
  - Follow journal guidelines
  - Avoid plagiarism, ghost- or guest authorship
  - Disclose competing interests and funding
  - Disclose use of AI

Ethics

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Ethical writing is based on ethical research, honestly presented, with full credit for all work performed and disclosure of funding

Collaboration Strategies

- Identify authors and collaborators early in the research process
  - Use tools like ICMJE or CSE author guidelines or CRediT taxonomy
- Build expectations based on deliverables
  - Report versus publication
  - Identify roles and responsibilities
  - Clarify the message and scientific meaning
  - Ensure that all authors and contributors understand the process (Communication)
- Present clear timelines
- Listen
- Build consensus through intellectual exchan guidance

Process steps

Convene writing team- bring people together
Identify roles and responsibilities
Review data and deliverables with the team
Agree to process and tracking methods
Draft the work
Allow authors to review and comment (remind them of agreed-on roles)
Build consensus if there are misalignments
Maintain communication –send polite reminders

Common Challenges and Tips (1)

- Timelines and lateness
  - Notify collaborators early
  - Use calendar to block time
  - Send automatic notifications
- Communication
  - Schedule consensus meetings
  - Listen to understand
  - Invite explanation of perspectives
  - Be flexible

Common Challenges and Tips (2)

- Unclear roles and responsibilities
  - Use a RACI diagram to describe who is responsible, accountable, consulted, and informed for each task
  - Define roles early
  - Include reminders of roles every time you ask for input or feedback
- Authorship attribution
  - Be specific about the authorship standard (usually by journal)
  - Review rules and acknowledge that different standards exist
  - Use CRediT taxonomy
- Journal or agency standards
  - Include a link in any emails
  - Explain any specific requirements that differ from usual practice

Final Challenges

- Communicating to lay audiences
  - Use plain language principles
  - Find readers who are not experts in the scientific area to review work
- AI
  - Refer to guidelines for acceptable usage
  - Protect data (don't use open source AI for confidential data)
  - Always disclose any use of AI
    - scientific method
    - data analysis
    - editing/grammar software

References

- Andrade, E. L., Bento, A. F., Cavalli, J., Oliveira, S. K., Schwanke, R. C., Siqueira, J. M., Freitas, C. S., Marcon, R., & Calixto, J. B. (2016). Non-clinical studies in the process of new drug development - Part II: Good laboratory practice, metabolism, pharmacokinetics, safety and dose translation to clinical studies. Brazilian journal of medical and biological research = Revista brasileira de pesquisas medicas e biologica, 49(12), e5646. https://doi.org/10.1590/1414-431X20165646
- Authorship and Authorship Responsibilities. Council of Science Edotors: https://www.councilscienceeditors.org/2-2-authorship-and-authorship-responsibilities
- Barroga, E., & Matanguihan, G. J. (2021). Creating Logical Flow When Writing Scientific Articles. Journal of Korean medical science, 36(40), e275. https://doi.org/10.3346/jkms.2021.36.e275
- Contributor Roles Taxonomy (CRediT): https://credit.niso.org
- Council of science editors (CSE): https://www.councilscienceeditors.org/recommendations-for-promoting-integrity-in-scientific-journal-publications

References (2)

- Defining the Role of Authors and Contributors. International Committee of Medical Journal Editors: https://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html
- DeTora, L. M., Toroser, D., Sykes, A., Vanderlinden, C., Plunkett, F. J., Lane, T., Hanekamp, E., Dormer, L., DiBiasi, F., Bridges, D., Baltzer, L., & Citrome, L. (2022). Good Publication Practice (GPP) Guidelines for Company-Sponsored Biomedical Research: 2022 Update. Annals of internal medicine, 175(9), 1298–1304. https://doi.org/10.7326/M22-1460
- Gasparyan, A. Y., Yessirkepov, M., Voronov, A. A., Gorin, S. V., Koroleva, A. M., & Kitas, G. D. (2016). Statement on Publication Ethics for Editors and Publishers. Journal of Korean medical science, 31(9), 1351–1354. https://doi.org/10.3346/jkms.2016.31.9.1351
- Good Clinical Practice. ICH Website: https://database.ich.org/sites/default/files/ICH_E6%28R3%29_Step4_FinalGuideline_2025_0106.pdf

References (3)

- Gouveia, B. G., Rijo, P., Gonçalo, T. S., & Reis, C. P. (2015). Good manufacturing practices for medicinal products for human use. Journal of pharmacy & bioallied sciences, 7(2), 87–96. https://doi.org/10.4103/0975-7406.154424
- Guth, B. D., & Pugsley, M. K. (2017). GLP in safety pharmacology studies: Report card after 15years. Journal of pharmacological and toxicological methods, 87, 24–26. https://doi.org/10.1016/j.vascn.2017.02.016
- Holstein, S. E., Mickley Steinmetz, K. R., & Miles, J. D. (2015). Teaching science writing in an introductory lab course. Journal of undergraduate neuroscience education : JUNE : a publication of FUN, Faculty for Undergraduate Neuroscience, 13(2), A101–A109.
- International Committee of Medical Journal Editors (ICMJE) Guidelines: https://www.icmje.org
- International Council on Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH): https://www.ich.org/page/ich-guidelines
- Lingard L. (2021). Collaborative writing: Strategies and activities for writing productively together. Perspectives on medical education, 10(3), 163–166. https://doi.org/10.1007/s40037-021-00668-7

References (4)

- Minor, S., & Stumbar, S. (2022). Writing Collaboratively in Medical Education. Medical science educator, 32(2), 517–522. https://doi.org/10.1007/s40670-022-01503-2
- NY.gov. Plain language: Why it matters and how to use it: https://www.ny.gov/plain-language-what-it-why-it-matters-and-how-use-it
- Oliver, S.K., Fergus, C.E., Skaff, N. K., Wagner, T., Tan, P-N., Cheruvelil, K.S., Soranno, P.A. (2018). Strategies for effective collaborative manuscript development in interdisciplinary science teams. Ecosphere. https://doi.org/10.1002/ecs2.2206
- Plain Language Europe: https://www.plainlanguageeurope.com/en
- Swales, J. M. (2016) “Reflections on the concept of discourse community,” ASp, 69, pp. 7 – 19. Available at: https://doi.org/10.4000/asp.4774.
- World Medical Association. Declaration of Helsinki: https://www.wma.net/policies-post/wma-declaration-of-helsinki/

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Thank You!

Questions

- What are the most common mistakes you see researchers make when writing for institutional audiences, and how can they be avoided?
- How can early-career researchers balance institutional requirements with maintaining their own voice and style in writing?
- In collaborative projects, what are effective strategies to ensure consistent writing quality across multiple contributors?
- Could you share examples of ethical dilemmas in scientific writing and how they were successfully addressed?
- How can scientists working in non-English-speaking institutions improve the clarity and global reach of their manuscripts?
- What practical steps can researchers take to handle disagreements over authorship or contribution in institutional settings?

What are the most common mistakes you see researchers make when writing for institutional audiences and how can they be avoided?

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- Not planning ahead
- Things to plan for:
  - Audience
  - Document requirements (check guidelines)
  - Author availability
  - Roles and responsibilities
  - Data availability
  - How to build consensus if there is a disagreement
  - Backup journals
  - Funding for open access fees

How can early-career researchers balance institutional requirements with maintaining their own voice and style in writing?

- That depends on the document and audience
- Often, authors should avoid trying to develop a unique voice or style in scientific writing because the aim is to maintain consistency with the existing literature –including language use– and to meet requirements for readers and reviewers
- Personal style is more appropriate in editorials or reviews, which are usually invited– but some journals and blogs have a style for that also

In collaborative projects, what are effective strategies to ensure consistent writing quality across multiple contributors?

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- Assign a lead author (or writer) to ensure the document reads consistently and takes editorial responsibility
- Make sure there is a clear decision-maker for the document
- Use templates and follow directions/guidance
- Be flexible—not everyone is a good writer. Sometimes experts need to provide high-level bullet points and get help for crafting text.

Could you share examples of ethical dilemmas in scientific writing and how they were successfully addressed?

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- Ethical dilemmas can be related to research, analysis or writing
  - data integrity versus authorship, for example
- Planning is needed
- Consult ethical guidelines early and often
- Ensure that there is clear leadership who are aligned with ethical requirements

How can scientists working in non-English-speaking institutions improve the clarity and global reach of their manuscripts?

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- Do high-quality research
- Ensure good quality data analysis
- Seek out help with writing and data visualization
  - Follow guidelines
  - Read samples from the target journal
- Make sure grant applications include funding for writing help and publication open access fees

What practical steps can researchers take to handle disagreements over authorship or contribution in institutional settings?

- Plan ahead
- Set roles and responsibilities
- Follow authorship guidelines (remember these can vary by journal)
- Use the CRediT taxonomy to ensure all important areas are covered

Backup: CRediT Taxonomy

- Conceptualization
- Data curation
- Formal analysis
- Funding acquisition
- Investigation
- Methodology
- Project administration
- Resources
- Software
- Supervision
- Validation
- Visualization
- Writing – original draft
- Writing – review & editing

Backup: RACI Diagram

Backup: Discourse Communities

- Defined by John Swales
- Groups that work in the same field and exchange ideas at meetings, conferences, or the same journals
- Can also refer to in-person communities

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Thank You!