

Writing a mathematics or science education academic article

7,5 ECTS credits

Course code: UM014FN
Valid from: Autumn 2015
Approved: 2015 09 15

Lecturers: John Airey and Paola Valero
Time: 18-19 February and 28-29 April, 2020
Place: MND, Stockholm University
Max. participants: 20
Deadline for registration: 24 January 2020

Prerequisites:

When registration is confirmed, the course participants should submit a draft paper they want to work with under the workshop sessions during the course. The paper should be maximum 10 pages (or around 3.000 words). The submission should be in the adequate Athena site for the course which will be informed with the registration. The deadline for submission is the 7th of February 2020.

Learning objectives:

This course focuses on the writing of interpretive papers in order to provide students with tools to improve their efforts in writing good, publishable papers. The participants will gain competence in interpretive paper writing by learning how to:

- *Do a text deconstruction*: Analysis of good paper structure and organization. The analysis focuses on the use of textual resources as well as on the logical and argumentative structure of the text.
- *Understand different types of research papers*: Descriptive and argumentative research texts. Working with resources for argumentation (e.g., empirical material, arguing with literature).

- *Deal with the review process*: A discussion of review processes in journals is provided and concrete examples are presented, on how to deal with reviews.
- *Reconstructing texts*: Improving manuscripts and tightening for publication.

Teaching methods:

The course will run with at least two lecturers being present for the whole duration of the course. This provides the students with experiences of senior researchers in different areas, as well as attention to their difficulties. Papers in progress by the lecturers are used as examples during the course. The workshop follows a format where many hands-on sessions will be facilitated for the students to have a ground for further discussion and reflection on their own written production. The workshop combines short presentations by the lecturers, individual work, group discussions, and sessions of feedback to their writing by peer students and lecturers. Participants are also requested to read some basic material as preparation.

Criteria for assessment:

The course will be assessed with pass/non-pass depending on:

- Attendance to the whole course.
- Active participation in the workshop process of the participant's own paper.
- Oral presentation related to the process of writing and final submission of reworked paper.

Course description:

As more students engage in PhD thesis as a collection of papers, learning to construct research texts that meet high publication standards is of extreme relevance for the success of the PhD studies. Furthermore, a growing number of students at the Faculty work on studies that rely on qualitative and interpretive methodologies and analysis from the social and human sciences to investigate issues in mathematics, science and technology. More often than not students learn to write using a "trial and error" method. Indeed, writing successful research papers takes lots of effort even for experienced researchers. The process of writing at the level that paper-based dissertations demand is not a "natural" skill that research students master; it is in fact one of the most demanding competences that a researcher develops as part of his/her research practice.

The course is organized in five thematic blocks as indicated in the table below

Feb 18	Feb 19	Intermezzo	April 28	April 29
Block 1. Practices of writing	Block 3. Constructing texts	Rewriting one's paper	Block 4A. Reviewing papers...	Block 5. Preparing a submission in content and form

Block 2. Learning writing through reading

Reviewing a peer's paper

Block 4B. ...And the pain of revising

Block 6. So, professor....will i get published?

Revised paper submission for examination on May15, 2020.

Block 1. Practices of writing

In this block we will discuss and reflect on personal practices of writing and will address the following issues:

1. Barriers to writing.
2. Can writing be planned and organized?
3. Good and not so good habits of writing.
4. Tools and techniques to promote productive writing.

Block 2. Learning writing through reading

In this block we will work with tools to critically read and analyse papers. Our contention is that part of learning how to write is about being able to analyse papers, recognise their structure, and identify their main elements. The issues to be addressed are:

1. What is the aim of a paper?
2. What is the main argument or contention of the paper?
3. Which are the resources of argumentation used to support the argument?
4. Identifying topic sentences, coherence and cohesion in paragraphs.
5. Which are the linguistic resources deployed?

Block 3. Constructing texts

In this block we will work with the process of constructing texts. Here we turn to the written production of the participants and examine them in order to work on their betterment. The issues to be addressed are:

1. How do we move from a project to a paper?
2. Making explicit what is clear in one's mind
3. Making language work for you
4. Structuring of the core elements of a paper
5. Paper as good, self-contained stories of significance for a field of research

INTERMEZZO

During this period students will have the chance of setting in practice the elements of the first session by revising the paper that they will work with during the course and by preparing for the second session with a review of a paper of a peer-student.

Block 4A and B. Reviewing papers and the pain of revising

In this block we will focus on the painful but interesting process of peer-review. We will do this exercise working with examples from papers submitted by the course teachers. We will discuss issues such as:

1. What are the guidelines for reviewing papers?
2. What do reviewers pay attention to?
3. What are productive comments from reviewers?
4. What is the limit of the changes that you are willing to do?
5. Killing your darlings but gaining clarity
6. Coping with the emotion of receiving negative reviews
7. Responding to the reviewers and editors

Block 5. Preparing a submission in content and form

In this block we will go back to the participants' own writing discussing how to get them ready for submission. Issues to be addressed are:

1. How to know that a paper has a chance of going through review?
2. Journal instructions for authors
3. Reference management systems
4. Plan for finalising a paper and submitting

Block 6. Conclusions. So, professor....will i get published?

This last block has the intention of summarising the main learning from the course and discussed unresolved issues that at this time the participants will get. Some of the issues in the block are:

1. Tradition or innovation? How far can one push the boundaries of existing norms?
2. Learning writing of papers by mentorship. The value of working with your professor
3. Ethical considerations in the process of writing and collaborating in writing

Compulsory literature

A list of compulsory readings is made available to students through the course Athena. This is a starting reading list:

Becker, H. S. (2007). Chapter 4. Editing by ear. *Writing for social scientists* (pp. 68–89). Chicago: Chicago University Press.

Thanheiser, E., Ellis, A., & Herbel-Eisemann, B. (2012). From dissertation to publication in JRME. *JRME*, 43(2)144–158.

Wallace, M., & Wray, A. (2016) Chapter 5. Getting started on self-critical writing. *Critical reading and writing for post-graduates* (pp. 51–60). London: Sage.