

Training course on scientific writing and publishing for marine scientists

ICES TRAINING COURSE REPORT



Contents

Training course information	2
1 Summary	3
2 Context	4
2.1 Objectives	4
2.2 Level.....	4
3 Course programme, product, deliverance and instructors	5
3.1 Programme	5
3.2 Course products.....	5
3.3 Deliverables	5
3.4 Course instructors.....	5
3.5 Recommendations	5
3.6 Review of online format	5
Annex 1: List of participants.....	6
Annex 2: Agenda	8
Annex 3: Results of the survey.....	10

Training course information

Training course name	Training course on scientific writing and publishing for marine scientists
Date	26-30 April, 2021
Venue	Online via Microsoft Teams
Instructors	Jan A. Pechenik, Tufts University, USA
	Howard Browman, Institute of Marine Research, Norway

1 Summary

This workshop covered the key issues associated with preparing, writing, and publishing manuscripts reporting the outcomes of research. It was split into two main sections: “How to tell your story” and “How to get your story published”.

In the “How to tell your story” part of the course, we discussed the parts of a research paper, and the order in which the various components should be drafted, and how to approach writing each section. Students did exercises designed to help them learn how to structure the Materials and Methods section of a report and to determine what should be included and what should not be included. Students also learned how to decide what to include and what not to include in figures and in tables, and how to structure effective figure captions and table legends. Considerable time was spent discussing how to most effectively structure the Introduction section of a research paper, and how to lead smoothly and logically from opening statements concerning the general importance of the topic at hand to the final statement of the research question addressed. We then discussed the structure of Discussion sections, and what to include and what to avoid, and then talked about how to keep readers moving forward with minimal effort from the start to the end of the manuscript. “Never make the reader back up or do anything to annoy them” was a common theme.

In the “how to get your story published” part of the course, we offered practical information and advice about the process itself (e.g. selecting an appropriate journal, submitting a professionally prepared manuscript, cover letter, responding to the editor and reviewers...) and about the increasingly complex and hazardous landscape of scientific publishing (see topics listed in Annex 2).

2 Context

2.1 Objectives

To teach students how to best approach writing the different parts of a scientific research paper, including the best order in which to write the different sections: Title, Abstract, Introduction, Materials and Methods, Results, Discussion. How to write clearly and convincingly. How to choose where to submit the manuscript. Much of what we covered is also very relevant to writing successful research grant proposals.

Teaching students how to submit a professionally prepared manuscript, how to deal with the peer review and revisioning process, and to provide information about and insight into the growing complexity of scientific publishing.

2.2 Level

This workshop was designed for students who are finishing up their Ph.D. degrees and for researchers who already have a Ph.D.

3 Course programme, product, deliverance and instructors

3.1 Programme

See Annex 2.

3.2 Course products

PDF files of the instructor's slide decks used as the basis for the lectures.

3.3 Deliverables

Eight hours of lectures and slide decks as PDF files.

3.4 Course instructors

Howard Browman and Jan Pechenik

3.5 Recommendations

We will consider the feedback from the participants in revising the content and delivery of the course, should we be asked to do it again.

3.6 Review of online format

It is difficult to assess how engaged the participants are. Additional tools-support to help with improving engagement would be useful.

Annex 1: List of participants

Name	Country
Neil Anders	Norway
Tom Clegg	Norway
Claire Moore	Ireland
Isobel Bloor	UK
Agneta Hansen	Norway
Eva García Seoane	Norway
Randi Ingvaldsen	Norway
Heather Cannaby	Norway
Karen Assmann	Norway
Elliot Sivel	Norway
Mette Agersted	Norway
Gledis Guri	Norway
Rupert Wienerroither	Norway
Nadjejda Espinel Velasco	Norway
Daragh Browne	Ireland
Gema Casal Pascual	Ireland
Mikel Aristegui Ezquibela	Ireland
Christina O'Toole	Ireland
Hayley Campbell	Ireland
Yaxin Liu	Hong Kong
Dulaney Miller	Ireland
Signe Martin	Ireland
Qin Zhou	Norway
Malene Eilersen	Denmark

Anna Nikolopoulos	Norway
Julie Krogh Hallin	Denmark
Alondra Sofia Rodriguez Buelna	Denmark
Jasper Van Vlasselaer	Belgium
Natalya Gallo	Norway
Michaël Gras	Italy
Liisi Lees	Estonia

Annex 2: Agenda

Days 1 and 2 were led by Jan Pechenik, with the participation of Howard Browman

Days 3 and 4 were led by Howard Browman, with the participation of Jan Pechenik

Day 1.

- Introduction to the workshop
- Introduction to the instructors
- Parts of a research paper, and where to begin working
- How to decide what to include in the Materials and Methods section, and what not to include.
- How to design effective figures and tables.

Day 2.

- How to write effective figure captions and table legends
- What to focus on in writing the text of the Results section
- The importance of using strong verbs
- How to structure an effective Introduction, and how to keep readers moving forward, sentence by sentence.
- What to include and what not to include in Discussion sections
- The importance of avoiding present tense when talking about results of the present and previous studies

Day 3.

- Practical aspects of getting your story published: How to select an appropriate journal?
- What do editors expect from authors?
- How are reviewers selected?
- What are reviewers looking for?
- Editorial accept/reject decisions
- Submitting a professionally prepared manuscript
- The cover letter
- Common problems with peer review
- How to respond to the comments and criticism made by reviewers and editors
- Can you challenge a rejection decision?
- Types of editor/editorial models
- About editors
- Who are the editors?
- Should anyone be an editor for many journals simultaneously?
- How to get training to be an editor
- Do scientists get any credit for being editors?
- Peer reviewing and writing good reviews
- Where to get training in peer review
- Peer review models
- Different business models in scientific publishing (e.g. open access vs. subscription) and how they affect things such as selectivity and rejection rates

- Overinterpreting your work and the spin culture
- Diversity, inclusivity and equity
- Cognitive bias and other biases in editorial decision making
- What is driving developments in science and scientific publishing?
- Publishing models (subscription vs. open access)
- Plan S
- Predatory publishers
- Preprints

Day 4.

- Post-publication peer review journals vs. pre-publication peer review journals
- Peer community In
- Overlay journals
- Open Science – the TOP guidelines
- PRISMA guidelines for reporting systematic reviews and meta-analyses
- Open data and data archiving
- FAIR Principles (findability, accessibility, interoperability, reusability)
- Data publications and citing data sources
- Preregistration
- The reproducibility crisis
- The metrics used to assess performance in science – what is quality? What is impact?
- Citation-based metrics
- Alternative metrics
- The journal impact factor
- Aberrant behaviour – gaming citations
- H-index
- DORA – declaration on research assessment
- Publication ethics – retractions, paper mills, authorship, CREDIT (contributor roles taxonomy), plagiarism, text recycling, competing interests
- Applications of artificial intelligence in science publishing
- Use of animals in research
- Dissemination and visibility
- Social media
- Interacting with the media

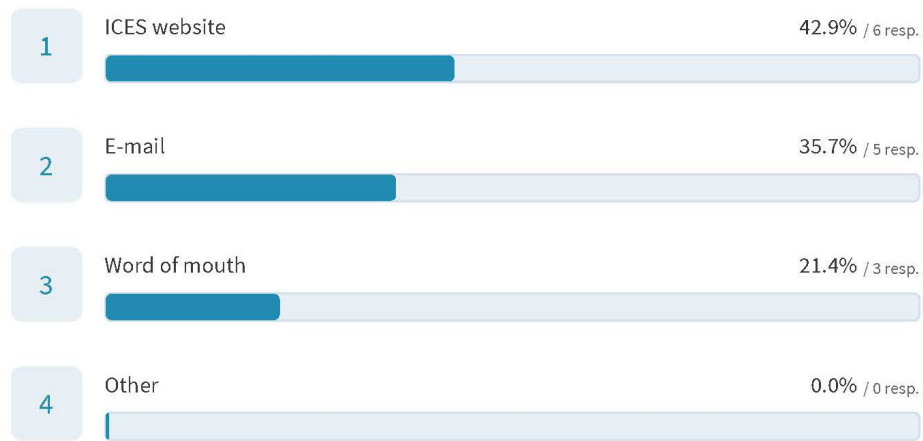
Annex 3: Results of the survey

TCSCIWRI 2021

15 responses

How did you hear about this course?

14 out of 15 answered



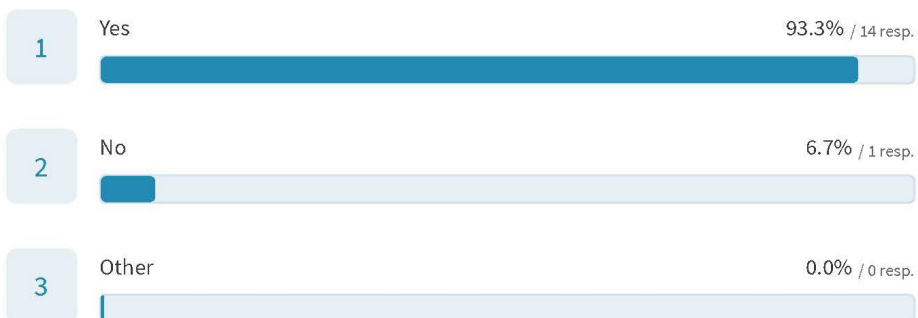
Did the training course meet your expectations?

12 out of 15 answered



Was the level of instruction appropriate?

15 out of 15 answered



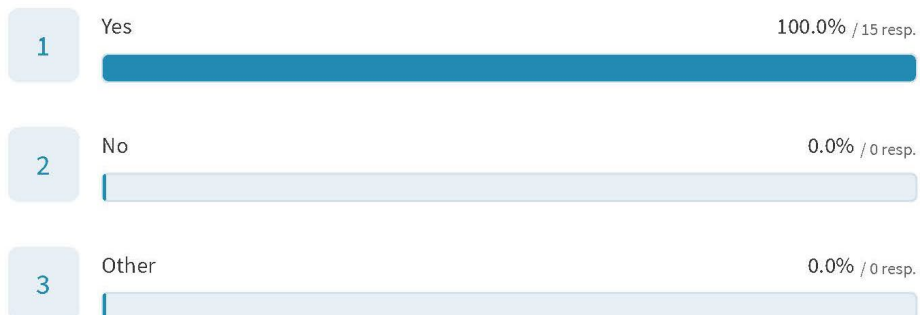
Was the level of difficulty appropriate?

15 out of 15 answered



Inscription to the training course and communication with organizers were efficient

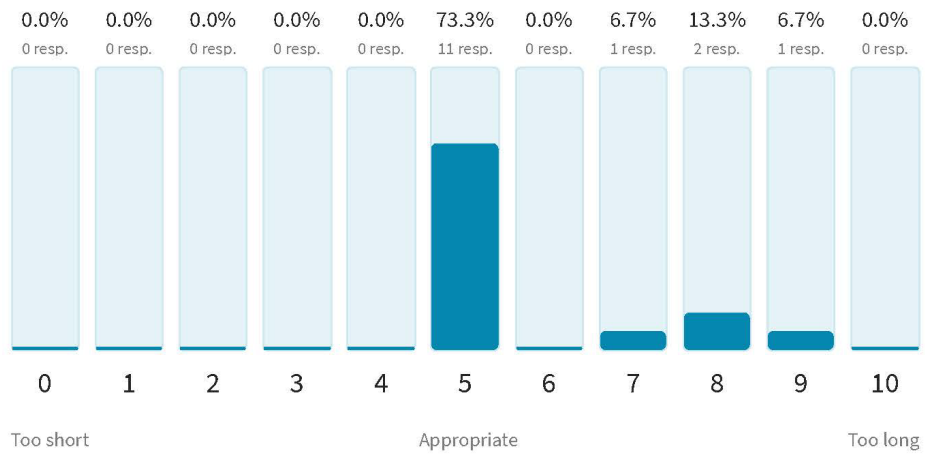
15 out of 15 answered



The length of the lectures were

15 out of 15 answered

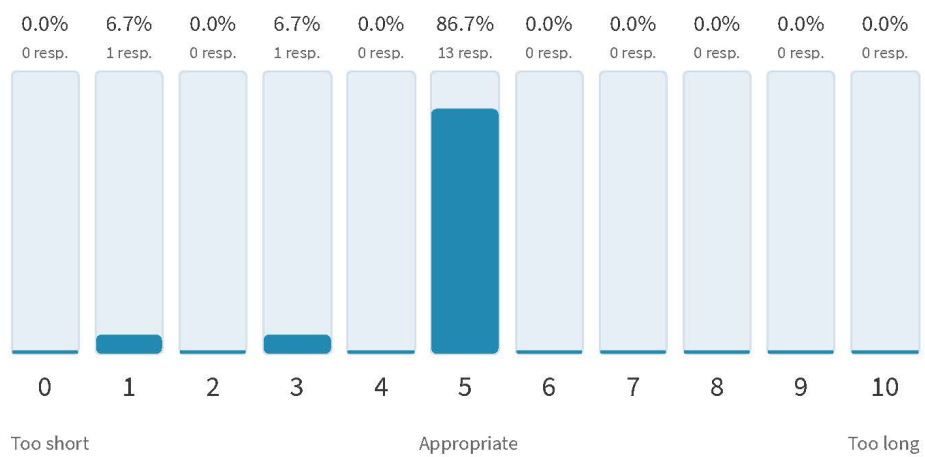
5.8 Average rating



The length of the Q&A sessions were

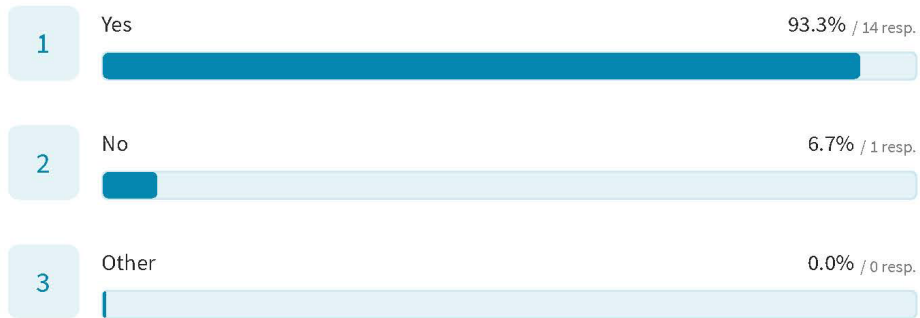
15 out of 15 answered

4.6 Average rating



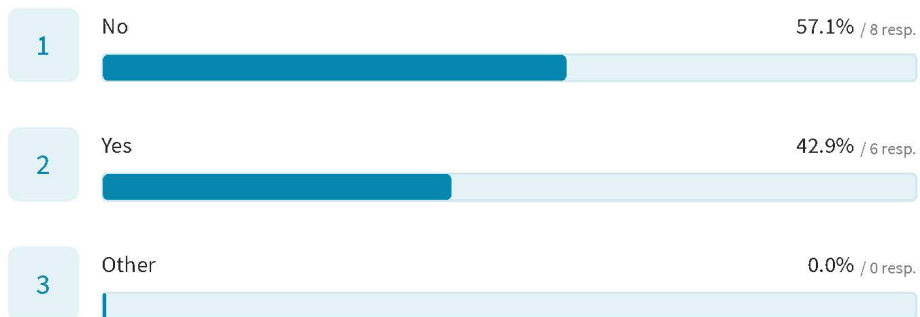
Have you previously used Microsoft Teams for meetings or online courses?

15 out of 15 answered



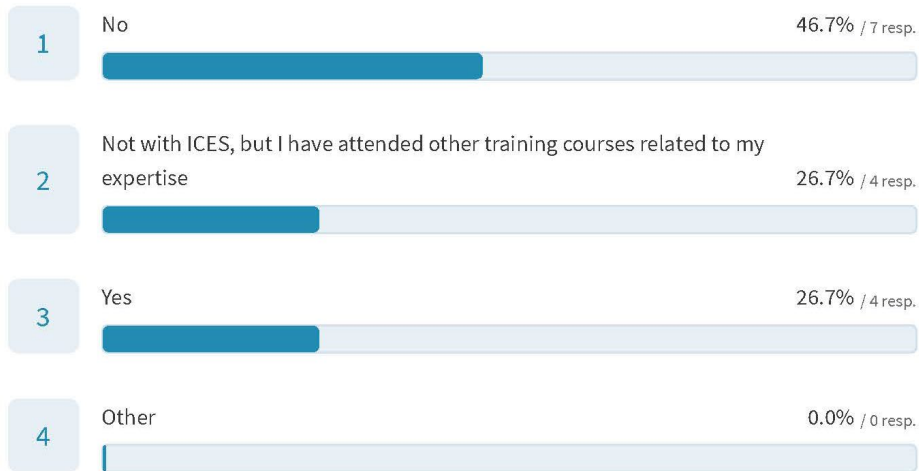
Would you have been able to join this course if it had not been online (without COVID travel restrictions affecting)?

14 out of 15 answered



Have you attended any other ICES training courses?

15 out of 15 answered



Would you be interested in another training course within ICES?

15 out of 15 answered

