Critical reviewing and peer response

Lecture and workshop
DAT147 - Technical writing in computer
systems and networks

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21st September, 2015

Today's agenda

- In own group: brief-self evaluation of text
- Reviewing: an overview
    1. Why peer reviews?
    2. Peer reviewing in scientific writing: the business of conference and publications
    3. Critical appraisal: what to focus on in a text
    4. What is a good review? What should be avoided?
- In own group: peer review of another group's paper
- Discussion between groups: what works, what needs work, how to improve it

Today's objectives

1 Make you **evaluate** what you have written so far

2 Make sure you **receive feedback** on your draft before submission

3 Prepare you for **writing a peer review** on Easy Chair

- Strategies of commenting scientific work
- Making use of and managing response received from others
- Developing skills in becoming a reflective reader, acknowledging aspects included in scientific writing
- Getting acquainted with working in an online reviewing system (EasyChair)

Reviewing procedure for paper in DAT147

- Passing milestones
  - [Events, deadlines and todos](#) document on homepage
- Fulfilment of criteria for paper to be accepted

- First deadlines
  - 27 Sept Each group makes submission of full paper via EasyChair (one author fills in the form and puts other authors' attributes)
  - 28 Sept you will receive two papers to review (individually)

Note: Each student should create a personal account on EasyChair

Self-evaluation (15 min.)

- Get together with your own group
- Take a few moments to go through your paper. No need to look at the peer-review form for now.

- Discuss (and take notes):
- **What are the weakest points of your draft?**
- **What would you like to receive feedback on?**

1. Why peer reviews?

Why peer reviews?

'Even the best writers with the best intentions can produce words that are meaningful to them but will fail to be meaningful to another' (Hacker et al. 2009: 156)

- Quality assurance in scientific work
- Learning tool
- Raise awareness of what your are writing (and why)

Hacker, D. J., J. Dunlosky and A. C. Graesser 2009. Handbook of Metacognition in Education. Routledge.

Peer review and peer response

The two concepts are synonyms

Peer response:
a form of collaborative learning in which writers meet (usually in small groups, either face-to-face or online) to respond to one another's work. Also known as *peer review*.   (Elbow, 1998)

- Purpose for this course:

This course aims to develop the student's awareness of the underlying structure of scientific and engineering research papers, **and to improve proficiency in reviewing and writing scientific research papers** as well as presenting such papers in public.

Peer response as a tool for learning

- Increasingly used in education Liu & Hansen 2005; Lundstrom & Baker, 2009

- Diversity of feedback enhances the learning situation Hyland & Hyland, 2006

- Collective engagement Arnold, Ducate & Kost, 2009; Lamb, 2004

- Theories on impact of learning through participation Bryers, Winstanley & Cooke, 2014; Cope & Kalanzis, 2000; Lund, 2010;

Peer response should be easy to follow

Compare these two in-text comments

A) "I don't understand"

B) "You have described your purpose in a clear and comprehensive way. I suggest that you move…"

Medium of delivery?

Text-based comments vs text-based comments + dialogue meeting face-to-face

Liu & Sadler's (2003) categorization model for peer comments
Dividing comments into area, type and nature

2. Peer reviewing in scientific writing

An insight into the reviewing business

- Research areas: academic writing, second language writing and metacognition
- *Reviews for:*
  - *Journal of L2 Writing*
  - *Journal of English for Academic Purposes*
  - *Written Communication*
  - *Language Learning and Technology Journals*
- Publication of research: workshops
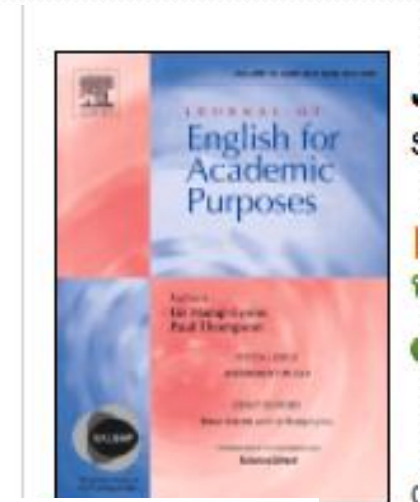
ISSN: **1060-3743**

The peer reviewing business: it really that bad?

It will probably come as no surprise . . . that the vast majority of comments in the reviews could be interpreted as negative (especially from an author's perspective).

… In no case was usage/style alone mentioned as a reason for rejecting a paper

Peer reviewing in scientific writing: conference and publications

journal editors, however, reported that the **most salient problem** in international scholars' submissions was **not language use but "parochialism**, or failure to show the relevance of the study to the international community''

9 features reviewers comment on the most:

Becher, D. D. (2007)

- Audience
- Topic
- purpose (or problem statement/research questions)
- literature review
- methods (or research design)
- results (including presentation of findings and analysis)
- discussion (or significance)
- pedagogical implications
- language use (or style)

3. Peer reviewing: how to do it

How NOT to review a paper in computer science

- Assume the role of 'adversary':

- "In Computer Science, we often form arguments and proofs based around the concept of an 'adversary'. Sometimes, this adversary can be malicious; in cryptography they are often "honest but curious". However, the most commonly encountered adversary in Computer Science is **the adversarial reviewer**"

G. Cormode (2008). How NOT to review a paper: The tools and techniques of the adversarial reviewer. *SIGMOD Record*, 37:4, 100-104

How NOT to review a paper in computer science

- Assume the role of 'adversary'
- Do things in a hurry:

The adversarial reviewer is often in a hurry, and so reviews are typically carried out in adversarial conditions. A typical adversarial review may be conducted clutching a crumpled and stained printout of the paper while packed into coach class on an intercontinental flight with a small child kicking the seat from behind… **It may be wise for for authors ensure that their work is as readable as possible in worst-case settings.**

G. Cormode (2008). How NOT to review a paper: The tools and techniques of the adversarial reviewer. *SIGMOD Record*, 37:4, 100-104

How NOT to review a paper in computer science

- Use adversarial reviewing techniques:
  - 2.1 The Goldilocks Method

    The Goldilocks method of reviewing (also known as the "Damned if you do, damned if you don't" approach) is based on finding some aspect of the paper and complaining that it is either "too hot" or "too cold" but never just right. This includes:

  - 2.2 If you can't say something nasty...

    The adversarial reviewer adopts the maxim "If you can't say something nice, don't say anything at all", but replaces "nice" with nasty. Their objective is to ensure that their review appears so consistently negative that the paper under submission could not possibly be accepted "in its present form". Therefore, if there are any

  - 2.3 Silent but deadly
  - 2.4 The Natives are Restless
  - 2.5 The Referee Moves the Goalposts

G. Cormode (2008). How NOT to review a paper: The tools and techniques of the adversarial reviewer. *SIGMOD Record*, 37:4, 100-104

Giving and Interpreting peer reviews

What is a good review? What should be avoided?

One of the major challenges is **avoiding indirectness**. It causes difficulties in **interpreting** the peer-reviewers' suggestions:

- What do these suggestions **mean** in terms of changes?
- How can these changes be implemented? (**what to do**)

Critical appraisal: what to focus on in a text

- **Balance**: intro/discussion/methods too long compared to results
- **Defining and using conce**pts: lack of consistency
- References
- **Originality (purpose)**: so what?
- Methods: process and/or its motivation are not clear
- Results: not systematically presented, weak evidence
- **Literature review**: reads like a list, not critical
- **Text logic** (organization, paragraphs, sentence structure)
- Connection to theory

Review forms for scientific papers

- Grades and text
  - Evaluate options
  - Formulate constructive feedback

JOURNAL :	
TITLE:	
AUTHORS:	
REFERENCE NUMBER:	

Is the paper of sufficient originality to warrant publication in the journals?
(Papers that are scientifically flawed, provide no new insight, merely report observations without analysis or comment, are incomplete or are of insufficient significance, should be rejected)
Comments: ....
....
....

YES | NO

Can the paper be shortened without overall detriment to the main message?
(If yes, please indicate what can be removed)
Comments: ....
....

YES | NO

Is the paper clearly and sensibly arranged
(If not, but is otherwise acceptable, please suggest necessary improvements)
Comments: ....
....

YES | NO

Are the analyses and conclusions a logical outcome of the data and discussion? *(If this is not the case, please outline)*
Comments: ....
....

YES | NO

Are all necessary figures (images) included & are they of sufficient quality?
Comments: ....

YES | NO

Should this paper be fast tracked for rapid publication?
Comments: ....

YES | NO

RECOMMENDATION
(Please accompany this report with any detailed comments)

☐ Accept

☐ Accept pending minor revisions

☐ Reconsider after major revisions

☐ Reject

Reviewer: .... Date: ....

The scale used on EasyChair

5. Excellent

Exceptionally strong

4. Good

Strong

3. Fair

Some strengths, but also moderate weaknesses

2. Poor

Very few strengths and numerous major weaknesses

1. Very poor

Deficient, task not fulfilled

Peer reviewing form for survey paper

1. Title
2. Abstract
3. Scope
4. Related work and references
5. Paper structure, organization, and style
6. Technical contribution
7. Length: should be around 5,000-7,000 words

- Some good things
- Suggested changes
- Style and grammar issues you noticed

Reminder: your writing goal

The survey paper should:

- **Make a contribution to a given research area** by critically discussing a number of papers on a specific topic/area (more than compilation of data and facts)
- 6 to 8 pages in ACM format, double-column

What to look out for in peer reviewing?

- First version
  - Heavy subheading
  - Lack of transition

3 KEY FINDINGS IN REAL-TIME CLUSTERING, CONCEPT DRIFT HANDLING AND DISTRIBUTED CLUSTERING

3.1 Real-time data-stream clustering

- Final version
  - Restructuring
  - Transition in text

3 KEY FINDINGS

This section will present key findings in three different areas; real-time clustering, concept drift handling and distributed clustering.

3.1 Real-time data-stream clustering

- Result
  - Increased readability and text flow

Notice how the titles/subtitles and the metatext introducing the section help in defining the **scope of the paper**

Qualifying results / statements

- Likelihood (stronger-weaker)
  - It is certain / obvious that …
  - It is possible that …
    - There is a strong possibility …
    - There is good possibility …
- Distance
  - The patient recovered …
  - The patient seems to have recovered …
  - Based on our observations, the patient appears to have recovered …

Swales & Feak, 2004, *An approach to academic writing,* p. 125

What happens now

Time/Location	Activity
Up to 2:30 pm EL42/EL43	Peer review of another group's paper: • Use the review form • Discuss each item on the form and decide together what to write as feedback to the authors (including suggestions for revision, if you can)
2:15-3:15pm EL 42/EL43	Discussion between groups: • First listen to self-evaluations • Then go through what you wrote in the peer review form
3:30-17 EL 42/EL43	Debriefing and revision within groups: • What next? • Possible revisions, revise together

Coming next

- Lecture 5: Optional lecture for those who want additional support (Raffaella)

Thu 2015-10-05, 13.15-17.00, room EE, plus EL42, El43

- Lecture 6: Paper presentation techniques

Dave Sands, guest lecturer. Thu October 8th, 10-11:45, ED

- Background reading:
  - Zobel, *Writing for computer science*, ch. 14 Giving presentations

Good luck with your papers!