International science writing and publishing: an overview

Karen Shashok
AuthorAID in the Eastern Mediterranean
kshashok@kshashok.com
The purposes of this workshop are:

1) to explain some features that make research articles in English effective for readers, and

2) to help participants learn to use these features in their own manuscripts.
Part 1
International science research
What do readers need?

Wikimedia Commons
1. Find articles **quickly**

How can the author help them?
- Publish in a good journal that is available to and read by your peers and research funding evaluators.

- Choose an open access journal.
Ask your librarian or information scientist about bibliographic databases and journal indexes.
PubMed

To get started with PubMed, enter one or more search terms.

Search terms may be topics, authors or journals.
Index Medicus for the Eastern Mediterranean Region

In order to give access to health literature published in or related to the Eastern Mediterranean Region, the Eastern Mediterranean Region Library Network (EMLIBNET) produces an international index to Eastern Mediterranean health literature and information sources using headings according to the Medical Subject Headings MeSH list of the U.S. National Library of Medicine. This index is called Index Medicus for the WHO Eastern Mediterranean Region (IMEMR).
2. Find articles they need, that are relevant to their interests

How can the author help them?
Use an accurate **title**, a good **abstract**, and good **key words** so that computerized indexes and search engines can find your article easily.
Computer-Based Production of Comparison Overlays from 3D-Scanned Dental Casts for Bite Mark Analysis*  

ABSTRACT: Bite mark analysis assumes the uniqueness of the dentition can be accurately recorded on skin or an object. However, biting is a dynamic procedure involving three moving systems, the maxilla, the mandible, and the victim’s reaction. Moreover, bite marks can be distorted by the anatomic location of the injury or the elasticity of the skin tissue. Therefore, the same dentition can produce bite marks that exhibit variations in appearance. The complexity of this source of evidence emphasizes the need for new 3D imaging technologies in bite mark analysis. This article presents a new software package, DentalPrint® (2004, University of Granada, Department of Forensic Medicine and Forensic Odontology, Granada, Spain) that generates different comparison overlays from 3D dental cast images depending on the pressure of the bite or the distortion caused by victim-biter interaction. The procedure for generating comparison overlays is entirely automatic, thus avoiding observer bias. Moreover, the software presented here makes it impossible for third parties to manipulate or alter the 3D images, making DentalPrint suitable for bite mark analyses to be used in court proceedings.

KEYWORDS: forensic science, forensic odontology, human bite mark, comparison overlays, 3D images, computers

Stella Martin-de las Heras,1 M.D., Ph.D., B.D.S.; Aurora Valenzuela,1 M.D., Ph.D., B.D.S.; Carlos Ogayar,2 M. Eng.; A. Javier Valverde,1 B.D.S.; and Juan Carlos Torres,2 Phys.D., Ph.D.

Paper ID JFS2004226
Available online at: www.astm.org
Choose the right journal

Look for the readers who need to know what you found.

- Readership, relevance, scope, editorial board members, usefulness, applicability

- Research evaluation and grant committees
Don’t give away copyright for all languages including the first language in your setting.

The global spread of English, scientific communication and ESP: questions of equity, access and domain loss

Gibson Ferguson
University of Sheffield
g.r.ferguson@sheffield.ac.uk

Ibérica 2007; 13: 7-38
You may wish to publish the information in the local, national or regional language, not just in an international journal in English.
Non-English journals are vital for knowledge transfer at the national level.

Adopting English as the language of publication may alienate lay people from the products of science.

The local language may lose its ability to depict new concepts and phenomena.

3. Read and **understand** articles easily

How can the author help them?

\[ [p,s] = \mathcal{E}(a,p) \]
Write and edit well.
Use simple English.
Use clear internal references to cited sources, figures, tables, and supplementary material.
Pay particular attention to the parts that readers look at first:

- Title, abstract, key words
- Tables, figures, conclusions, references
Remember...

Most researchers in the world do not have English as their first language.

Native users of English can produce bad writing.
Part 2

Writing (in any language) to make your results easy to understand
IMRAD format:

Introduction
Methods
Results
and
Discussion

>Title page, Abstract, Conclusions, Acknowledgments, References, Tables, Figures>
A title that reflects the contents by mentioning the main terms and concepts, and possibly the main conclusion.

Pitfalls of editorial miscommunication
Karen Shashok

Mortality after the 2003 invasion of Iraq: a cross-sectional cluster sample survey

Open access: implications for scholarly publishing and medical libraries
Karen M. Albert, MLS, AHIP, Director of Library Services, karen.albert@fccc.edu
Talbot Research Library, Fox Chase Cancer Center, Philadelphia, Pennsylvania 19111
Revise title carefully after the main text is finished.

Manuscript editing as a way of teaching academic writing: Experience from a small scientific journal

Aleksandra Mišak, Matko Marušić, Ana Marušić *

Impartial Judgment by the “Gatekeepers” of Science: Fallibility and Accountability in the Peer Review Process

The Origin of Palestinians and Their Genetic Relatedness With Other Mediterranean Populations
An **abstract** that reflects the contents

Revise abstract carefully after the main text is finished.

**Purpose:** The paper reviews and analyzes the evolution of the open access (OA) publishing movement and its impact on the traditional scholarly publishing model.

**Procedures:** A literature survey and analysis of definitions of OA, problems with the current publishing model, historical developments, funding agency responses, stakeholder viewpoints, and implications for scientific libraries and publishing are performed.

**Findings:** The Internet's transformation of information access has fueled interest in reshaping what many see as a dysfunctional, high-cost system of scholarly publishing. For years, librarians alone advocated for change, until relatively recently when interest in OA and related initiatives spread to the scientific community, governmental groups, funding agencies, publishers, and the general public.

**Conclusions:** Most stakeholders acknowledge that change in the publishing landscape is inevitable, but heated debate continues over what form this transformation will take. The most frequently discussed remedies for the troubled current system are the "green" road (self-archiving articles published in non-OA journals) and the "gold" road (publishing in OA journals). Both movements will likely intensify, with a multiplicity of models and initiatives coexisting for some time.
An **Introduction** that
- attracts attention,
- identifies the target population of readers, and
- explains the hypothesis tested or the question the research was designed to answer.
In the Introduction, emphasize different aspects of the research depending on the journal’s scope and readership.

INTRODUCTION

The scholarly publishing crisis, precipitated by longstanding, significant journal price increases, has seriously hampered the ability of libraries, universities.

Introduction

The status and continuing use of literature affected by scientific misconduct is of concern because of the potential for invalid research to misdirect subsequent research and clinical care [6, 7]. In 1990, Mark Pfeiffer and Gwendolyn Snodgrass [20] described the use of retracted, invalid scientific literature, reporting that compared with a control group, the retraction tag in the MEDLINE database reduced subsequent citation by only about one third.
Methods that don’t keep secrets.

Wikimedia Commons
If other researchers want to check or replicate your methods they need the whole recipe with all the secret ingredients and technical tips.

Methods

Overview of data collection

In 2002, we conducted a content analysis of all the “Findings of Scientific Misconduct” published in two public sources (the NIH Guide for Grants and Contracts, and the ORI Annual Reports) from 1991–2001. From these reports we abstracted the information on the publications said to be affected by scientific misconduct, the administrative actions taken against the respondent,
Results that focus on the question asked in the Introduction

RESULTS

Methodological and Statistical Content Study

Less than half of the 166 journals provided information on statistical methods (Table 1). Eighty-seven percent (13/15) of general journals and 36% (54/151) of specialty journals made reference to ICMJE uniform requirements.¹¹ Fifty-three percent
Emphasize different data and aspects of the research depending on the journal’s scope and readership.
A Discussion that explains what your findings mean

Discussion
We estimate that, as a consequence of the coalition invasion of March 18, 2003, about 655,000 Iraqis have died above the number that would be expected in a non-conflict situation, which is equivalent to about 2.5% of the population. Our investigations demonstrate that journals’ Instructions for Authors are heterogeneous in their length, that a small portion of Instructions for Authors’ space is devoted to scientific standards, constitutes a humanitarian emergency.
Emphasize different aspects of the research depending on the journal’s scope and readership.

Use only references that are relevant to the topic and of interest to readers of the journal.
Conclusions that don’t exaggerate the meaning or generalizability of the results

Conclusion

Many links to the *NIH Guide for Grants and Contracts* “Findings of Scientific Misconduct” were posted years after the misconduct finding, if at all: 31 of 98 affected articles indexed in PubMed had no link to the public *NIH Guide*. Over the course of the study, the PubMed database added links to the *NIH Guide* for several articles in the study population, making it easier for current researchers and database users to be aware of the problems with articles affected by scientific misconduct. However, it ap-
Acknowledgements that don’t leave anybody out
- Institutional, financial, professional and personal support and assistance

ACKNOWLEDGMENTS

We are grateful to Alberto Garcia for his help with art design work on the computer. We also thank M. Nei for providing the CNKDST and TREEVIEW programs. The authors thank Varda Appleton Schriger for help with the downloading of Web site content and the pilot testing of the classification taxonomy and Vladislav J. Mikulich for help with development of the graphics.

Work was supported by the Ministry of Education of Madrid Regional Government (06/10/97 and 8.5/14/98).
What if the journal rejects the manuscript?
If the manuscript is modified for submittal to another journal, parts of the text (including some references) may need to be rewritten or changed.
Readers of different journals are interested in different aspects (methodology, technical aspects, clinical or applied vs. basic science, etc.),

and...
...editors vary in their preference for original thinking and speculation vs a conservative interpretation, and in their tolerance for an interdisciplinary approach vs a traditional approach.
Gatekeepers of science publication

Journal editors (gatekeepers)

Part 3

Good scientific English style

Wikimedia Commons
For non-native English speakers publication is slower, and there is a higher risk of being misunderstood or ignored if the English or writing are not good.

Learning to write well in your *first* language takes years of practice.

Learning to write well in your *second* language takes years of practice, motivation, and discipline.
Even manuscripts written by native speakers of English are frequently criticized for poor English. It has frequently been said that despite the fact of having English as their first language, authors who fulfil this criterion may nonetheless receive frequent negative feedback due to the unfeasibility of discerning the meaning in their written communications.
1. Objective and subjective elements of writing

2. Who can help you improve your writing?

3. Remember the readers
1. Objective and subjective elements of writing
Objective, right or wrong:
Grammar, spelling, punctuation, syntax
Specialized terminology and usage
Subjective, influenced by language and cultural background, education and expertise, language proficiency:
Organization and logical flow
Rhetoric and persuasiveness
2. Who can help you improve your writing?
Local peers and advisors
Experts in the scientific content

Author’s editors
Experts in written communication

When? Before manuscript submittal
Author’s editors

- help authors to produce writing that will effectively communicate their message to the target audience

- help ensure that the text is read with respect for and attention to the content
Journal peer reviewers
Experts in some things but not in everything

When? During peer review
“Through the Anglo-American hegemony, UK- and US-based referees’ comments often not only force a non-native English-speaking author to rewrite his/her paper, but also increase the ‘creative destruction’ of a paper.”

Aalbers MB. Creative destruction through the Anglo-American hegemony: a non-Anglo-American view on publications, referees, and language. Area 2004; 36: 319-322
Reviewers often say (for different reasons) that a manuscript requires "review and editing by a native English speaker."

Even minor errors in the English can lead to rejection of the manuscript.
Peer review

Editors and reviewers with limited time and motivation may look for reasons to reject a manuscript rather than provide substantial feedback.
# Reasons for rejection

<table>
<thead>
<tr>
<th>Category</th>
<th>% of Manuscripts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methodology</td>
<td>74.3</td>
</tr>
<tr>
<td>Significance / “so what”</td>
<td>60.3</td>
</tr>
<tr>
<td>Writing style</td>
<td>58.4</td>
</tr>
<tr>
<td>Literature review section of paper</td>
<td>50.9</td>
</tr>
<tr>
<td>Data analysis section of paper</td>
<td>42.1</td>
</tr>
<tr>
<td>Organization</td>
<td>34.6</td>
</tr>
<tr>
<td>Quality and rigor</td>
<td>30.0</td>
</tr>
<tr>
<td>Sampling</td>
<td>29.2</td>
</tr>
<tr>
<td>Conclusions section of paper</td>
<td>27.6</td>
</tr>
<tr>
<td>Discussions section of paper</td>
<td>25.2</td>
</tr>
<tr>
<td>Reference section of paper</td>
<td>23.6</td>
</tr>
</tbody>
</table>

Factors not related to science influence the decision to accept or reject a manuscript.

- National origin, affiliation
- Use of English
- Balance in topics
- Citability
- Potential media attention
Publisher’s editors

Superficial grammar, spelling and punctuation check or careful editing for clarity, terminological accuracy and discipline-specific conventions in usage and style

When? After acceptance
Copyeditor performance

Preferred version, with regard to major errors and readability (Number of papers)

Publisher’s version 16
Author’s version 2
Different, neither version unequivocally preferred 2
Equally good 4

But **authors** are mainly responsible for editorial quality.

The quality of academic papers---on which the author’s reputation depends---can still be perceived as less than perfect even after favorable peer review. Quality needs to be provided mainly by the authors because we cannot assume that the journal or publisher will add editorial quality after acceptance.

3. Remember the reader
What do readers want?
1. Find it quickly
2. Find it selectively
3. Understand it easily
What can the writer do?

Make English your ally for clear communication, not your opponent.
1. A simple and boring text is better than a complex, “interesting” text that is hard to understand.
2. Revise, correct and rewrite patiently.

It is normal for a good article to be rewritten many times before it is clear enough for readers to understand easily.
3. Ask a specific question. Provide a specific answer.

Your research question is the anchor for the whole article.
4. The data, results and discussion are the most important things.

What are your results and what do they mean for other researchers?
5. The reader needs to be convinced that your findings are logical, valid, and supported by solid evidence, not impressed by your writing style.
6. Don’t copy and paste from other articles. The English may not be very good.

Many articles in an unreadable writing style are published even in top journals.
A proposal
A clear understanding of what editors and readers expect from a well-written article + improved training in English writing skills can help increase publication success.
Thank-you very much

AuthorAID in the Eastern Mediterranean

Wikimedia Commons