UNIVERSITY of the WESTERN CAPE

Writing a Paper for Publication

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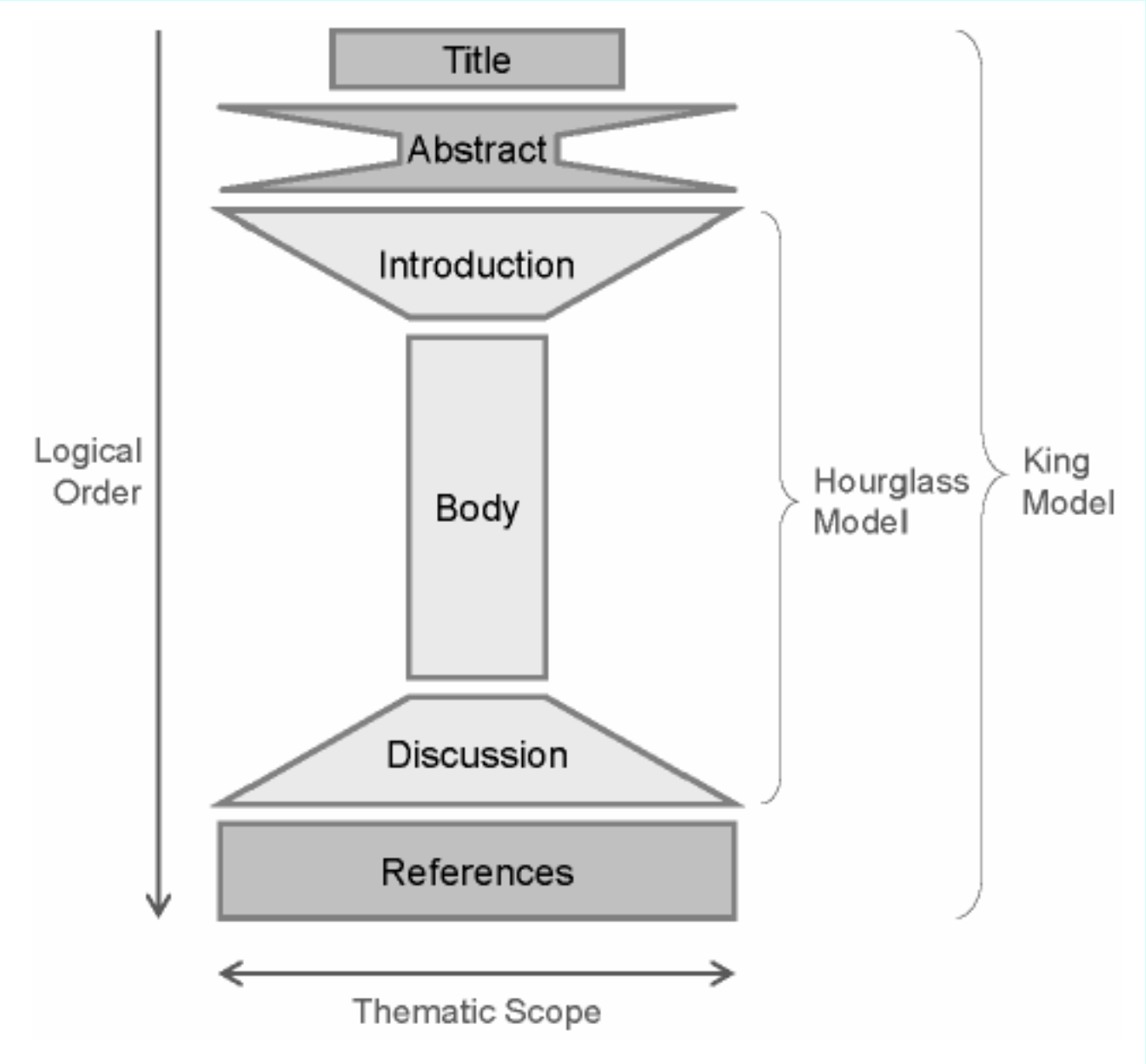
- **Managing Guest Editor & Guest Editor** *Physics and Chemistry of the Earth Journal*

- **Associate Editor** *International Journal of Applied Earth Observation and Geoinformation*

- **Associate Editor,** *Hydrology and Earth Systems Science Journal*

- **Guest Editor**, *Wetlands Ecology and Management*.



Derntl, M. 2014. Basics of research paper writing and publishing. *Int. J. Technology Enhanced Learning*, Vol. 6, No. 2, 105-123.

Title

- Very important in selling your paper
- Most read part of the paper
- Attracts Editors, Reviewers and Readers
- Avoid too long and too short titles

Examples

- An investigation of the hydrological responses of mountain catchments: A case study of the Jonkershoek River in the Western Cape Province of South Africa. [Too long]

- Hydrological responses of the Jonkershoek River. [Too short and meaningless]

An Effective Title

- Identifies the issue(s) covered in the paper.
- Accurate, unambiguous and complete
- No unnecessary abbreviations especially not well-known by international readers.
- Easily understood by readers

Types of Titles

- Descriptive

  Surface water – groundwater interactions in catchments with contrasting topography

- Interrogative

  Is stationarity relevant in hydrology?

- Declarative

  Incorporation of uncertainty is the key to realistic modelling in semi-arid catchments

Meaningless Titles

- The hydrology of mountain catchments in the Western Cape Province of South Africa

- Application of IWRM principles in semi-arid catchments in southern Africa.

Abstract

- Most readers will read the Abstract and not the whole paper.
- Whole paper read if the Abstract convinces the reader.
- Helps the reader to identify a relevant paper using electronic searchers
- Informative – objectives, methods, major results, conclusions

Abstract - Problems

- Not informative.
- Objectives of the paper not clearly stated
- Too much details about Methods instead of outlining the general approach used in the study.
- Major findings not clearly presented
- Main conclusion not presented
- Tendency to reproduce text already in the main paper without considering whether this is useful

Keywords

- Enables readers to identify the issues covered in a paper.
- Useful when using electronic searches
- Title + Keywords help to narrow a search
- Avoid repeating words that already in the title.
- Avoid using very general words used, e.g. rainfall, correlation, population, sampling, high school

Introduction

- Informs the reader about the general subject area and the specific issue being examined.
- Concise overview of state of the art knowledge about the problem being investigated
- What is the gap that the paper will cover?
- Objectives of the study presented in the paper
- *Outline of the main results???*
- *Structure of the Paper????*

Introduction - Problems

- Too long and boring
- Presenting material commonly found in textbooks
- Problem which was investigated is not sufficiently articulated
- Objectives not given or not clearly stated
- Is the paper presenting a new approach to investigating a known problem?
- Is the paper presenting a new issue that has not been previously considered?
- Is the paper presenting a different explanation to an existing problem?
- Reader needs to refer to other sources to understand

Methods

- Materials and data used
- Clear description of methods used to answer the research questions.
- Transparent – peers can repeat the study following the methods presented
- Methods – relevant to the research questions/objectives
- Focus should be on the scientific method used and not the software unless this is important for readers to understand the method used
- What is novel about the specific application of the method(s)?

Methods - Problems

- Often not adequately presented to enable another researcher to repeat the same investigation (Transparent!).
- Frequent description or stating the statistical/GIS software package used without being specific about the exact scientific method used, e.g. “Data was analysed using SPSS vnXX, ArcGIS, Excel”

- Explaining what is commonly known, e.g. correlation coefficient

Methods - Problems

- Equations often not written clearly, and symbols used not explained.
- Same symbol used to refer to different variables in the same paper
- Use of abbreviations to represent variables can be very confusing, e.g.

$$MAR = MAP – EPP$$

- When MAR, MAP and EPP are used in the text, this leads to some confusion whether these are used as ordinary words or variables

Results

- Need to present results that illustrate the point(s) to be conveyed.
- Consider which results are important in addressing the research question(s)
  - General information or results that assist the reader to understand the major findings to be presented.
  - Major findings, i.e. proving/disproving hypotheses
  - Findings that support the arguments being presented

Tables and Figures

- Tables – present the actual results
- Figures – illustrating the results
- Results should not be duplicated in Tables and Figures
- Captions of Tables and Figures should be self-explanatory
- Lines joining data points should be used for time series
- Decimals points indicate the level of accuracy, and need to be consistent especially for the same or related variables

Tables

- Avoid having too many Tables and Figures
- Avoid using default features of software packages when presenting diagrams, e.g. Excel, GIS.
- Avoid starting the discussion when presenting Results

Discussion

- Many papers are rejected for lack of a meaningful discussion.
- How do your results relate to findings made by other researchers?
- Do your results confirm existing explanations?
- Avoid making claims not supported by your results
- Avoid using outdated references in discussing your findings

Conclusion

- Necessary and should be related to the objectives of the paper.
- Closing the loop
- Should be supported by your Results and the Discussion.
- Recommendations for further research

Other Frequent Problems

- Using non-specific words or phrases, e.g. can be, low, high, large without being qualified.
- Papers investigating the obvious and then making claims of having established new findings.
- Papers based on questionable assumptions that authors never verified

- Presenting a simple summary of data collected without demonstrating how these data improve our understanding.

- A clear summary of a student or consultancy report that has not been re-shaped into a scientific publication

- Clear evidence that the paper was never proof read even if there are several co-authors, e.g. grammatical errors.

- Avoid using the colon and semi-colon if you are not sure about their correct usage.

- Senior authors never taking the trouble to proof read papers drafted by young scientists.

- Have the manuscript peer reviewed by colleagues before submitting to a journal

- Authors not adequately addressing comments by the Reviewers when revising manuscripts

- Editors are in the first instance guided by the comments of Reviewers.

- Reviewers' comments cannot simply be ignored

- Get an expert English writer to proof read your work, if in doubt.

Deadlines

- Respect the deadlines in addressing and revising the comments of reviewers

Which Journal?

Which Journal?

- Objectives of the journal
- Targeted readership
- International/regional coverage of issues
- Turn-around time, number of issues per year

Hydrological Sciences Journal

- the hydrological cycle on the Earth
- surface water, groundwater, snow and ice, in all their physical, chemical and biological processes, their interrelationships, and their relationships to geographical factors, atmospheric processes and climate, and Earth processes including erosion and sedimentation
- hydrological extremes and their impact
- measurement, mathematical representation and computational aspects of hydrological processes
- hydrological aspects of the use and management of water resources and their change under the influence of human activity
- water resources systems, including the planning, engineering, management and economic aspects of applied hydrology

http://www.tandfonline.com/action/journalInformation?show=aimsScope&journalCode=thsj20

Advances in Water Resources
Geophysical Journal International

Geoscience Letters (Journal)

Ground Water
Hydrogeology Journal

Hydrological Processes (Journal)

Hydrological Sciences Journal

Hydrology and Earth System Sciences (Journal)

Hydrology Research (Journal)

International Journal of Geoscience Research

International Journal of Geosciences

International Journal of Hydrology Science and Technology

International Journal of River Basin Management

International Journal of Water

International Journal of Water Resources Development

Journal of American Water Resources Association

Journal of Contaminant Hydrology

Journal of Environmental Hydrology

Journal of Flood Risk Management

Journal of Geographic Information System

Journal of Geology & Geosciences

Journal of Hydrologic Engineering

Journal of Hydrology
Journal of Hydrology and Hydromechanics
Journal of Spatial Hydrology

Journal of Water and Land Development

Journal of Water Resource and Protection

Journal of Water Resources Planning and Management

Journal of Water Science

Open Hydrology Journal

Southwest Hydrology

Transport in Porous Media (Journal)

Journal of Hydraulic Engineering

Vadose Zone Journal

Water - A Multidisciplinary Research Journal

Water International (Journal)

Water Policy (Journal)

Water Research
Water Research (Journal)

Water Resources
Water Resources (Journal)

Water Resources and Hydrology Journals

Water Resources Management (Journal)

Water Resources Research (Journal)

Water SA
Journal of Groundwater Research (JGWR)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