

# The Backbones of an Article

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## Backbones?

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- Holds everything together
- Protects
- Maintains flexibility
- Can be a real pain
  
- Writing must be clear and focused
- Intellectual property protection
- Author open to new ideas
- Writing can be a chore



## **Mike's Thoughts on Writing an Article**

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- Know your audience
- Know the publication
- Know how your work will be evaluated
- Do the initial writing
  - Outline
  - Create text
  - Illustrations
- Review and revise
- Format

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## Know your Audience

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- Who will read your work?
  - Experts in the field
  - Professionals familiar with the general area
  - General public
- Level of writing
- Format

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## Know the Publication

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- Archival scientific journal
- Book chapter
- Meeting abstract
- Professional magazine
- Popular magazine
- Newspaper

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## Evaluation of Work

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- Peer reviewed
- Editor's decision
- Edited work
- Published "as is"

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## Outline Phase

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- Introduction
- Background
- Methods
- Results
- Discussion
- Conclusions

## Outline Phase

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- I. Introduction
  - A. Problem statement
  - B. Rationale
- II. Background
  - A. Previous work done by others
  - B. Previous work done by you
- III. Methods and materials
  - A. What you did
  - B. How you did it
  - C. What you used
- IV. Results
  - I. Typical raw data
  - II. Data obtained
- V. Discussion
  - I. What the results mean
  - II. Comparison with work of others
  - III. Significance of findings
- VI. Conclusions

# Outline Phase

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- I. Introduction
  - A. Problem statement
  - B. Rationale
- II. Background
  - A. Previous work done by others
  - B. Previous work done by you
- III. Methods and materials
  - A. What you did
  - B. How you did it
  - C. What you used
- IV. Results
  - A. Typical raw data
  - B. Data obtained
- V. Discussion
  - A. What the results mean
  - B. Comparison with work of others
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# Outline Phase

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- I. Introduction
  - A. Problem statement
    - 1. What is the backbone of a good paper?
    - 2. How do you produce a good paper?
  - B. Rationale
    - 1. Why is this important?
    - 2. Improves chance of being published
- II. Background
  - A. Previous work done by others
    - 1. Several guides (references)
    - 2. Instructions for Authors
  - B. Previous work done by you
    - 1. Wrote a draft that nobody liked
    - 2. Bought *Writing for Dummies*
- III. Methods and materials
  - A. What you did
    - 1. Used writing assistant S/W
    - 2. Hired a writing coach
  - B. How you did it
    - 1. Worked from 6:00 – 8:00 AM every day
    - 2. Coach reviewed each section
  - C. What you used
    - 1. New paper and pen (Office Max)
    - 2. Invisible ink (magic store)
- IV. Results
  - A. Typical raw data
    - 1. Example of rough draft text
    - 2. Same draft after editing by writing coach
  - B. Data obtained
    - 1. Table of what was written and how much time it took
    - 2. There were many spelling errors
    - 3. Results of peer review
- V. Discussion
  - A. What the results mean
    - 1. Writing efficiency improved over time
    - 2. Writing coach was essential for better writing
    - 3. A dictionary would be a good purchase
  - B. Comparison with work of others
    - 1. A similar study by Micera showed no improvement over time
    - 2. Micera 's subjects wrote in Italian while ours wrote in English
  - C. Significance of findings
    - 1. Data was statistically significant for the groups studied, but this may not help individuals
    - 2. Writing in English may be easier than in Italian
- VI. Conclusions
  - A. More effort can lead to improved writing
  - B. Hiring a writing coach is a good investment

## **Create Text Phase**

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- The outline provides structure
- Concentrate on syntax
- Thoughts and organization are already there in the outline, now you express them clearly by adding words and sentences

## **Illustrations**

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- Must complement the text
- Must be legible – especially the legends and captions
- Figure and caption should provide some information to those who do not read the entire paper
- Should be aesthetically attractive

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**Read, Revise,  
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