Writing a Manuscript for Submission to a Journal

Ismail Said
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• **Content of a manuscript**
  – Title
  – Abstract
  – Keywords
  – Introduction and Background
  – Methodology
  – Results
  – Discussion
  – Conclusion
  – Acknowledgement
  – References
What and How to Begin

Introduction and Background

• Discussion on the pertinent previous research, theory or concept, problem or issue, aim/purpose of article, research questions.

1. A small growing body of empirical research supports the healing potential of gardens in hospital settings. (*Evaluating a Children’s Hospital Garden Environment: Utilization and Consumer Satisfaction*)

2. Nanomaterials continue to receive increasing attention as a result of their potential applications in biology and medicine. (*Multi-walled carbon nanotube exposure alters protein expression in human keratinocytes*)
What and How to Begin

3. Under the Sultanates, many Javanese mosques were founded by wali, sultan, sultan’s family, or kyai (Islamic religious teacher) ordered by the sultan. (A Study on the History and Development of the Javanese Mosque Part 2: The Historical Setting and Role of the Javanese Mosque under the Sultanates)

4. Solar chimney natural ventilation has high ground in both, developing and developed countries. (Heat Transfer and Natural Ventilation Airflow Rates from Single-sided Heated Solar Chimney for Buildings)

5. A good suspension system should have the capability to reduce the car body displacement and acceleration, and maintain the right contact between tire and terrain. (Adaptive sliding controller with self-tuning fuzzy compensation for vehicle suspension control)
What and How to Begin

Methodology

• Explanation on the subjects, measures, procedure, ethics, and analysis methods.

1. The study is based on behavioural mapping and open-ended interview with 4-12-year-old children (n=10) in three villages in Peninsular Malaysia. There were five girls and five boys. The girls comprised of a 4-year-old, two 5-year-olds, a 6-year-old, and an 11-year-old. And, the boys were a 7-year-old, two 8-year-olds, a 10-year-old and a 12-year-old.

2. Estimation of imperviousness using remote sensing images was carried out using two forms of remote sensing imagery and a planimetric data of a small section of the study area. The first type of remote sensing was scenes from the Path 15/Row 35 and Path 16/Row 35 of the Landsat ETM+ images captured by Landsat 7 satellite.
What and How to Begin

Results and Findings

Discussion on relationship of variables; findings in graphs, histograms, tables, figures or pictures, etc. The results are a straightforward description of your statistical analyses and findings. All tables and diagrams must be commented. All tables and diagrams must be clear and they communicate effectively. Use the statistical significant methods such as $t=3.27, d.f. = 21, p<0.05$.

1. Aggregate data from behavioral mapping is shown in Figure 3. (Evaluating a Children’s Hospital Garden Environment: Utilization and Consumer Satisfaction)
What and How to Begin

Results and Findings

• 2. Adult garden users were asked if they would recommend any physical changes for the garden, and the majority (87%) did. (Evaluating a Children’s Hospital Garden Environment: Utilization and Consumer Satisfaction)

• 3. Therefore, opening areas of 16 m² between the occupant space and the double-skin space is considered reasonable to obtain preferable ventilation performance. (Natural ventilation performance of a double-skin façade with a solar chimney)
What and How to Begin

Discussion

Relate to research questions; explanation on the relationship of the independent and dependent variables; whether the findings are in accord or contradict to referred theories and discuss the reasons.

1. There is a major potential in controlling the supply air temperature optimal to reduce the HVAC energy use. A comparison of the energy use between a constant supply air temperature at 12 °C and the optimal strategy shows a difference of only 8% in Sturup with an internal load in a zone of 44 W/m² floor area (Fig. 19). This is a rather small difference, though this is only true if the internal loads are constant and that is not the case in practice. (Optimal supply air temperature with respect to energy use in a variable air volume system)
What and How to Begin

Discussion

• **Positive and negative affordances**

The first research question of the study was to determine the differences of affordances between the ward and the garden. The behavioral responses of the patients towards the affordances of the ward and the garden were categorized into positive and negative affordances. As can be seen in Figure 2 that the ward had 15 positive and 14 negatives affordances. In contrast, the garden provided 72 positive and 7 negative affordances. Thus the garden afforded the children almost five times more positive affordances and twice less negative affordances than the ward.

![Figure 2: Affordances offered by the ward and the garden to the patients](image)
What and How to Begin

Conclusions

These should summarise the main outcomes of your discussion. Sometimes a numbered list will be sufficient. If necessary, briefly discuss the major contribution of the research and its future in the current or related disciplines.

1. Moisture transfer rate is a function that in a linear relation with vapor pressure gradient and air change rate. (Experimental and numerical study on indoor temperature and humidity with free water surface)

2. In conclusion, place-related attachment and identity are phenomena that evolve over time and are guided by interwoven and interrelated psychological and sociological elements in a most complex way. (Attachment and identity as related to a place and its perceived climate)
What and How to Begin

References

This should normally only include the works you cite in your report. It should in accord to the requirement of the journal, for example, Harvard format.

Book:


Journal Article:
What and How to Begin

Book Chapter:
Developing the outline

• An outline is, essentially, a picture of the logical structure of your paper. It classifies the segments of the investigation into clear, logical categories. It employs special conventions use numbers, letters, and indentations to show the logical relations among ideas. It gives you a convenient way to refresh your memory on the mechanical details.
Developing the outline

Example 1: Children's neighborhood place as a psychological and behavioral domain

From *Journal of Environmental Psychology*, 2006

**Article outline**

1. **Introduction**
2. **Methods**
   2.1. Site and design
   2.2. Interview procedure
   2.3. Observation procedure
3. **Findings**
   3.1. Places important to children
   3.2. Reasons for importance of place
   3.3. Behavioral observations and comparative analysis
4. **Discussion**
   4.1. Children's places in Hansol neighborhood
   4.2. Distinction of place and space
   4.3. Attributes and behaviors of psychologically important places
5. **Conclusions**

References
Developing the outline

Example 2: Adaptive thermal comfort standards in the hot–humid tropics

From *Energy and Buildings*, 2004

**Article Outline**
1. Introduction
2. Why is the ISO7730 prediction wrong?
3. Deciding what temperatures to provide: the field survey approach
4. Accounting for air movement and humidity
   4.1 Air movement
   4.2 Humidity
   4.3 A meta-analysis of field studies
5. Conclusions
References
Developing the outline

Example 3: Deep drawing with anti-lock braking system (ABS)
From Mechanism and Machine Theory, 2006

Article Outline
1. Introduction
2. Design of anti-lock braking system (ABS) and tools
3. Experimental procedure
3.1. Material and equipment
3.2. Adjustment of compression distance
3.3. Experiments
3.3.1. Deep drawing tests without ABS
3.3.2. Deep drawing tests with ABS
4. Experimental results and discussion
4.1. Comparison of LDR and cup height
4.2. Comparison of the drawing loads
4.3. Comparison of the workpiece thickness
5. Additional experiments
6. Effect of lubrication
7. Conclusions
References
Sentence construction

• 1. A sentence should be short and sweet that explains a meaning; usually not more than 15 words.

• **Example:** Their breakthrough studies help us understand the complex process that enables us to tell the difference between the sweet scent of a hyacinth, the tang of garlic, the harsh sting of ammonia and the clean, citrusy spritz of lemon (39 words)—The Reader’s Digest, September 2006.

• 2. A sentence is unified when all its parts contribute to making one clear idea or impression.

3. Base your sentence on sound logic.

4. Thus avoid fanciful sentence that is loaded with many adjectives.

5. Do not allow excessive detail to obscure the central thought of the sentence.
Sentence construction

• **Example 1**: Survey on Thermal Environment in Residences in Surabaya, Indonesia: Use of Air Conditioner

  Along with the questionnaire, the temperature and humidity of the five houses were measured.

• **Example 2**: Application of radiant cooling as a passive cooling option in hot humid climate

  Air-conditioning is commonly used to achieve thermal comfort in commercial buildings in the hot and humid Southeast Asian Region.

• **Example 3**: Representation is everything

  Representation is everything. It permeates all aspects of personalization.
Sentence construction

• However, a long sentence is accepted when it is subdivided by punctuation such as semi-colon.

**Example 4:** Dendritic cells are relatively scarce: they constitute only 0.2 percent of white blood cells in the blood and are present in even smaller proportions in tissues such as the skin (30 words)—Scientific American, November 2002.
END