

How to write paper in journals

By

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- **Epilogue**

There are very few scientific papers from the academics and scientists of developing countries published in journals. As such, the average number paper per person from the developing countries may be less than 0.5. In contrast, academics in universities of South Korea, Japan and the United States published some 2.85 papers/year/person. The mainstream understanding of the academic world is that journal paper is the benchmark for academic excellence and a requirement for application of research grant and collaboration. Inasmuch, several universities in North America such as Carnegie Mellon University, MIT and Stanford received numerous research funding from public and private agencies. As such, tenure of the professors of these universities is directly dependent on bringing in research grants to their institutions.

The possible reasons very few papers come from the developing countries are interrelated which include: (i) lack of writing skills, (ii) difficulty of writing in English, and (iii) lack of empirical studies to be published. The first reason can be overcome through learning the writing skills, either through try-and-error publishing in journal, coaching by peers, or learning in a workshop.

- **Objectives**

The objectives of this manuscript are:

1. To give awareness the importance of writing in journal, and
2. To understand the technique of writing scientific manuscript for journal submission.

- **Contents**

The manuscript is divided into four lectures. Each lecture is equipped with an exercise. The topics of the lecture are:

- Importance of scientific publication
- Title
- Abstract and Keywords
- What and How to Begin
- Assessment criteria and submission guidelines

Lecture 1

Importance of scientific publication

1.0 Knowledge is Power

Journal paper is a scholarly document; a sound judgment of a scholar on a particular subject matter. Scientific publishing is a **rigorous effort** of writing facts derived from a valid methodology. The information is **accurate and current**: relevant to the discipline of knowledge. Inasmuch, publishing is an act of disseminating of the knowledge to peers. In turn, the publication becomes a source of reference for the peers to pursue more knowledge on the discipline or other related disciplines. For example, the knowledge of environmental psychology is useful for architects and landscape architects to understand how people behave in the built or natural environment. It helps to find answer on questions such as why adults have fond memory of natural landscapes that they encountered during their childhood. Inasmuch, it enables landscape planners to reason out why rural landscape afforded more place attachment or affiliation than urban one.

Journal is a source of **knowledge**. Scholarly journals are actively involved in the creation and diffusion of knowledge. Some journals are perceived as sources of knowledge; others serve as storers of knowledge. Journals frequently cited are highly to be valuable sources of knowledge, while those that often cite others are storers or borrowers of knowledge. The function of a journal is a function of how useful it is a source of knowledge.

It is a **concise, clear and accurate** report; discussing a problem and its solution achieved through rigorous, valid methodology. It is not an aggregate of anecdotal evidences gathered by a researcher.

Firstly, the problem is linked or justified with previous literature. It has a clear method of how the data are collected and later analyzed. The methodology is achieved from the literature review. The findings are discussed in relation to the theoretical background, either in accord or in contrast. Finally, it briefly suggest the implications of the findings in two aspects, theory and practice.

Clearly, knowledge is power. To give an example, Jeffery Sachs able to become special adviser to Kofi Annan because he has published more than 300 articles on economic. Because of the knowledge he possessed, he became full professor at Harvard after three years completing his PhD. And, his knowledge skills in world economic enable him to be the project leader to draft the United Nations Millennium Goals. Knowledge is a jawhar to be shared and disseminated.

A journal paper describes a **scientific inquiry**: fundamentally assumes life is not totally chaotic or random but has logical and persistent patterns of regularity. This assumption, labeled **positivism**, is responsible for the two major pillars of scientific inquiry: scientific theory and empiricism.

Positivism means all sciences, physical, natural, social, or health, are based on the fundamental assumption that there exists a persistent pattern or regularity in what is being studied.

Scientific theory is related to the logical aspect of science and is used as a framework to guide the understanding and explanation of patterns of regularity in life. **Empiricism** is the approach used in scientific inquiry to discover the patterns of regularity in life.

Empirical evidence is the only means scientists use to corroborate, modify, or construct theories. Whether a question can be studied scientifically depends on whether it can be subjected to verifiable observations. That is, it must be possible for the scientist to make observations that can answer the question.

In social sciences, it reports **patterns** or regularities of human behaviors in a context. The patterns can come in three forms: commonalities, variations, and uniqueness. But it does not discuss the exception.

Examples of findings:

1. Analyses suggest gustiness and wind speed are most important in determining user satisfaction. There is strong support for the theory that people actively adapt to microclimatic conditions (Walton et al., 2007).
2. In children-environment study, Fjortoft (2004) finds that playing in a natural environment enables young children to increase their motor fitness.
3. In the perspectives of healthcare and environment, Sherman et al. (2005) find that hospitalized children are fascinated and satisfied to garden because they are able to participate with play activities particularly with manipulating features.
4. In molecular biology, Bonnie L. Basseler (2004), a professor at Princeton University—occasional actress, dancer, and singer—found that bacteria talked to one another to form a quorum enough to trigger an attack on their host. (See Talking Bacteria, *Scientific American*, Feb. 2004.) Her study is known as quorum sensing which has its roots in the late 1960s.
5. In ecological economic, Herman E. Daly (2005) posits that to ensure long-term economic health, nations must sustain the levels of natural capital (such as fish), not just total wealth.

2.0 Plethora of Publications

ScienceDirect serves over 2000 peer-reviewed journals and provides access to near 8 million papers. The subjects that it serves include physical sciences and engineering (e.g. computer science), life sciences (e.g. agriculture), health sciences (e.g. pediatric nursing), and social sciences and humanities (e.g. economic).

SAGE Publications publishes more than 460 journals covering 30 areas of study which include Arts and Humanities (e.g. Children Language Teaching and Therapy), Engineering (e.g. Indoor and Built Environment) and Geography and Environmental Science (e.g. Journal of Planning Literature).

To get your paper published in renowned journal is a tough effort. As such, from the 11,000 submissions reviewed by *Science*, only 1 in 14 is accepted. It is a serious scientific manuscript; more than 80% of the Science's readers have doctorate level degrees.

Examples of journals on building, environment and habitation are:

- *Construction, Management and Economics* (Routledge)
- *Energy and Buildings* (Elsevier)
- *Building and Environment* (Elsevier)
- *Journal of Asian Architecture and Building Engineering*
- *Landscape Research*
- *Engineering, Construction and Architectural Management*(Emerald)

Examples of journals on human behavior and environment are:

- *Environment and Behavior*, Sage (ISI impact factor 0.517)
- *Journal of Environmental Psychology*, Academic (0.656)
- *Urban Studies*, Routledge/Taylor & Francis (1.127)
- *Human Ecology*, Springer/Plenum (0.978)
- *Environment & Planning D: Society & Space*, Pion (1.591)
- *Environment & Planning B: Planning & Design*, Pion (0.495)
- *Places: A Forum of Environmental Design*
- *Traditional Dwellings and Settlements Review*
- *Journal of Planning Literature* (Sage)

Examples of journals concerning architecture are:

- *Architectural Science Review*
- *Journal of Architectural Education* (Blackwell)

3.0 A few examples of academic writers

Name	Institution	Contributions
Paul Erdos	Memphis State University	More than 1400 papers in mathematics; coauthored with more than 500 researchers
James Varni	Texas A&M University	190 papers in clinical psychology and environmental psychology
Jeffery Sachs	Columbia University, then at Harvard University for 20 years	More than 200 articles in journals, over 100 book chapters and essays in economics, and more than 10 books; Director of Earth Institute; Project director for the UN Millennium Goal and special economic advisor to Kofi Annan
Amos Rapoport	University of Wisconsin at Milwaukee	Extensive papers in proceedings and book chapters in architecture and cultural landscape since late 1960s; academic adviser to the government of Israel

4.0 Achievement of some South Korean universities

Source: Scientific American, Vol. 290, No. 1, January 2004

- 1020 academics of Hanyang University in South Korea published 1041 Science Citation Index (SCI) articles in 2002. The university bestowed about 300 Ph.D's every year in the fields of cultural technology, nanotechnology, biotechnology, information technology, and environmental technology.
- Korea Advanced Institute of Science and Technology (KAIST) bestowed about 350 doctoral degrees a year. And, from 1997-2002 (5-year duration), KAIST's academics published 1649 papers in the fields of applied physics and material sciences; in comparison MIT published 1748 papers.
- In year 2002, the full-time professors (N=219) of Pohang University of Science and Technology (POSTECH), published 790 SCI papers that is 3.8 SCI publications per professor. In addition, the academics also published 5.6 papers per person in conferences.
- At Seoul National University, myriad of professors serve on the editorial boards of prominent international journals.

5.0 Impacts of Writing Article

- Dissemination of empirical findings
- Source of citations
- A mode to get research collaborators and graduate students
- Credential for researcher to apply for research grants and job promotion
- Credential for university as research and learning center
- Researcher as a hub of a special study area and university as an academic hub
- Citation is an important criteria use for benchmarking or rating universities

6.0 Type of paper

Most journals seek for manuscript that described **empirical findings** of a research. The research can be exploratory, descriptive and explanatory. These researches answered the research hypotheses or problems. Their findings explained the causal relationship(s) between the independent and dependent variables. Generally, an experiment was conducted to collect the data of the variables.

Example 1: Explanatory

Patient-friendly hospital environments: exploring the patients' perspective

In *Health Expectation*, 2004

Findings:

- Patients perceived the built environment of the hospital as a supportive environment
- Patients identified having a need for personal space, a homely welcoming atmosphere, a supportive environment, good physical design, access to external areas and provision of facilities for recreation and leisure.

However, non-experimental research, that is, a **review of literature** is also accepted by journal. The methodology of the research is a systematic reviewing of past studies and analyzing the information through content analysis and derives a pattern or regularity of a phenomenon.

Example 2: Descriptive

Greening Healthcare: Practicing as if the natural environment really mattered.

In *Alternative Therapies in Health and Medicine*, 2002

Findings:

- Interaction with nature positively affects multiple dimensions of human health.
- Physiological effects of stress on the autonomous nervous system are lessened.

Lecture 2

Title

2.0 Introduction

Title shall be:

- Clearly describe the contents of your research
- Independent and dependent variables
- Concise and accurate; snappy
- Comprise of major variables or subject
- Less than 10 words

Example 1:

Benchmarking electricity consumption (2006)

The subject is benchmarking electricity consumption in building.
Key indicator is kWh/m² usable floor area and year.

Example 2:

Architectural Types of Residential Unit in Nursing Homes (2006)

The subject is about architecture of nursing homes. The concern is the types of residential unit for the nursing homes.
Therefore, the title above avoid unnecessary words such as “a study of” or “an investigation on”

Example 3:

Residential Mobility in Chinese Cities: A Longitudinal Analysis (2006)

The subject is mobility of urban dwellers in China. The study is an analysis of social housing system in Chinese cities from 1949-1994.

Example 4:

Conflicting factors in construction projects: Korean perspective

The title discuss on adverse effect of conflict in construction projects. One of the factors is differing site condition.

Example 5:

Children in the City: Reclaiming the Street (2006)

The major variable of this paper is children who live in the city.
The issue is to make the street as a place for children.

2.2 Exercise 1: What are the variable(s) or subject of the following titles?

1. Use of process maps to develop a management briefing sheet for a design consultancy (Engineering, Construction and Arch Management)
2. The Law of Conservation of Activities in Domestic Space (*JAABE*)
3. Ecological footprints and sustainable urban form (*Journal of Housing and Built Environment*)
4. Designing suburban greenways to provide habitat for forest-breeding birds (*Landscape and Urban Planning*)
5. Slope Management Planning for the Mitigation of Landslide Disaster in Urban Areas (*JAABE*)

6. Contradictions and Complexities: Jane Jacobs's and Robert Venturi's Complexity Theories (*Journal of Architectural Education*)
7. Artificial neural networks model for predicting excavator productivity (*Engineering Construction and Architectural Management*)
8. Mapping the design process during the conceptual phase of building projects (*Engineering Construction and Architectural Management*)
9. The relationship between distribution of control, fairness and potential for dispute in the claims handling process (Construction management and Economic)
10. The importance and allocation of risks in Indonesian construction projects (Construction management and Economic)

2.3 Longer Title

However, some editors allow or prefer longer titles; about 15 words.

Examples in *Journal of Asian Architecture and Building Engineering* are:

1. *Domestic Space Arrangement of the Private Rental Housing: A Case of Urban Village Housings of Yogyakarta, Indonesia (2005)*

The issue of the paper is space arrangement in rental houses.
The author investigates a specific case of village houses in Yogyakarta.

2. *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 (2005)*

What is the subject?
Where is the study is carried out?
What is historical era?
Why the paper is divided into two parts?

Examples in *Children, Youth and Environment* are:

1. *Landscape as Playspace: The Effects of Natural Environments on Children's Play and Motor Development (2005)*

Clearly, the subject is natural landscape as playspace for children.
The issue is about what are the effects of playing in natural landscape on children's motor development.

2. *Children's Environments and Health-Related Quality of Life: Evidence Informing Pediatric Healthcare Environmental Design (2005)*

It seems that the paper concerns on children health and environment.
The environment is in healthcare setting.

3. *"At That Age, You Just Accept What You Have...You Never Question Things": Student Participation in School Ground Greening*

It seems the paper focuses on school children participating in greening projects.

2.4 Additional Exercise

What are concerns of the following papers?

1. *Plant refurbishment in historical buildings turned into museum*
2. *Children's Behavioral and Conceived Domains in Neighborhood Environment*
3. *Mixture and Material Factors Affecting the Strength and Shrinkage of High Performance Concrete*
4. *An Energy Management Process and Prediction of Energy Use in an Office Building*
5. *A method of optimization of solving a kinematic problem with the use of structural analysis algorithm (SAM)*
6. *The influence of dispersity in geometric structure on the stability of cellular solids*
7. *A simulation-based investigation of the staircase method for fatigue strength testing*
8. *Ecological networks: A spatial concept for multi-actor planning of sustainable landscapes*
9. *The potential of urban tree plantings to be cost effective in carbon credit markets*
10. *Social effects on crowding preferences of urban forest visitors*
11. *Perception of human risk factors in construction projects: an exploratory study*

Lecture 3

Abstract and Keywords

An abstract is the prelude of your paper. It is usually read first and may be only part read. Therefore, make it accurate, specific, objective, and self-contained (i.e., it makes sense alone without references to the main text).

The abstract **summarizes** the question being investigated in the paper, the **methods** used in the experiment, the **results**, and the **conclusions** drawn. The reader should be able to determine the major topics in the paper without reading the entire paper. Basically, an abstract is a one-paragraph summary of the entire paper. The abstract is composed **after** the rest of the paper is completed.

Some journals call this the “summary” because it must concisely describe the experimental question, the general methods and the major findings and implications of the experiments.

3.0 Content

An abstract summarizes the essential ideas of the paper in about 150 to 200 words. *Energy and Building* permits not more than 200 words. *Children, Youth and Environment* allows 150 words. And, Journal of Environmental Psychology requires 100-200 words. Do check Guide to Authors and Submission Guidelines.

Its content includes:

- Intent or objective of paper; Problem statement; Issue (1-2 sentences)
- Method of study (2-3 sentences)
- Results or Findings (2-3 sentences)
- Conclusion (1-2 sentences)
- Implication (1 sentence)--optional

3.1 Keywords

Keywords are the main subjects which guide the structure of your paper. Generally, 5 to 6 keywords are required.

Let us examine the following examples (n=6)

Example 1:

Thermal comfort for naturally ventilated houses in Indonesia (2005) (169 words)

Henry Feriadi and Nyuk Hien Wong

For naturally ventilated buildings (NVB) located in the tropical regions, thermal comfort (TC) prediction based on predicted mean vote (PMV) standard has shown some deviations from the observed results. Hot and humid environmental conditions throughout the year and personal adaptation could have an effect on expectation and perception about TC. Through an extensive field survey conducted in residential buildings in Indonesia, 525 sets of data had been gathered. The data analysis revealed that the PMV equation had predicted warmer thermal perception as compared to what people actually felt.

Interestingly, it was observed that under hot and humid tropical climate, people indicated preference to cooler environment as compared to what the neutral temperature has shown. The study also investigated the occupant's adaptive control preferences in creating a more thermally comfortable living environment.

The reciprocal effects of occupant's thermal perception and behavioural adaptation were explored. In tropical free-running buildings where the air temperature and humidity might not be modified easily without mechanical means, the people seemed to prefer higher wind speed.

Author Keywords: Thermal comfort; Adaptive behaviour; Tropical climate

Literature background: For naturally ventilated buildings (NVB) located in the tropical regions, thermal comfort (TC) prediction based on predicted mean vote (PMV) standard has shown some deviations from the observed results. Hot and humid environmental conditions throughout the year and personal adaptation could have an effect on expectation and perception about TC.

Method: Through an extensive field survey conducted in residential buildings in Indonesia, 525 sets of data had been gathered. The data analysis revealed that the PMV equation had predicted warmer thermal perception as compared to what people actually felt.

Findings: Interestingly, it was observed that under hot and humid tropical climate, people indicated preference to cooler environment as compared to what the neutral temperature has shown. The study also investigated the occupant's adaptive control preferences in creating a more thermally comfortable living environment. The reciprocal effects of occupant's thermal perception and behavioural adaptation were explored. In tropical free-running buildings where the air temperature and humidity might not be modified easily without mechanical means, the people seemed to prefer higher wind speed.

Example 2:

RESTORATIVE EXPERIENCE, SELF-REGULATION, AND CHILDREN'S PLACE PREFERENCES (2003) (169 words)

KALEVI **KORPELA**, MARKETTA KYTTÄ and TERRY HARTIG

We examined the role of restorative experience and self-regulation in the formation of place preferences by Finnish children. Girls and boys ($n=55$) aged 8–9 or 12–13 and living in downtown Tampere or Helsinki answered open- and closed-ended questions in a structured interview. One or both parents completed a questionnaire. We did not find statistically significant associations between age or gender and type of favorite place, nor was a particular type of favorite place named disproportionately often, independent of age and gender. The latter result contrasts with previous findings with young adults. However, like young adults, over half of the children appeared to use their favorite places for cognitive restoration. One-third of the children reported using their favorite places for emotion-regulation. Use of the favorite place for restoration and emotion-regulation did not necessarily imply visiting the favorite place alone; however, 12–13-year-olds were more likely than the younger age group to visit the favorite place with friends. Surprisingly, many parents did not know their child's favorite place.

Purpose: We examined the role of restorative experience and self-regulation in the formation of place preferences by Finnish children.

Method: Girls and boys ($n=55$) aged 8–9 or 12–13 and living in downtown Tampere or Helsinki answered open- and closed-ended questions in a structured interview. One or both parents completed a questionnaire.

Findings: We did not find statistically significant associations between age or gender and type of favorite place, nor was a particular type of favorite place named disproportionately often, independent of age and gender. The latter result contrasts with previous findings with young adults. However, like young adults, over half of the children appeared to use their favorite places for cognitive restoration. One-third of the children reported using their favorite places for emotion-regulation.

Conclusion: Use of the favorite place for restoration and emotion-regulation did not necessarily imply visiting the favorite place alone; however, 12–13-year-olds were more likely than the younger age group to visit the favorite place with friends. Surprisingly, many parents did not know their child's favorite place.

Example 3:

Housing regeneration and building sustainable low-income communities in Korea (2005)

Seong-Kyu Ha

Abstract

◀Housing▶ regeneration in Korea has focused on improving physical deterioration and maximizing landlord profits rather than on strengthening the social capital of low-income neighborhoods. Much less attention has been given to community capital, particularly social capital. This paper examines the characteristics of low-income communities and ▶housing▶ regeneration projects, and sustainable low-income communities in terms of community capital. There is no doubt that ▶housing▶ regeneration projects have contributed to a ▶housing▶ stock increase. The survey evidence demonstrates that ▶housing▶ regeneration projects demolished the slums where low-income families are concentrated, thereby isolating and marginalizing the displaced residents. The market approach of residential redevelopment schemes can be characterized as a landlord-initiated gentrification process. Applying the concept of sustainable development to low-income communities in urban Korea requires mobilizing residents and their governments to strengthen economic capital and preserve

Problem Statement: Housing regeneration in Korea has focused on improving physical deterioration and maximizing landlord profits rather than on strengthening the social capital of low-income neighborhoods. Much less attention has been given to community capital, particularly social capital.

Intent: This paper examines the characteristics of low-income communities and ▶housing▶ regeneration projects, and sustainable low-income communities in terms of community capital.

Findings: There is no doubt that ▶housing▶ regeneration projects have contributed to a ▶housing▶ stock increase. The survey evidence demonstrates that ▶housing▶ regeneration projects demolished the slums where low-income families are concentrated, thereby isolating and marginalizing the displaced residents. The market approach of residential redevelopment schemes can be characterized as a landlord-initiated gentrification process.

Implication: Applying the concept of sustainable development to low-income communities in urban Korea requires mobilizing residents and their governments to strengthen economic capital and preserve.

Example 4:

Airflow rates by combined natural ventilation with opposing wind—unambiguous solutions for practical use (2007)—81 words

Issue: Analysis of possible airflow rates by combined natural ventilation with opposing wind in rooms with two openings shows multiple solutions, instability and hysteresis. **Intent:** In this paper, it is analysed to what extent these phenomena should be considered under practical conditions. **Results:** The analysis shows that unambiguous solutions can be obtained if difference between indoor and outdoor temperature is known at start, i.e. when heat sources are switched on and ventilation openings are opened. Discontinuities in airflow rates occur under certain specific conditions.

Example 5:

Mixture and Material Factors Affecting the Strength and Shrinkage of High Performance Concrete (2005)

This paper reports experimentally investigated effects of mixture proportion and material factors on strength, drying and autogenous shrinkage of high performance concrete (HPC). Based on numerous trial mixtures by the authors, HPC mixtures incorporated 5% expansive additive (EA) and 1% shrinkage reducing admixture (SRA). Water to binder ratio (W/B) and water content were varied from 20% to 35% and 145 kg/m³ up to 175 kg/m³, respectively. Cement type, such as ordinary Portland cement and high belite cement, as well as superplasticizer type, including melamine based, naphthalene based and polycarboxylate based superplasticizers, were chosen as experimental parameters. Drying and autogenous shrinkage were reduced by increasing the W/B and decreasing water content. Additionally, drying and autogenous shrinkage were reduced by using high belite cement. In order to secure volumetric stability, HPC mixtures must incorporate, within a range of possible limits, fly ash (FA), silica fume (SF), EA and SRA, high W/B, low water content and a high C₂S content cement.

Keywords: mixture proportion; autogenous shrinkage; drying shrinkage; High Performance Concrete (HPC)

Example 6:

Local thermal sensation and comfort study in a field environment chamber served by displacement ventilation system in the tropics

K.W.D. Cheong, W.J. Yu, S.C. Sekhar, K.W. Tham and R. Kosonen

Purpose: This paper presents a study of local thermal sensation (LTS) and comfort in a field environmental chamber (FEC) served by displacement ventilation (DV) system. **Method:** The FEC, 11.12 m (*L*)×7.53 m (*W*)×2.60 m (*H*), simulates a typical office layout. A total of 60 tropically acclimatized subjects, 30 male and 30 female, were engaged in sedentary office work for 3 h. Subjects were exposed to three vertical air temperature gradients, nominally 1, 3 and 5 K/m, between 0.1 and 1.1 m heights and three room air temperatures of 20, 23 and 26 °C at 0.6 m height. **Objective of study:** The objective of this study is to investigate the mutual effect of local and overall thermal sensation (OTS) and comfort in DV environment. **Findings:** The results show that in a space served by DV system, at OTS close to neutral, local thermal discomfort decreased with the increase of room air temperature. The OTS of occupants was mainly affected by LTS at the arm, calf, foot, back and hand. Local thermal discomfort was affected by both LTS and OTS. At overall cold thermal sensation, all body segments prefer slightly warm sensation. At overall slightly warm thermal sensation, all body segments prefer slightly cool sensation.

Keywords: Local thermal sensation; Local thermal comfort; Thermal gradient; Displacement ventilation; Tropics

3.2 Some common statements in writing abstracts

Purpose

This study **investigates** the impact of a garden...
This paper **presents** a modelling study...
The paper **traces** the conceptualization, planning...
This qualitative study **examined** the preferences of 54 male...
The literature **shows** a consistent strong preference...
The paper **discusses** the primary challenges...
This paper **aims** to develop...
This paper **introduces** the roles of CFD...
This paper **reports** the results of the survey in...
Furthermore, it **analyses** the developing trends...
This paper reports experimentally **investigated**...

Results and Findings

As a result the patients...
The results showed that the shading conditions of the courtyard internal envelope are **significantly dependent**...
The study **suggests** guidelines...
Responses were **analyzed**...
The analysis **shows** that unambiguous solutions...

Conclusion and Implication and Recommendations

It is **concluded** that although contact-spread...
It has also been **implicated** in...
The resulting key directions for **future research** highlight issues
Lessons are **drawn** from the implementation...
Finally, the modelling methods, **predictive** behaviours...
Recommendations from adolescents include

3.3 Exercises

Let us do the following exercise by choosing at least two abstracts from list (n=11). Analyze the abstract in the form of problem statement, method, analysis, findings and conclusion.

Exercise 1:

Novel approach to multi-functional project team formation (2004)

Tseng T.-L.; Huang C.-C.¹; Chu H.-W.; Gung R.R.

A group of people from different functional departments or various areas of work responsibility, working together and exchanging information through networks, is called a "multi-functional team" in the e-world. Multi-functional teams are becoming crucial because organizations always require group cooperation across functional lines and the members may not be in the same location. The formation of multi-functional teams is becoming a key issue in project management. The literature does not provide analytical solutions

for forming multi-functional teams under uncertain information environment. To deal with the underlying complexities of the multi-functional teams formation process, a methodology for the multi-functional teams formation is developed. The methodology is based on fuzzy sets theory and grey decision theory. Fuzzy sets theory is applied to deal with problems involving ambiguities, which are normally confronted in multi-functional teams formation practice and form groups, when there is no clear boundary for relationship between customers' requirements and project characteristics. Grey decision theory is also used to select desired team members through abstractural information. Specifically, the team member is required to be competent in his/her work and also able to share other's responsibility. In this paper, applying the fuzzy and grey approaches demonstrates its capability of forming a good multi-functional team and it is promising for dealing with insufficient information at the team forming stage.

Keywords

[Multi-functional team](#); [Team formation](#); [Fuzzy sets theory](#); [Grey decision making](#)

Exercise 2:

Shading simulation of the courtyard form in different climatic regions (2004)

This paper presents a modelling study carried out into the effect of rectangular courtyard proportions on the shading and exposure conditions produced on the internal envelope of the form in four different locations. These locations, Kuala Lumpur, Cairo, Rome and Stockholm, were chosen to represent the climatic regions of hot humid, hot dry, temperate and cold climates, respectively. The study highlights the effect of the climatic conditions on the suggested courtyard ratios and heights to achieve a reasonable annual performance in the examined locations. Also, it clarifies the variation in the courtyard daily shading and exposure performances as a result of changing the location latitude and consequently the sun's position in the sky. The study suggests guidelines and general rules for efficient courtyard design in the considered climatic regions. Furthermore, it states the ranges within which the parameters of the form can be changed with minimum deviation from the optimum performance. The results showed that the shading conditions of the courtyard internal envelope are significantly dependent on the form's proportions, location latitude and available climatic conditions.

Exercise 3:

A greenway network for Singapore (2006)

The greenway movement in Singapore began in the late 1980's as a proposal for an island-wide network of green corridors. The paper traces the conceptualization, planning strategy and implementation of this greenway network. The capitalization of under-utilized land along drainage channels and beside carriageways for pilot greenway projects ensured government backing for the projects. The challenges faced in implementing the projects and the solutions taken to advance the greenway concept are discussed. Garnering public support for the completed sections generated resources and conferred additional flexibility to the land allocation process, allowing the concept to evolve. Strategic partnership with key land-use agencies and the overview of a national Garden City Action Committee for conflict resolution facilitated the process. Lessons are drawn from the implementation of the pilot projects to inform subsequent greenway development efforts, enhancing the usage and multi-functional capacity of the greenways. The Singapore experience provides a model for greenway planning and implementation for other rapidly urbanizing cities in Asia.

Exercise 4:

Design Issues in Hospitals The Adolescent Client (2006)

Adolescents are underrepresented in the research on health care design. This qualitative study examined the preferences of 54 male and 46 female junior high school students, aged 12 to 14, regarding the physical design and visiting policies of hospitals. Participants compared and rated color photos of hallways and lobbies for units with adult-oriented decoration versus child-oriented decoration and answer questions about such issues as privacy, amenities, entertainment, and visiting hours policy. Responses were analyzed to explore adolescents' criteria for hospital design. Adolescents prefer the bright colors associated with childhood but reject the emblems of childhood, such as teddy bears and balloons. Recommendations from adolescents include private bedrooms and bathrooms, full-coverage pajamas, access to DVDs, continuous availability of food, and a lenient visiting policy.

Key Words: health care architecture • hospital design • family-centered care • adolescents • privacy

Exercise 5:

The Airborne Transmission of Infection in Hospital Buildings: Fact or Fiction? (2003)

Airborne transmission is known to be the route of infection for diseases such as tuberculosis and aspergillosis. It has also been implicated in nosocomial outbreaks of MRSA, *Acinetobacter* spp. and *Pseudomonas* spp. Despite this there is much scepticism about the role that airborne transmission plays in nosocomial outbreaks. This paper investigates the airborne spread of infection in hospital buildings, and evaluates the extent to which it is a problem. It is concluded that although contact-spread is the principle route of transmission for most infections, the contribution of airborne micro-organisms to the spread of infection is likely to be greater than is currently recognised. This is partly because many airborne micro-organisms remain viable while being non-culturable, with the result that they are not detected, and also because some infections arising from contact transmission involve the airborne transportation of micro-organisms onto inanimate surfaces.

Key Words: Nosocomial • Infection • Hospital • Airborne • Droplet nuclei • Staphylococcus aureus • MRSA •

Exercise 6:

Application of Computational Fluid Dynamics in Building Design: Aspects and Trends (2006)

Computational fluid dynamics (CFD), as the most sophisticated airflow modelling method, can simultaneously predict airflow, heat transfer and contaminant transportation in and around buildings. This paper introduces the roles of CFD in building design, demonstrating its typical application in designing a thermally comfortable, healthy and energy-efficient building. The paper discusses the primary challenges of using CFD in the building modelling and design practice. Furthermore, it analyses the developing trends in applying CFD to building design, by thoroughly reviewing the literatures in all the proceedings of the International Conference on Building Simulation, one of the most influential symposiums in the building simulation field.

Key Words: Building modelling • Computational fluid dynamics • Building design • Energy efficiency • Building systems • Development trend

Exercise 7:

Evaluation of Methods for Modelling Daylight and Sunlight in High Rise Hong Kong Residential Buildings (2004)

Two alternative modelling approaches, physical scale modelling and numerical simulation, have been applied to the design assessment of daylight and sunlight in, and around, high-density Hong Kong housing. The ability to include both self-shading and site obstructions is crucial to this application area, which severely constrains the methods used for both approaches. While physical scale modelling could assist in estate planning, it was not feasible to study both external and internal spaces at the same model scale, even in a large, advanced facility. Due to the need to include context surroundings, physical scale models in this application would be unlikely to be able to inform design on detailed internal conditions. Numerical simulations could effectively focus on both issues and the data produced could couple to detailed modelling of other aspects, e.g. the calculation of cooling load or peak internal temperatures. Numerical modelling at this level has significant drawbacks, however, including the investment in time and expertise necessary to achieve reliable results, and the requirement for rigorous testing and validation for general acceptance of results.

Key Words: Daylight • Daylight modelling • Residential • High rise • Urban environmental design

Exercise 8

Survey on Thermal Environment in Residences in Surabaya, Indonesia: Use of Air Conditioner

This paper reports the results of the survey in Indonesia on the consciousness of the residents towards the use of air conditioner. The questionnaire survey and measurements of the thermal environment were carried out. The higher the resident's income is, the more the percentage of the residents who feel the air conditioner is necessary. Once they start to use air conditioners, they will not quit using. When the air conditioner is used, the room temperature is from 24 to 30 degrees C, similar to that in Japan. The air conditioner is usually used around 14:00 and during sleeping time. This is similar to Naha's situation, a subtropical area in Japan. Also, the duration that the air conditioner is used is longer than that in Japan. The energy consumption for cooling is expected to increase in this area.

Keywords: use of air conditioner; hot humid climate; thermal

Exercise 9:

Occupant preferences and satisfaction with the luminous environment and control systems in daylight offices: a literature review (2006)

Anca D. Galasiu and Jennifer A. Veitch

This paper presents an overview of peer-reviewed investigations of subjective issues linked to the use of daylighting in office buildings, particularly studies of preferred physical and luminous conditions in daylight office environments, and studies of occupant satisfaction and acceptance of electric lighting and window shading controls. The literature shows a consistent strong preference for daylight and a wide distribution between individuals in relation to the preferred illuminance levels in daylight offices. Existing

knowledge about how people respond to daylight-linked lighting and shading controls in the workplace is very limited; therefore, this paper presents a summary of knowledge gaps in the field of daylighting and its interaction with the occupants. The resulting key directions for future research highlight issues for which a better understanding is required for the development of lighting and window shading control systems that are both energy efficient and suitable for the office occupants.

Keywords: Daylight; Daylighting; Occupant preferences; Occupant satisfaction; Lighting control; Shading control

Exercise 10:

Contradictions and Complexities: Jane Jacobs's and Robert Venturi's Complexity Theories (115 words)

When Robert Venturi began writing *Complexity and Contradiction in Architecture* in 1962, Jane Jacobs's *The Death and Life of Great American Cities* (1961) was the subject of dinner-table conversation across the country. Apart from Jacobs's direct influence, among the parallels that emerged from their Townscape affiliations and other interests, the concept of complexity stands out, with Venturi's conception echoing Jacobs's historic introduction of complexity science into architectural and urban theory. While Venturi did not seek to extend the scientific research put forward by Jacobs, favoring instead the complexities suggested by gestalt theory and New Criticism, he cited similar scientific sources and derived similar principles for urbanism, as revealed by his Copley Square project of 1966.

Exercise 11:

Artificial neural networks model for predicting excavator productivity (104 words)

This paper aims to develop a quantitative model for predicting the productivity of excavators using artificial neural networks (ANN), which is then compared with the multiple regression model developed by Edwards & Holt (2000). A neural network using the architecture of multilayer feedforward (MLFF) is used to model the productivity of excavators. Finally, the modelling methods, predictive behaviours and the advantages of each model are discussed. The results show that the ANN model is suitable for mapping the non-linear relationship between excavation activities and the performance of excavators. It concludes that the ANN model is an ideal alternative for estimating the productivity of excavators.

Exercise 12:

Caregivers' Evaluation On Hospitalized Children's Preferences Concerning Garden And Ward (2005)

This study investigates the impact of a garden on the psychological well-being of pediatric patients, aged 2 to 12 years, by determining their preferences concerning the domains (properties and attributes) of gardens and wards of two hospitals in Malaysia. The preference is a behavioral response observed by the caregivers, mothers and nurses. It is elicited using two sets of administered questionnaires; Set A for mothers (n=360) and Set B for nurses (n=43). From Set A, 94% of the mothers found that more patients preferred the garden than the ward. The mean preference scores of the garden are greater than the ward in 11 domains including refreshing smell, fresh air, full of light, cheerful environment, pleasant sound, scenic view, open space, free to play, not confined, home feeling, and place for variety of activities. From Set B, the nurses found that the patients preferred the garden more than the ward because it allows them to: (1) play freely and safely either alone or with peers, (2) escape from the confined ward environment into an

open space where they can observe animals, and (3) gain control on their movements. As a result the patients feel cheerful and are more agile, suggesting their cognitive functioning is restored.

Keywords: preference, restorative environment, children, hospitalization, cognitive functioning

Exercise 12:

Problems in managing internal development projects in multi-project environments

Elonen S.¹; Artto K.A.

This article identifies problems in managing multiple internal development projects. The research methodology employed organisation-specific interviews, surveys and workshops on two case project portfolios. Project portfolio management studies provide one view on existing knowledge in this area. The study results in six relevant problem areas: (1) Inadequate project level activities, (2) Lacking resources, competencies and methods, (3) Lacking commitment, unclear roles and responsibilities, (4) Inadequate portfolio level activities (5) Inadequate information management and (6) Inadequate management of project-oriented organisation. The article suggests further analysis and development of managerial practices on these areas.

Keywords: [Project management](#); [Project portfolio management](#); [Multi-project management](#); [Programme management](#); [Project-oriented business](#); [Internal development project](#)

Exercise 13:

Climate change, thermal comfort and energy: Meeting the design challenges of the 21st century

Michael J. Holmes¹   and Jacob N. Hacker²

This paper addresses the dual challenge of designing sustainable low-energy buildings while still providing thermal comfort under warmer summer conditions produced by anthropogenic climate change—a key challenge for building designers in the 21st century. The main focus is towards buildings that are ‘free running’ for some part of the summer, either being entirely naturally ventilated or mixed-mode (where mechanical cooling is only used when thought to be essential). Because the conditions in these buildings will vary from day to day it is important to understand how people react and adapt to their environment. A summary is made of recent developments in this area and of the climate data required to assess building performance. Temperatures in free running buildings are necessarily closely linked to those outside. Because the climate is changing and outside summer temperatures are expected to increase, the future will offer greater challenges to the designers of sustainable buildings aiming to provide either entirely passive or low-energy comfort cooling. These issues are demonstrated by predictions of the performance of some case study buildings under a climate change scenario. The examples also demonstrate some of the important principles associated with climate-sensitive low-energy design.

Keywords: Climate change; Thermal comfort; Low-energy buildings; Mixed-mode; Natural ventilation; Thermal mass

Lecture 4

What and How to Begin

4.0 Content

The first task to accomplish as you begin the process of writing is to order and organize the information you wish to present. Some people work well from an outline, others do not. Some people write first to discover the points, then rearrange them using an after-the-fact outline. Whatever process you may use, be aware that scientific writing requires special attention to order and organization.

In general, a paper in social science including architecture and planning would contain the following:

- a. **Title:** It must be informative. And, the dependent and independent variables should normally be mentioned in it. The title should be short and unambiguous, yet be an adequate description of the work. A general rule-of-thumb is that the title should contain the **key words describing the work** presented.
- b. **Abstract:** 150-200 words on issue or problem, methods, findings and conclusions. It is a brief summary of all the important components of the research report. It gives the reader a good idea of what to expect in the report.
- c. **Keywords:** 4 to 5 words
- d. **Introduction:** The central experimental question and important background information are presented in this section. Relevant and established scientific knowledge is cited in this section and then listed in the *References* section at the end of the article. Introductions are intended to lead the reader to understand the authors' hypothesis and means of testing it.
- e. **Methodology:** This section describes the experiment in such a way that it may be repeated exactly. The information in this section should not be a list of steps. The procedure is written concisely, but in paragraph form using the **past tense**. The way the independent variable was varied, the numbers of replications, the control treatments, and the method of measuring the dependent variable(s) are all included. In short, it explains the **subjects, measures, procedure, ethics, and analysis methods**.

All experimental procedures and reagents are described in detail sufficient for another researcher to reproduce the findings. This section must be accurate and complete if the discoveries are to be validated and then extended by others.

- f. **Results:** The data are presented in this section, giving other scientists an opportunity to judge their merit. The findings are described with words and also illustrated using figures and tables. Figures are used to facilitate the interpretation of the data and have accompanying explanations, called "legends."

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 $t=3.27$, $d.f. = 21$, $p<0.05$.

- g. **Discussion:** In this section, authors may present a model or idea they feel best fits their data. They also present the strengths and significance of their data. Some journal articles fuse "Results and Discussion" into one section, but when they are separated a reader can easily distinguish the data collected from the authors' interpretation of it.

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.

This is your opportunity to demonstrate your critical ability to synthesize and interpret scientific work.

- h. **Conclusions:** These should summarize 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.
- i. **Acknowledgements:** Acknowledge the sponsor of the research and contribution of respondents.
- j. **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. As a rule, in research papers, direct quotation and footnoting are not practiced - simply restate the author's ideas or findings in your own words and provide a citation. *Plagiarism* (use of others words, ideas, images, etc. without citation) is not to be tolerated and can be easily avoided by adequately referencing any and all information you use from other sources. Paraphrasing other's words too closely may be construed as plagiarism in some circumstances.

4.1 Summary

The sections appear in a journal style paper in the following prescribed order:

Experimental process	Section of Paper
What did I do in a nutshell?	Abstract
What is the problem?	Introduction
How did I solve the problem?	Materials and Methods
What did I find out?	Results
What does it mean?	Discussion
Who helped me out?	Acknowledgments (optional)
Whose work did I refer to?	Literature Cited
Extra Information	Appendices (optional)

4.2 Introduction and Background

The introduction has two functions

a - Provide context and background for the investigation.

The introduction begins by reviewing background information that will enable the reader to understand the objective of the study and the significance of the problem, relating the problem to the larger issues in the field. The scientist includes only information that directly prepares the reader to understand the question being investigated. Most ideas in the introduction will come from outside sources, such as scientific journals or books dealing with the topic under investigation.

b - To state the question asked and the hypothesis tested in the study.

The introduction briefly describes the experiment performed, including only the question and hypothesis that were investigated. A description of all variables is included here.

Note – A scientist writes in the **past tense** when referring to his/her own experiment. The **present tense** is used when referring to another investigator's published work as background information.

Examples:

1. The benefits that individuals can derive from plants and contacts with nature have been discussed for thousands of years. **(Evaluating a Children's Hospital Garden Environment: Utilization and Consumer Satisfaction)**
2. 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)**
3. 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)**
4. 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)**
5. 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)**
6. Using the calculated spatial luminance distribution, we obtain photometric data for a light source which substitutes a window or a window opening in a room for which daylight illuminance is to be determined. **(Development of a substitutive light source for indoor daylight calculations)**
7. 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)**
8. The year 2003 witnessed the 50th anniversary of the discovery of DNA's double-helix structure by James D. Watson and Francis H. Crick. **(Nanotechnology and the Double Helix)**
9. The nanoscale is the scale of molecules. **(Nanotechnology and the Double Helix)**

4.3 Results and Findings

Figures and tables are numbered consecutively throughout the paper. When referring to figures and tables within a paragraph, scientists use the word Figure or Table, followed by its number. If possible, each figure or table is placed at the end of the paragraph in which it is cited.

Examples

1. Aggregate data from behavioral mapping is shown in Figure 3. **(Evaluating a Children's Hospital Garden Environment: Utilization and Consumer Satisfaction)**
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)**

4.4 Discussions

This is where the results of the experiment are analyzed and interpreted. The conclusion is clearly states in this section. The word “prove” is not used in the conclusions, since the results will support, verify, or confirm the hypothesis, or they will negate, refute, or contradict the hypothesis.

Example

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)**

4.5 Conclusions and Recommendations

Examples

1. Based on the simulation and experiment results and discussions, the following conclusions can be drawn:

(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)**

3. The crucial goal for nanotechnology based on DNA is to extend the successes in two dimensions to three dimensions. **(Nanotechnology and the Double Helix)**

4. Here are some ideas about how to proceed:

- It may be best to start the experiments with relatively small store. That way there will be fewer assignments to try and fewer similar signatures.
- We should probably start with a date in the middle of the operation of the system and try to extend identifications both forward and backward in time. **(Phenomenal Data Mining)**

4.6 References

Book:

1. Wilson, E.O. (1984). *Biophilia*. Cambridge, Mass: Harvard University Press.
2. **Holloway, Sarah and Gill Valentine**, eds. (2000). *Children’s Geographies: Playing, Living, Learning*. London and New York: Routledge.

Journal Article:

1. Verderber, S. F. (1986). Dimensions of person-window transactions in the hospital environment. *Environment and Behavior*, 18, 450-466.
2. **Gallagher, Claire B.** (2004). "Our Town: Children as Advocates for Change in the City." *Childhood* 11(2): 251-262

Book Chapter:

Jencks, Christopher and Susan Mayer (1990). "The Social Consequences of Growing up in a Poor Neighborhood." In Lynn, Laurence and Michael McGeary, eds. *Inner-City Poverty in the United States*. Washington, D.C.: National Academy Press, 111-186.

4.7 Citations

1. The calculation of spatial luminance distribution is based on the new CIE standard S 011/E:2003 [1].
2. The invention of the scanning tunneling microscope (STM) in 1982 by Binnig and Rohrer [1] triggered the development of a family of high-resolution microscopes called scanning probe microscopes (SPM) [2]. (Compact programmable controller for a linear piezo-stepper motor)
3. Inertial sliders [12], [13], [14] and [15] are similar to the piezo-steppers in that they produce a series of discrete steps, each using one full expansion of a piezo drive. (Compact programmable controller for a linear piezo-stepper motor)
4. To date, there are only a handful of research studies that have employed a strict scientific method to the study of wildlife on golf courses with most focusing on links courses (Green and Marshall, 1987; Blair, 1996; Terman, 1997 and Terman, 2000). (Effects of golf courses on local biodiversity)
5. More than a decade after the compromise Northwest Forest Plan was developed for 9.8 million ha of forest land in California, Oregon, and Washington, intense controversy over forest management in the region continues (Stokstad, 2005).

4.8 Writing style

- **Abbreviations:** Do not use abbreviations in the text *except* for units of measure.
- Do not use contractions: for example, "don't" must be "do not" and "isn't" must be "is not" etc.
- **Precise word** use is critical.
- Your writing should be in **complete sentences** and easily understood.
- Always use the **passive voice**, which stresses the subject being observed or tested, rather than the active voice, which stresses the researcher.

OR

- **Use Active Verbs:** Use active verbs whenever possible; writing that overly uses passive verbs (is, was, has, have, had) is deadly to read and almost always results in more words than necessary to say the same thing.

ACTIVE: "*the mouse consumed oxygen at a higher rate...*"
 PASSIVE: "*oxygen was consumed by the mouse at a higher rate...*"

- Use the **past tense** when reporting the results of your own work (which includes most of the Abstract, Materials and Methods, and Results sections) and the **present tense** for established research (which includes most of the Introduction and Discussion).
- **Be clear and concise:** Write briefly and to the point. Say what you mean **clearly** and avoid embellishment with unnecessary words or phrases. **Brevity** is very important. Use of the active voice alone shortens sentence length considerably.
- Unlike your descriptive writing in other disciplines, writing in science does not benefit from the use of modifiers such as “very,” “quite,” and “rather.” You should omit any words or phrases that do not add to the meaning of your sentences.
- Some exceptions should be noted:

1. Use the **past tense** when you refer to an author directly:

For example:

Implementation was adapted from [Dillman \(2000\)](#) using a combination of email and regular mail initial contact and reminder letters.

2. Use the **present tense** when you refer directly to a table or figure in your own paper

For example:

Figure 1 shows that the population was adversely affected.

4.9 Constructing the sentence

- A sentence should be short and sweet that explains a meaning; usually not more than 15 words.
- A sentence is unified when all its parts contribute to making one clear idea or impression.
- Base your sentence on sound logic.

Example 1: *A greenway network for Singapore*

The paper traces the conceptualization, planning strategy and implementation of this greenway network (13 words).

Example 2: *A Study on Indoor Air Quality of Urban Residential Buildings in China*

The purpose of this survey was to examine the actual conditions of residential indoor air quality in urban areas in China (21 words).

Example 3: *Representation is everything*

Representation is everything. It permeates all aspects of personalization.

Example 4: *Landscape as Playscape*

Natural environments represent different play opportunities for children.

Example 5: *Landscape and Health*

Human health and behavior are influenced by the environment. Environment contributes to an overall quality of life.

Example 6: *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 7: *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. (19 words)

Example 8: *The Galactic Odd Couples* (Weaver, 2003)

Black holes are the most efficient engines of destruction known to humanity (12 words).

- Thus avoid fanciful sentence that is loaded with many adjectives.
- Do not allow excessive detail to obscure the central thought of the sentence.

Example 9: 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.

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

Example 10: 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

Example 11: The representation should include both objective and subjective information about user interactions in order to maximize the opportunity to predict user behavior, and thereby adapt to their individual needs. (29 words)—*Communications of ACM*, August 2000

- Or, when the reader able to follow the idea present by the sentence.

Example 12: The reason of collapse or burst of form is because of too large momentum and pressure under pouring of concrete, unqualified material of support, or insufficient confined force of column, unsatisfactory design and combination from system.

4.10 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.

Outlines appear in **topic or sentence**. Avoid mixing the forms within a given outline, and use either standard outline symbols or the decimal plan.

a. Topic outline

Use of standard outline symbols.

List your major categories and subtopics in this form:

- I. _____ First major heading
 - A. _____ Subheadings of first degree
 - 1. _____ Subheadings of second degree
 - 2. _____

With the topic outline, every heading is a noun phrase (“Prevention of abuse”) or its equivalent, a gerund phrase (“Preventing abuse”), or an infinitive phrase (“To prevent abuse”). A brief sample follows:

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**
- 6. References**

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

From *Energy and Buildings*, 2004

Article Outline

- 10. Introduction
- 11. Why is the ISO7730 prediction wrong?
- 12. Deciding what temperatures to provide: the field survey approach
- 13. Accounting for air movement and humidity
 - 4.1 Air movement

- 4.2 Humidity
- 4.3 A meta-analysis of field studies
- 14. Conclusions
- References

Example 3: Application of radiant cooling as a passive cooling option in hot humid climate

From *Building and Environment*, 2005

Article Outline

1. Introduction

2. Background information and summary of a previous study of radiant cooling at AIT

2.1. Climate

2.2. A previous experimental study of radiant cooling at AIT

3. Whole year simulation by TRNSYS

4. Night-time application

4.1. Application of constant-temperature cooling water

4.1.1. Results

4.2. Application of cooling tower

4.2.1. Results

5. Whole day application

5.1. Application of constant-temperature cooling water

5.1.1. Results

5.2. Application of cooling tower

5.2.1. Results

6. Daytime application

6.1. Results

7. Conclusion

References

Example 4: 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

b. Sentence Outline

This outline includes full sentences that you would transcribe into the rough draft. Some outline entries can serve as topic sentences for paragraphs, thereby speeding the writing process. In addition, the subject/verb pattern establishes the logical direction of your thinking (for example, the phrase “myths about abuse” becomes “We must avoid myths and distortions”). A brief sample follows:

- I. The issues of child abuse are multiple and complex.
 - A. The problems center on recognition and discovering of abuse.
 1. First, we need to recognize that there is a problem.
 2. Next, we must avoid mythic distortions.
 - B. Statistics reveal the extent of the problem.
 1. Abuse increases yearly.
 2. All types of abuse take place daily.

4.11 Introductory Phrases and Conjunctions for Qualitative Research

It seems likely...

It seems clear that...

However, a substantial body of scientific findings ...

There is evidence to suggest that...

On the basis of this general theory of cognitive development...

They postulate that...

On the other hand...

Inasmuch...

In summary, ...

Notwithstanding, ...

However, ...

In addition, ...

Not only it is important ...

It seems clear that ...

Despite the gaps ...

There is growing body of evidence...

There is a substantial body of literature demonstrating ...

Furthermore, the results of this study are consistent ...

The findings are also in accord ...

The generalizability of the findings ...

The author contends that ...

However, these results definitely add support to past studies that emphasized ...

Hoffman, however, contends that the idea of ...

Gibson posits that ...

Gibson postulates that ...

While the list by no means comprehensive, ...

Thereby, ...

Therefore, ...

These arguments are in clear accord with findings of ...

These arguments are consonant with the findings ...

Not surprisingly, then ...

An extensive body of research evidence ...

As is often the case...

A small amount of research findings suggest...

Accordingly, ...

An explicit goal of the ...

An implicit goal for the...

In the environmental psychological literature there is substantial evidence that children's

Unfortunately, as we shall soon see, ...

Lecture 5

Assessment criteria and submission guidelines

5.0 Assessment Criteria

- a. Originality and significant of contribution
- b. Aim and objectives or research questions are clear stated
- c. Context and background literature on previous work in the field is integratively and critically reviewed. In other words, it covers appropriate existing literature.
- d. Adequacy of methodology analysis and interpretation. Thus results are clearly presented and supported through conclusions.
- e. Some discussion of applications to policy or practice, directions for further works are included
- f. Clear, concise and jargon-free writing style.
- g. Reviewers consider the validity of the approach, the significance and originality of the finding, its interest and timeliness to the scientific community, and the clarity of the writing.
- h. Thanks to the peer-review system, readers can feel confident that the information found in scientific journals is credible.

See example of Architecture Science Review.

ARCHITECTURAL SCIENCE REVIEW

Editor-in-Chief

Professor Gary T Moore *RAIA PIA FAPA*, The University of Sydney

Paper #:

Date:

Architectural Science Review is an international double-blind refereed journal devoted to all aspects of the science of architecture and the built environment.

We would greatly appreciate if you would review the attached paper, and give us the benefit of your opinion. The basic criterion for publication in *ASR* is that the paper makes an original contribution to knowledge. You may also wish to make comments directly in the manuscript to assist the author(s); if so, please use Word Track Changes or a distinctive colour.

The majority of authors who submit papers to the *Architectural Science Review* do not have English as their first language, and we accept that their English may need to be improved by editing. Any help you may be able to give directly on the enclosed manuscript would be most welcome.

Please return this form electronically to the Editor at asreditor@arch.usyd.edu.au within four weeks of transmission to you (two weeks would be preferable).

First, please rate the manuscript using the following criteria on a scale of 1 (very poor) to 5 (very good):

Assessment Criteria	1 – 5	Comments or Reservations
1. Is the topic relevant to <i>ASR</i> ?		
2. Is the problem addressed		

innovative and/or important?		
2. Is the background research literature summarised in an integrative and critical manner?		
3. Are the methods clearly stated, and valid?		
4. Are the findings, interpretations and conclusions warranted from the research and data collected?		
5. Will the findings have applicability beyond the particular situation studied?		
6. Is the quality of presentation clear and suitable (structure, English, illustrations, tables, references)?		
7. Overall rating: Does the paper make a contribution to the field?		

Second, based on your evaluation on the above criteria, what is your overall recommendation?

Recommendation	Tick X	Why?
1. Accept as is or with only minor editorial changes (please indicate below or in the manuscript).		
2. Accept subject to minor or major modifications (summarise needed modifications below).		
3. Revise and resubmit (indicate what revisions are necessary before resubmission).		
4. Not suitable for publication.		

Third, please add additional comments to help the Editor and author(s) to improve the paper. Please indicate if they are “must change” or “nice to change.” To increase the flow of papers through the journal without compromising quality, we are trying to reduce the length of papers to 8,000 words and research notes to 2,000 words; please indicate where and how the paper could be shortened (eg, text, illustrations or tables eliminated or condensed) without compromising quality.

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JURNAL MEKANIKAL REVIEW

**Editor-in-Chief
Dr Intan Zaurah Mat Darus
Universiti Teknologi Malaysia**

JURNAL MEKANIKAL

(Referee's Report)

Title of Paper:

Please evaluate the paper according to the following criteria

	Comments
1. Is the topic important and relevant for publication?	Yes/No
2. Is the work presented in the manuscript new and original?	Yes/No
3. Are the references adequate and appropriate?	Yes/No
4. Does the manuscript uses appropriate language and style?	Yes/No
5. Is the title of manuscript appropriate?	Yes/No
6. Is the presentation/format of the manuscript satisfactory?	Yes/No
7. Is the abstract adequate to reflect the content of manuscript?	Yes/No
8. Is the introduction adequately developed?	Yes/No
9. Is the problem described in the manuscript clearly stated?	Yes/No
10. Is the adopted methodology described sound and justifiable?	Yes/No
11. Are the findings of this manuscript correctly interpreted?	Yes/No
12. Are the interpretation and conclusions sound and justifiable?	Yes/No
13. Is the manuscript free from obvious errors?	Yes/No
14. Is the quality of figures and illustrations acceptable?	Yes/No

SUGGESTIONS TO THE AUTHOR(S)

RECOMMENDATIONS TO THE EDITORS

The manuscript should be:

- | | |
|-------------------------------------------------------------------|--------------------------|
| 1. published as it is | <input type="checkbox"/> |
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| 3. returned to the writer to be completely reworked and rewritten | <input type="checkbox"/> |
| 4. rejected | <input type="checkbox"/> |

If you have selected 2 ad 3, please lists all corrections and suggestions in a separate sheets. Please include your comments also if you selected 4.

LANDSCAPE JOURNAL Review Form

CONTENT:

1. Does the author exhibit knowledge of the relevant existing literature and work? Is it acknowledged and cited?

2. Does the author clearly state the purpose of the work, its limitations, and its assumptions?
3. Are the arguments/methods clear, consistent, appropriate, and convincing?
4. Are the conclusions clear and justified? Is the contribution or significance of the research made clear?

PRESENTATIONS:

- A. Is the argument clearly structured and organized (both intellectually and stylistically) and easy to follow? Are headings and subheadings appropriately used?
- B. Is the prose clear, easy to read, and appropriate?

CONTRIBUTIONS:

- A. What is the relation of this work to other work—historic, current, or potential?
- B. Does this work make a contribution to the field? Will it leave an intelligent reader with something more than he or she started with, such as new knowledge, skills, or ways of understanding?

5.1 Choosing the appropriate journal

- a. Review local and online-journals.
- b. Browse journal webpages, for example, ScienceDirect by Elsevier and select a few journals.
- c. Read the submission requirement and some abstracts of the published paper.
- d. Choose the journal that is in accord or parallel to your subject (see examples). For example, paper on children's restorative environment could be published in (1) *Landscape and Urban Planning*, (2) *Health and Place*, (3) *Social Sciences and Medicines*, and (4) *Journal of Environmental Psychology*.
- e. For a start, it is advisable to pick a journal with low impact factor index. For example, *Health and Place* has impact factor of 1.600 whereas *Social Sciences and Medicine* has higher factor, 2.618. Logically, the chance for a paper to be accepted in the former is greater than the latter.

Example 1:

Landscape and Urban Planning is concerned with conceptual, scientific, and design approaches to land use. It emphasizes ecological understanding and a multi-disciplinary approach to analysis, planning and design. The journal attempts to draw attention to the interrelated nature of problems posed by nature and human use of land. Its impact factor is high; **1.359**.

Example 2:

Energy and Buildings is an international journal publishing articles with explicit links to energy use in buildings. The aim is to present new research results, and new proven practice aimed at reducing energy needs of a building and improving indoor environment quality. Impact factor of this journal is **0.59**.

Example 3:

The Journal of Architectural Education has been published since 1947 for the purpose of enhancing architectural scholarship in design, history, urbanism, cultural studies, technology, theory, and practice.

5.2 Reviewing process

Validity of journal publication stands at its double-blind review process. Two to three readers reviewed the manuscript. The readers are the experts in the field of research selected by the editor-in-chief. The readers are given a duration to review the manuscript, generally 2 to 4 months for Elsevier's journals. The evaluation is then submitted to the editor, and later the editor will forward it to the corresponding author. If accepted, the author has to edit the manuscript as suggested by the reviewers as well as fit by the author(s). Changes must be submitted to the editor. Then the manuscript is proofread by a native reader for grammatical corrections. It is then submitted to the author for the final document before publication.

Hence, from the time of first submission to the time your article is published in a journal may take 7 to 8 months. If rejected, you can revise the manuscript according to the comments of the reviewers and submit to another journal. Check the list of editorial members of the new journal. Make sure the members are different from the former one.

5.3 Before submitting the manuscript observe this checklist

(Adapted from *Health and Place*, Elsevier)

- Have you told reader, at the outset, what they might gain by reading your paper?
- Have you made the aim of your work clear?
- Have you explained the significance of your contribution?
- Have you set your work in the appropriate context by giving sufficient background to your work?
- Have you addressed the question of practicality and usefulness?
- Have you identified future developments that may result from your work?
- Have you structured your papers in a clear and logical fashion?
- Have provided an abstract and keywords?