

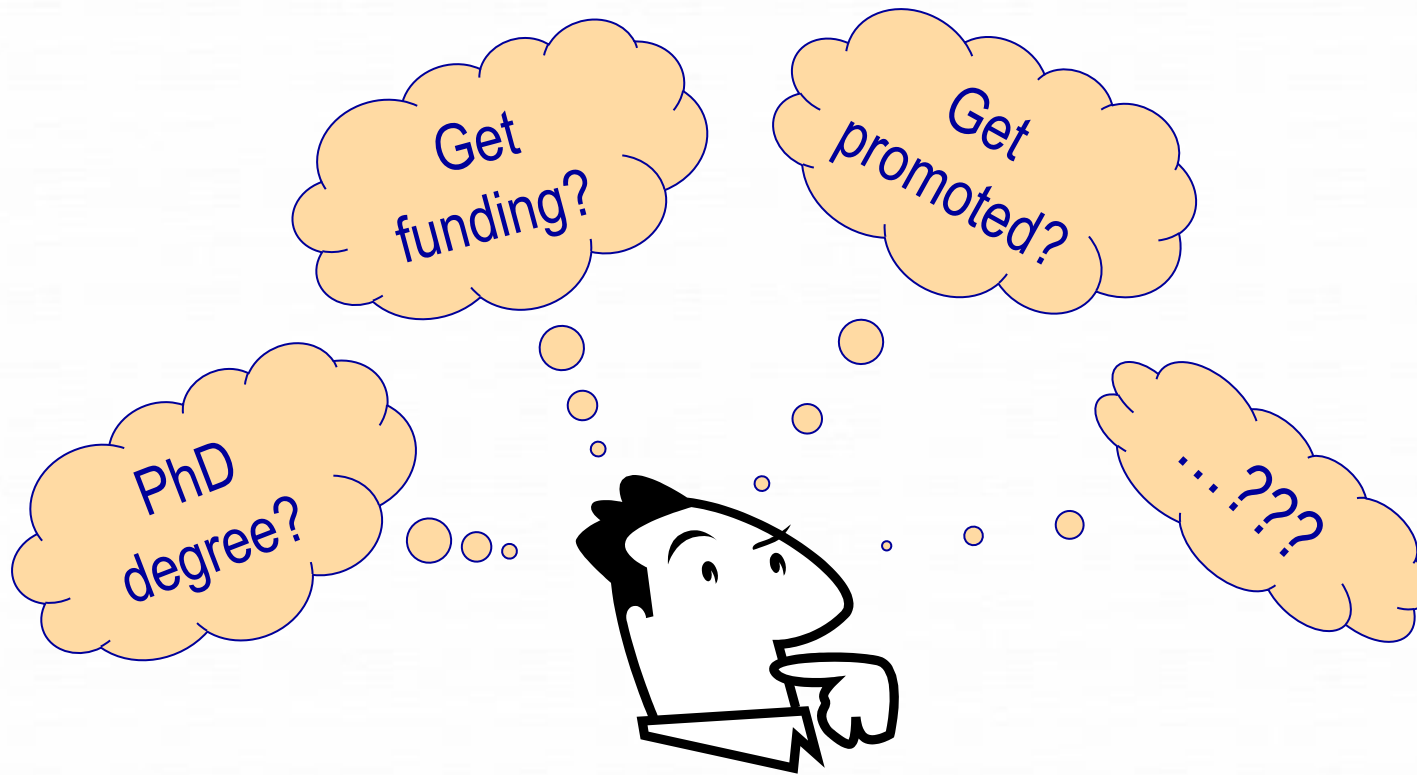
# Menulis Artikel untuk Jurnal Internasional

*Universitas Negeri Padang  
Rabu, 8 Juni 2022*

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# Apa Alasan Anda untuk Publikasi?



*Editor, reviewer, dan komunitas peneliti tidak peduli ....*

# Menulis Artikel – susah?

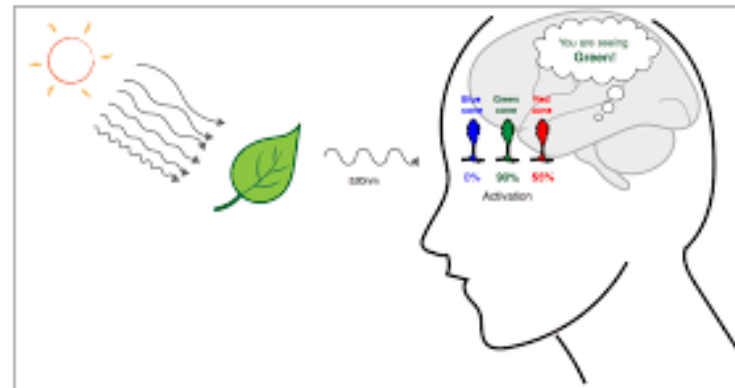
~~For most~~  
~~people,~~  
Writing is  
~~a~~ hard  
~~thing~~  
~~to do.~~

Jim LaBate

GETTING STARTED IS THE HARDEST PART



# Bagaimana mencari ide tulisan/penelitian?



**Adopsi 3 N** dari Ki Hadjar Dewantara  
Niteni  
Niroke  
Nambahi

**Atau ATM**  
Amati  
Tiru  
Tambahkan

## Contoh Artikel Penelitian “Terbaru” dari Beberapa Jurnal





# Teachers' perception of STEM integration and education: a systematic literature review

Kelly C. Margot<sup>1\*</sup> and Todd Kettler<sup>2</sup>

## Abstract

**Background:** For schools to include quality STEM education, it is important to understand teachers' beliefs and perceptions related to STEM talent development. Teachers, as important persons within a student's talent development, hold prior views and experiences that will influence their STEM instruction. This study attempts to understand what is known about teachers' perceptions of STEM education by examining existing literature.

**Results:** Study inclusion criteria consisted of empirical articles, which aligned with research questions, published in a scholarly journal between 2000 and 2016 in English. Participants included in primary studies were preK-12 teachers. After quality assessment, 25 articles were included in the analysis. Thematic analysis was used to find themes within the data. Findings indicate that while teachers value STEM education, they reported barriers such as pedagogical challenges, curriculum challenges, structural challenges, concerns about students, concerns about assessments, and lack of teacher support. Teachers felt supports that would improve their effort to implement STEM education included collaboration with peers, quality curriculum, district support, prior experiences, and effective professional development.

**Conclusions:** Recommendations for practice include quality in-service instruction over STEM pedagogy best practices and district support of collaboration time with peer teachers. Recommendations for future research are given.

**Keywords:** STEM, Teacher perception, Teacher beliefs, Systematic literature review, Engineering in K-12 schools

2022. *Education and Information Technologies*.

<https://doi.org/10.1007/s10639-022-11058-9>

Metode : Scientific Procedures and Rationales for Systematic Literature Reviews (SPAR-4-SLR)

Teknik Analisis : Bibliometric analysis

2019. *International Journal of STEM Education*, 6(1).

<https://doi.org/10.1186/s40594-018-0151-2>

Metode : Sytematic Literature Review dengan pedoman PRISMA

Teknik Analisis : Thematic Analysis

Education and Information Technologies

<https://doi.org/10.1007/s10639-022-11058-9>



## Virtual Laboratories- A historical review and bibliometric analysis of the past three decades

Raghu Raman<sup>1</sup> · Krishnashree Achuthan<sup>2</sup> · Vinith Kumar Nair<sup>3</sup> · Prema Nedungadi<sup>4</sup>

Received: 23 February 2022 / Accepted: 12 April 2022

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## Abstract

Online and virtual teaching–learning has been a panacea that most educational institutions adopted from the dire need created by COVID-19. We provide a comprehensive bibliometric study of 9523 publications on virtual laboratories in higher education covering the years 1991 to 2021. Influential bibliometrics such as publications and citations, productive countries, contributing institutions, funders, journals, authors, and bibliographic couplings were studied using the Scientific Procedures and Rationales for Systematic Literature Reviews (SPAR-4-SLR) protocol. A new

## Mobile Games for Negotiated-Play and Decision-Making in Health Literacy

Sotiris Themistokleous<sup>1</sup>, Lucy Avraamidou<sup>2\*</sup>, Charalambos Vrasidas<sup>3</sup>

<sup>1</sup> Center for Social Innovation, CYPRUS

<sup>2</sup> University of Groningen, NETHERLANDS

<sup>3</sup> CARDET - University of Nicosia, Nicosia, CYPRUS

Received 21 April 2020 • Accepted 10 June 2020

### Abstract

The purpose of this qualitative case study study is to examine the ways in which mobile videogames can be used in non-formal educational environments, to support students to develop decision-making skills through negotiated play. In the context of this study, the health literacy mobile videogame, *PlayForward: Elm City Stories* developed at Yale University was implemented in an afterschool setting in southern Europe. In this study we explored how secondary school students negotiate meaning, make decisions, and interpret the consequences in a non-formal education context, through an interpretive symbolic-interactive framework. The data included individual interviews with students, field-notes, and video-based student-groups' interactions. These were analyzed with the use of open coding techniques. The analysis of the data resulted in the following three assertions: (a) The technical affordances of the game such as sound, usability, rating system, and visuals, are vital features that defined the quality of play and learning experience; (b) The narrative of the game guided the learning game-play experience of the students; and, (c) Students perceived that their engagement in the game facilitated their collaboration and decision-making. These are discussed alongside recommendations for game design for supporting negotiated play and decision-making.

**Keywords:** mobile games, healthy literacy, negotiated-play, decision-making

2020. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(9), 2-12.

<https://doi.org/10.29333/ejmste/8352>

Metode : Case Study  
Teknik Analisis : Open Coding Techniques

2018. *Journal of Research in Science Teaching*, 56(6), 797–820.

<https://doi.org/10.1002/tea.21528>

Metode : Case Study  
Teknik Analisis : Coding Techniques

DOI: 10.1002/tea.21528

WILEY | JRST

### RESEARCH ARTICLE

## Teacher–student negotiations during context-based chemistry reform: A case study

Michelle Overman<sup>1</sup> | Jan D. Vermunt<sup>2,3</sup> | Paulien C. Meijer<sup>4</sup> | Mieke Brekelmans<sup>1</sup>

<sup>1</sup>Faculty of Social and Behavioural Sciences, Utrecht University, Utrecht, Netherlands

<sup>2</sup>Faculty of Education, University of Cambridge, United Kingdom of Great Britain and Northern Ireland

<sup>3</sup>Eindhoven School of Education, Eindhoven University of Technology, Eindhoven, Netherlands, Netherlands

<sup>4</sup>Radboud Docenten Academie, Radboud University, Nijmegen, Gelderland, Netherlands

#### Correspondence

Michelle Overman, Faculty of Social and Behavioural Sciences, Utrecht University, Utrecht, Netherlands.  
Email: m.overman@outlook.com

#### Funding information

NRO/PROO

#### Abstract

Teachers participating in curricular reforms, especially reforms based on constructivism, are expected to bring about change in their teaching approach. This is often a difficult, complex and intensive process, and demands a radical reculturing of the classroom. This is also the case for social constructivist reforms in chemistry education, which are based on a context-based approach. Educational change is a social and interactional process, and during this change teachers will engage in negotiations with their students about the reform. These teacher–student negotiations have a profound impact on the succeeding of the reform. This study explores the teacher–student interactions during the reform that shape and alter the context-based chemistry approach. We focused on two teachers, of whom it was found in an

## Development and validation of an instrument measuring undergraduate students' perceived holistic competencies

Cecilia K. Y. Chan  and Lillian Y. Y. Luk 

Faculty of Education, Centre for the Enhancement of Teaching and Learning, University of Hong Kong, Hong Kong

### ABSTRACT

There is a need to develop an instrument for undergraduate students to evaluate their holistic competencies. Such an instrument can not only be used as a tool for benchmarking but can also be used to enhance students' awareness of their strengths and weaknesses, and to inform teaching by improving teachers' understanding of their students. This study aims to develop and validate a questionnaire measuring undergraduate students' perceived holistic competencies. A total of 2192 undergraduates from six out of the eight universities in Hong Kong participated in the study. Exploratory factor analysis was conducted on a random, stratified sample, followed by confirmatory factor analysis on the remaining sample. Six scales were obtained from exploratory factor analysis, namely (1) cultural sensitivity and global citizenship, (2) interpersonal and leadership competencies, (3) problem-solving and critical thinking skills, (4) self-understanding and resilience, (5) information literacy and (6) moral values. These six scales were supported by findings from confirmatory factor analysis, and Cronbach's alpha values indicated the scales were reliable. Overall, psychometric properties of the instrument indicated that the instrument is sufficiently reliable and valid for use in educational practice and research.

### KEYWORDS

Holistic competencies; questionnaire development; self-evaluation; assessment; student perception

2020. *Assessment & Evaluation in Higher Education*, 46(3), 1–16. <https://doi.org/10.1080/02602938.2020.1784392>

Metode : Development Questionnaire

Teknik Analisis :

1. Exploratory Factor Analysis
2. Confirmatory Factor Analysis

2021. *International Journal of Science Education*, 44(1), 18–47. <https://doi.org/10.1080/09500693.2021.2010286>

Metode : Development Instrument Test

Teknik Analisis :

1. Exploratory Factor Analysis
2. Confirmatory Factor Analysis
3. RASCH Analysis

## Development and validation of an instrument to measure students' engagement and participation in science activities through factor analysis and Rasch analysis

Italo Testa <sup>a</sup>, Giovanni Costanzo <sup>a</sup>, Marianna Crispino <sup>b</sup>, Silvia Galano <sup>a</sup>, Alessio Parlati <sup>a</sup>, Oreste Tarallo <sup>c</sup>, Francesca Tricò <sup>a</sup> and Umberto Scotti di Uccio<sup>a</sup>

<sup>a</sup>Department of Physics 'E. Pancini', University Federico II, Naples, Italy; <sup>b</sup>Department of Biology, University Federico II, Naples, Italy; <sup>c</sup>Department of Chemical Sciences, University Federico II, Naples, Italy

### ABSTRACT

In this study, we present a new instrument, the Participation and Engagement Scale (PES), for the evaluation of the students' involvement in STEM-oriented activities. The instrument was administered to about 1000 secondary school students who participated in the activities of the Italian *Piano Nazionale Lauree Scientifiche* in Biology, Chemistry and Physics. The activities were carried out in a remote modality due to the COVID-19 restrictions. Through an exploratory and confirmatory factor analysis, it was possible to validate a two-factor structure of the instrument: satisfaction towards the activities and value of the activities. The proposed factor structure shows a good model fit, with each of the obtained scales displaying excellent reliability. Construct-related validation evidence was obtained through the Rasch analysis, which allowed further psychometric improvement of the instrument. Convergent validation evidence was established through a correlation with the academic motivation and perceived difficulties scales. Using the proposed instrument, we found no statistically significant relationships between engagement, the different types of science activities attended, and the intention to enrol in a STEM course. Implications of the study for the evaluation of public understanding of science activities in both remote and in-presence modalities are also discussed.

### ARTICLE HISTORY










Received 14 September 2021  
Accepted 21 November 2021

### KEYWORDS

Engagement; out-of-school activities; confirmatory factor analysis; Rasch analysis



## The Use of Virtual Reality in A Chemistry Lab and Its Impact on Students' Self-Efficacy, Interest, Self-Concept and Laboratory Anxiety

Almer Gungor<sup>1\*</sup> , Denise Kool<sup>2</sup> , May Lee<sup>2</sup> , Lucy Avraamidou<sup>2\*</sup> , Niek Eisink<sup>2</sup> ,  
Bauke Albada<sup>3</sup> , Koos van der Kolk<sup>4</sup> , Moniek Tromp<sup>2</sup> , Johannes Hendrik Bitter<sup>3</sup> 

<sup>1</sup> Odisee University of Applied Sciences, BELGIUM

<sup>2</sup> University of Groningen, NETHERLANDS

<sup>3</sup> Wageningen University, NETHERLANDS

<sup>4</sup> Labuddy, NETHERLANDS

Received 19 December 2021 • Accepted 10 February 2022

### Abstract

The purpose of this study was to evaluate the impact of virtual reality on undergraduate students' self-efficacy, self-concept, interest, and laboratory anxiety in an introductory chemistry course. We used a mixed-methods approach to improve our understanding of how these factors mediate student learning. The findings showed that (i) the use of the virtual reality application had an overall positive impact on students' self-efficacy, self-concept, interest, and anxiety; and (ii) students who expressed some anxiety about doing the lab prior to the course reported the use of the virtual reality application decreased their levels of anxiety at the end of the lab. The implications of these findings speak to the potential value of the use of virtual reality applications

2022. *Distance Education*, 43(1), 1–22.

<https://doi.org/10.1080/01587919.2022.2029352>

Metode : Mixed-methods Sequential  
Explanatory Design

Teknik Analisis :

1. Multiple Regression
2. Content Analysis

2022. *Eurasia Journal of Mathematics, Science and Technology Education*, 18(3), 2-13.

<https://doi.org/10.29333/ejmste/11814>

Metode : Mixed-Methods  
Teknik Analisis : Quantitative and Qualitative

## Distance education students' mental health, connectedness and academic performance during COVID-19: A mixed-methods study

Gina Di Malta<sup>a</sup> , Julian Bond<sup>a</sup>, Dominic Conroy<sup>b</sup> , Katy Smith<sup>a</sup>, and Naomi Moller<sup>a</sup> 

<sup>a</sup>School of Psychology and Counselling, Faculty of Arts and Social Sciences, The Open University, United Kingdom; <sup>b</sup>School of Social Science and Professions, London Metropolitan University, United Kingdom

### ABSTRACT

In this study, we investigated the links between distance education students' mental health, connectedness, and academic performance during COVID-19, using a mixed-methods sequential explanatory design. Online survey responses with a sample of 208 distance education students—aged 18–84, 144 females, 60 males, three nonbinary individuals, most (163) self-identified as White British—were analyzed using multiple regression, mediation, and content analysis. Connectedness (loneliness and a sense of con-

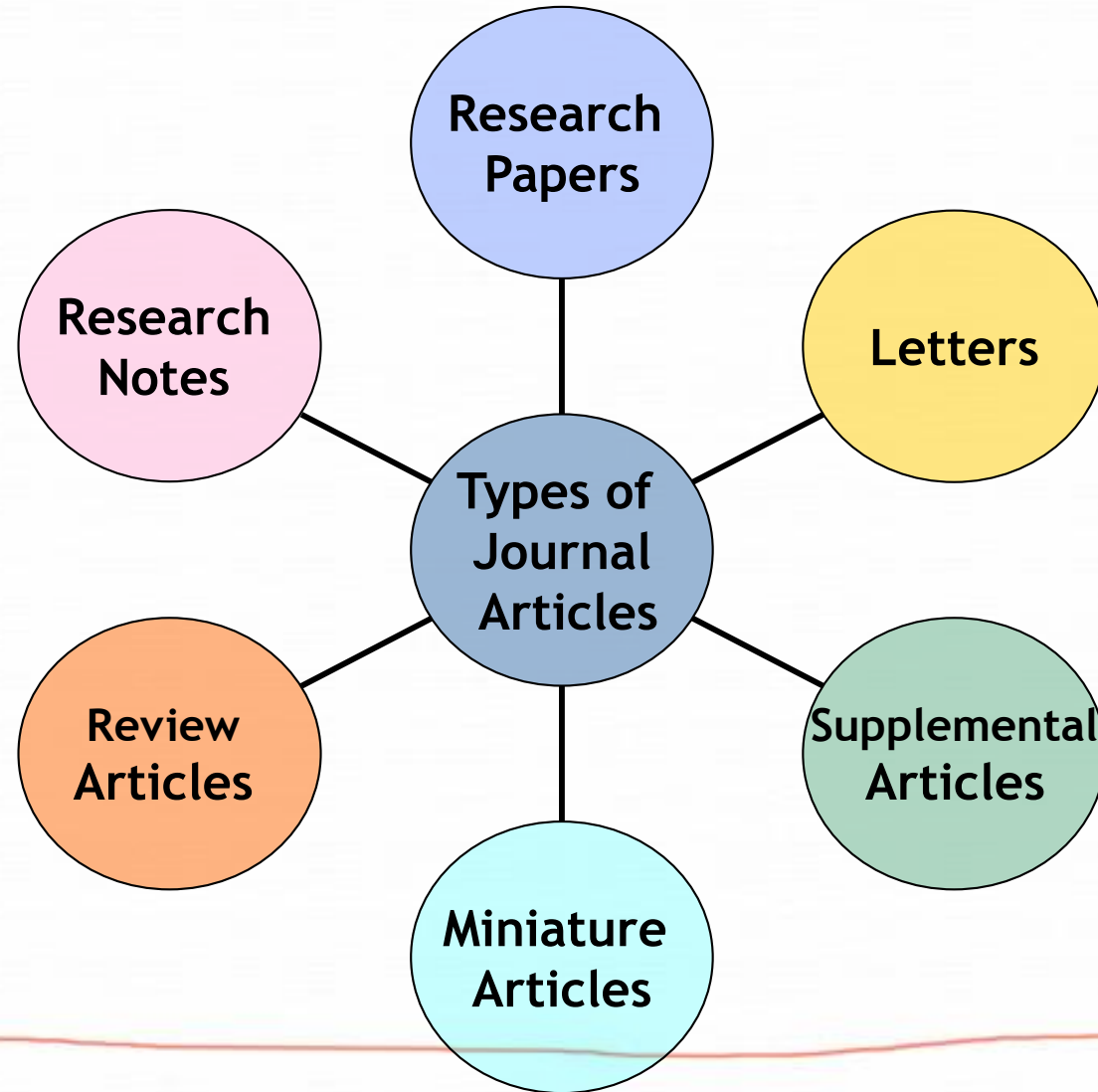
### ARTICLE HISTORY

Received 22 November 2021  
Accepted 10 January 2022

### KEYWORDS

mixed methods; mental health; connectedness; academic performance; COVID-19

# Types of Articles



# Prasyarat Artikel


→ adanya hasil penelitian yang:

- ◆ sudah dirancang dan dilakukan dengan baik
- ◆ data telah disederhanakan: gambar, tabel, grafik
- ◆ dianalisis dengan baik dan benar
- ◆ sudah menghasilkan kesimpulan

→ sejak awal sudah "bercita-cita" mau publikasi di mana



# Prinsip penulisan

- ◆ *Unity*
  - ◆ *Coherence*
  - ◆ *Support*
  - ◆ *Effective Paragraphs*
  - ◆ *Word choice*
- 

# Komponen Artikel

Section	Purpose	
Title	Clearly describes contents	
Authors	Ensures recognition for the writer(s)	
Abstract	Describes what was done	
Key Words (some journals)	Ensures the article is correctly identified in abstracting and indexing services	
<b>I M R A D</b>	Introduction	Explains the problem
	Methods	Explains how the data were collected
	Results	Describes what was discovered
	Discussion	Discusses the implications of the findings
Acknowledgements	Ensures those who helped in the research are recognised	
References	Ensures previously published work is recognised	
Appendices (some journals)	Provides supplemental data for the expert reader	

# Bagaimana Urutan Menulis?

Title

Abstract

Introduction

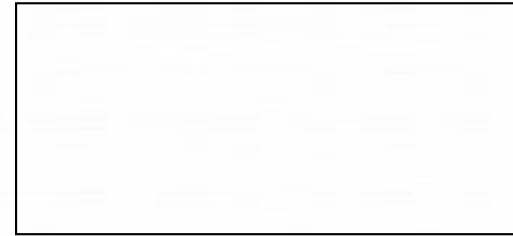
Methods

Results

Discussion

Acknowledgements

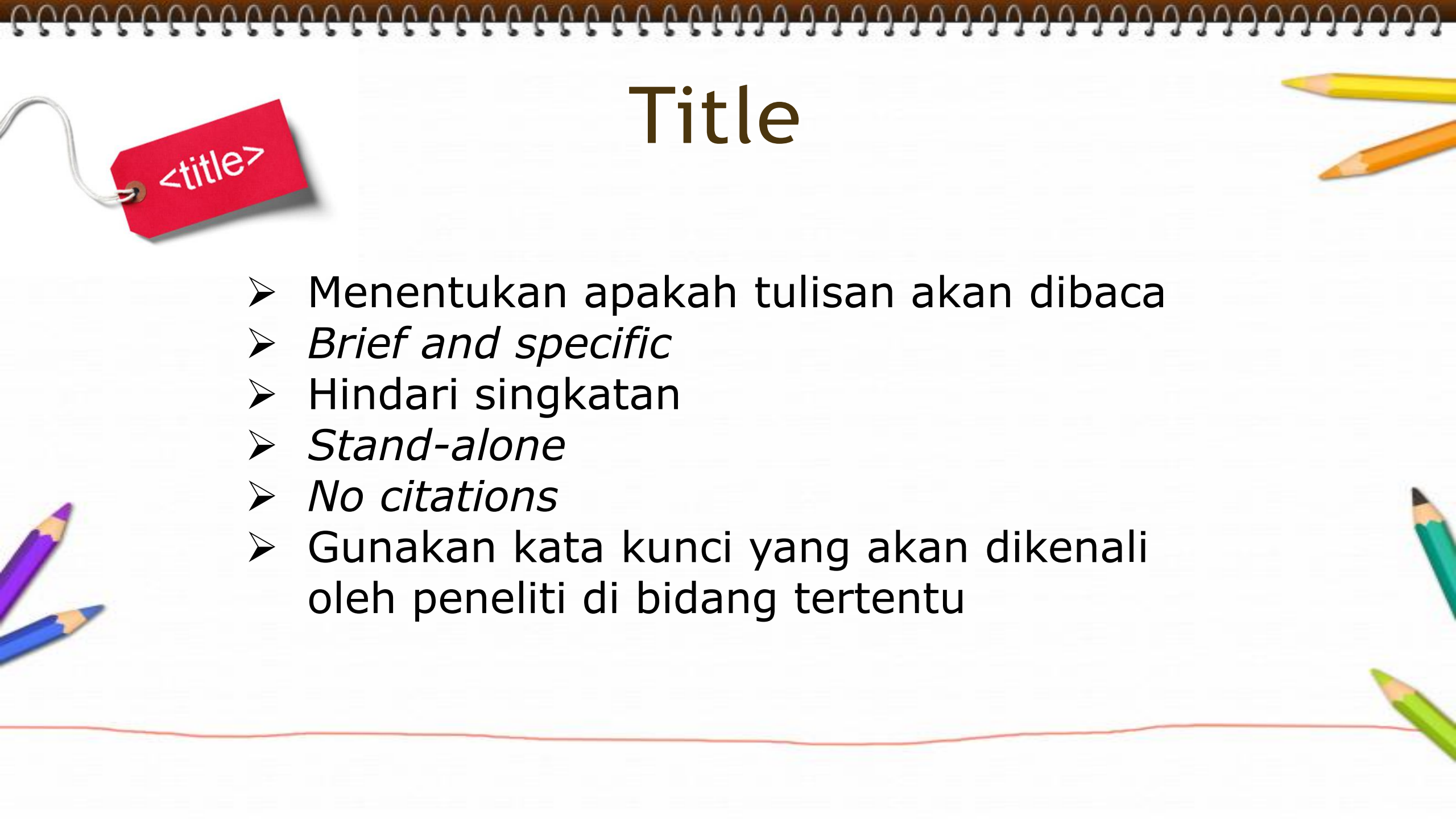
References



# Title



<title>

- Menentukan apakah tulisan akan dibaca
  - *Brief and specific*
  - Hindari singkatan
  - *Stand-alone*
  - *No citations*
  - Gunakan kata kunci yang akan dikenali oleh peneliti di bidang tertentu
- 

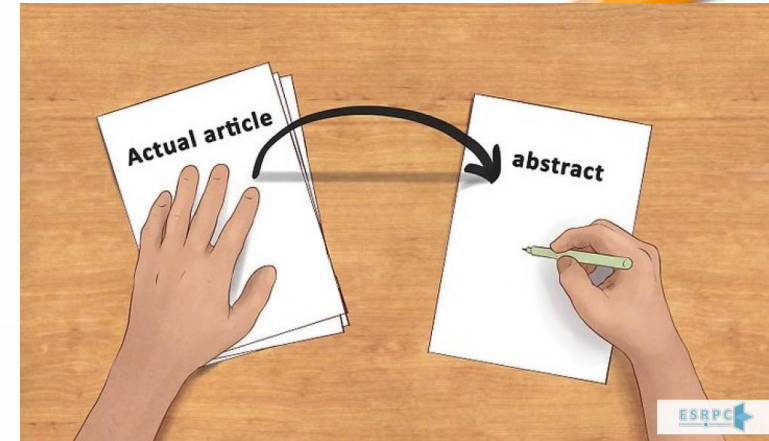
# Abstract

**Abstrak:** versi singkat dari artikel,

berisi informasi:

- (1) apa tujuan dari penelitian
- (2) bagaimana penelitian dilakukan
- (3) hasil yang diperoleh
- (4) signifikansi hasil

Meski terletak di awal artikel → sebagian besar ilmuwan menulis saat **terakhir**.



**Write a very strong abstract!**



## ❖ Tiga tipe utama abstract:

- ❖ **Indicative (descriptive) abstract:** menyampaikan kerangka dari topik tulisan, sering digunakan dalam *review articles*
- ❖ **Informative abstract:** ringkasan artikel dengan pola IMRAD
- ❖ **Structured abstract:** dengan pola yang dipersyaratkan jurnal

→ **Periksa jenis yang sesuai dengan jurnal tujuan Anda.**

# Indicative abstract

Signal Processing

Volume 19, Issue 4, April 1990, Pages 259-299

Invited paper

doi:10.1016/0165-1684(90)90158-U

## Fast fourier transforms: A tutorial review and a state of the art

Example

P. Duhamel

Background

**Abstract.** The publication of the Cooley-Tukey fast Fourier transform (FFT) algorithm in 1965 has opened a new area in digital signal processing by reducing the order of complexity of some crucial computational tasks like Fourier transform and convolution from  $N^2$  to  $N \log 2$ , where  $N$  is the problem size. The development of the major algorithms (Cooley-Tukey and split-radix FFT, prime factor algorithm and Winograd fast Fourier transform) is reviewed. Then, an attempt is made to indicate the state of the art on the subject, showing the standing of research, open problems and implementations.

Main topic

Issues discussed

# Informative abstract

## Example

**Abstract:** The objective of the present study was to investigate feed digestibility and methane emissions of ration based on oil palm by-products on addition of probiotics, namely *Acetoanaerobium noterae* and *Saccharomyces cerevisiae* and banana stem *in vitro*. The substrate, i.e., oil palm by-products consisted of oil palm midrib, oil palm leaf, oil palm kernel cake and oil palm sludge in the ratio of 30, 30, 30 and 10%, Respectively. The following treatments were tested: control (R0), R0+S. *cerevisiae* (R1), R0+A. *noterae* (R2), R0+S. *cerevisiae*+A. *noterae* (R3), R0+ banana stem (R4), R0+banana stem+S. *cerevisiae* (R5), R0+banana stem+A. *noterae* (R6) and R0+banana stem+S. *cerevisiae*+A. *noterae* (R7). The treatments were incubated *in vitro* with buffered-rumen fluid in four replicates (represented by three incubation units per replicate), conducted for 48 h at 39oC. Gas production and methane emission were measured at regular time point ntervals. After the incubation, digestibility, Volatile Fatty Acids (VFA), ammonia and microbial counts were determined. Results showed that the highest dry matter digestibility was shown by R5 and the best reduction of methane emission was shown by R2 at 12 h of incubation. In conclusion, supplementation of probiotics did not affect the digestibility of ration based on oil palm by-products but A. *noterae* addition was potential to mitigate ruminal methane emission.

**Key words:** Acetogen, yeast, banana, methane, digestibility, rumen

I

M

R

D

# Structured Abstract

118

Received 30 July 2014  
Revised 29 November 2014  
19 January 2015  
Accepted 28 January 2015

## A new perspective for raising the quality of teaching

Mohammad Reza Sarkar Arani  
*School of Education, Teikyo University, Tokyo, Japan*

### Abstract

**Purpose** – The purpose of this paper is to examine an Iranian mathematics lesson through the eyes of Japanese educators, and the critiques of Iranian teachers for raising the quality of teaching. In this paper, the Japanese lesson study process is considered as an approach to raising the quality of teaching.

**Design/methodology/approach** – Qualitative methods including pre-lesson planning, peer observation of the lesson, post-lesson discussion, and semi-structured interviews with the participants of the post-lesson discussion meetings in Iran and Japan were employed for data collection. A detailed description and analysis of the lesson is provided for deep understanding of students' mathematical communication in the class and teachers' points of view in the post-lesson discussions about raising the quality of teaching.

**Findings** – The findings are intended to clarify the significant influence that cross-cultural analysis has exerted on raising the quality of teaching and developing a culture of transnational learning that supports teachers to design appropriate learning tasks, to conceptualize mathematical phenomena, and to provide mathematical communication which encourage students to participate more in classroom activities.

**Research limitations/implications** – This study provides a transnational learning opportunity for Iranian teachers to learn from Japanese educators how to deliver evidence-based analysis of a lesson for raising the quality of teaching in practice, look culturally and differently at what actually goes on in the classroom, and localize lesson study as a global approach to the "science of improvement." However, issues to be considered in future studies include how such "small changes" can be linked together in local communities to expand the improvement from bottom up, and how to facilitate collaboration with the global community to expand transnational learning.

**Practical implications** – Traditionally in Iran, there are a variety of teacher training programs but there are no examples of lesson study like those that take place in Japan as a model of practitioner inquiry for raising quality of teaching. Hence, it can be said that Japanese lesson study may provide a new approach of transnational learning in the Iranian education context for building a "science of improvement."

**Social implications** – In the case of Iran, especially at the elementary school level, teachers do not have enough preparation or experience. Therefore, raising the quality of teaching through lesson study that has an actual impact on teacher and teaching quality and developing a "science of improvement" has become a pressing concern in national and international contexts.

Example

# Masalah umum dari Abstrak:

- Terlalu panjang -- melebihi aturan
- Terlalu detail -- bukan tempat penjelasan metodologi atau konteks masalah penelitian secara RINCI
- Terlalu singkat – sehingga kurang informatif -  
- Jika batas 200 kata tetapi abstrak hanya 75 kata, mungkin belum cukup detail.
- Kegagalan memasukkan informasi penting

# Introduction

- ◆ Introduction menyampaikan:
  - ✓ Kondisi pengetahuan/pemahaman pada awal penyelidikan (latar belakang)
  - ✓ Pernyataan tujuan
  - ✓ Hipotesis atau prediksi (jika diperlukan)
- ◆ Tulis bagian ini dengan “**past or present tense, never in the future**”.
- ◆ Hindari pernyataan seperti: “*This study will examine ...*”

# Introduction

## Masalah apa yang dikaji dan mengapa penting untuk dilakukan?

Jawab pertanyaan berikut:

- Apa masalahnya?
- Apakah sudah ada solusinya?
- Apa solusi yang terbaik?
- Apa hambatan utamanya?
- Apa yang Anda harapkan untuk dicapai?

- Latar belakang umum (ulasan artikel yang disitasi) → masalah yang diselidiki khususnya dalam penelitian ini (ulas publikasi yang menjadi dasar kajian Anda).

**Yakinkan pembaca bahwa Anda menguasai mengapa kajian Anda ini penting dilakukan.**

- Gunakan kata/frasa: "however", "remain unclear", dll., untuk menunjukkannya

“Jika Anda memiliki publikasi terkait dengan kajian yang sedang ditulis, Anda dapat menyebutkan dalam *Introduction* → akan membantu editor dan reviewer untuk melihat rekam jejak Anda. ”

Contoh

“...**Our recent studies** of HR1 and HR2 regions in MuV fusion protein have shown that its HR1 and HR2 also form a stable six-helix bundle, **suggesting** a common core architecture similar to those of other viral fusion protein [20]. These methods have been **successfully used in** the biochemical and **structural analysis** of several other viral fusion protein core, including SARS-CoV [21] and [22], MHV [17], Newcastle disease virus [23] and [24], Nipah virus, and Hendra virus [25]. **Here, we report the determination** of crystal structure of MuV fusion core to 2.2 Å resolution by X-ray crystallography. **The structure confirms .... ”**

Biochemical and Biophysical Research Communications

Volume 348, Issue 3, 29 September 2006, Pages 916-922

**Structural characterization of Mumps virus fusion protein core**

Yueyong Liu<sup>a, 1</sup>, Yanhui Xu<sup>b, 1</sup>, Zhiyong Lou<sup>b, 1</sup>, Jieqing Zhu<sup>a</sup>, Xuebo Hu<sup>a</sup>, George F. Gao<sup>a</sup>,

Bingsheng Qiu<sup>a</sup>,  , Zihao Rao<sup>b</sup>,   and Po Tien<sup>a</sup>,  

doi:10.1016/j.bbrc.2006.07.168



# *Introduction* bukan menjelaskan “sejarah”

“Rice (*Oryza sativa* L.) is one of the major crops in the world (Wang et al. 2004), contribution 43.7% of the total national grain production in China... **[Followed are more than 200 words, describing the problem of water shortage in rice cropping area.]**

Nitrogen (N) is one the three essential macronutrients for plant growth... **[Another nearly 300 words describe the generation of nitrites in the soil.]**

Using model calculations and experiments... **[The next 5 more paragraphs describe the detailed mechanism of how plants absorb N in the soil and its relationship with irrigation.]**

Based on previous studies, we focus our investigation on...

**[Readers may well be exhausted If they ever read this far.]**

Contoh

## Berikan info ringkas dan utuh sebelum menyajikan kajian baru Anda.

"Wide band gap materials are attractive for optical devices. For example, GaN and SiC have been used for blue or shorter wavelength light emitting diodes. ZnO is a wide band gap material (3.37 eV). Compared with others, it has larger exciton binding energy (60 meV), which assure more efficient excitonic emission at higher temperature. The study on the emission properties of ZnO films is attractively increasing attention because of its promising optoelectric applications [4-9]. In this paper, Cu-doped ZnO films were prepared by RF sputtering technique. The structures and light emission properties of Cu-doped ZnO films have been investigated and discussed."

Contoh

- ❖ **Masalah yang dikaji tidak disampaikan dengan baik, terutama kepentingan dan fokus kajian. Pembaca akan membaca sekilas tulisan jika tidak ditemukan poin menarik dalam *Introduction*.**

# Sitasi sumber penting yang relevan

Some recent papers have demonstrated abnormal expression of microRNAs in diverse cancers, suggesting that microRNAs might play a role in oncogenesis, and some of these seem to have the characteristics of stem cell microRNAs. Some researchers now consider that cancer stem cells might contribute to the development and transformation of human cancers. To determine whether or not the initiation and maintenance of cancer stem cells are regulated by microRNAs will require further studies. In this review, we summarize some indirect evidence to support the concept that microRNAs.

Contoh

Corresponding references  
should be CITED here!!!

# METHODS

- ◆ Jelaskan secara rinci disain penelitian, metode, dan materi
- ◆ Cukup rinci sehingga orang lain bisa melakukan kajian serupa atau mengembangkannya
- ◆ Penggunaan prosedur yang sudah baku bisa dirujuk saja
- ◆ Jelaskan apa yang telah dilakukan, kapan, dan bagaimana
- ◆ Jelaskan bagaimana data dianalisis dan disajikan
- ◆ Kesahihan hasil yang diperoleh
- ◆ *Materials and Methods* ditulis dengan kalimat ***past tense*** dan kalimat pasif

methods

# Results – apa yang sudah ditemukan?

- **Temuan utama** dalam kaitannya dengan **metode**
- **Jangan** terlalu **membahas** hasil.
- Tidak perlu menjelaskan setiap langkah analisis statistik  
*e.g.: Just say something like:*  
"Honeybees did not use the flowers in proportion to their availability ( $\chi^2 = 7.9$ ,  $p < 0.05$ , d.f. = 4, chi-square test)."
- Jelaskan temuan utama mengacu Tabel/Gambar. Misal:
  - ◆ **Incorrect:** The results are given in Figure 1.
  - ◆ **Correct:** Temperature was directly proportional to metabolic rate (Fig. 1).

Contoh

# Results

Contoh

"Nitrogen fertilizer significantly increased soy bean total biomass ( $p=0.05$ ) regardless of the presence or absence of *Rhizobium* (Table 1)."

Kalimat di atas ditulis dengan baik:

- ◆ Hasil penambahan nitrogen dinyatakan dengan ringkas.
- ◆ Kata *significantly* disertai dengan tingkat probabilitas statistik ( $p=0.05$ )
- ◆ *Rhizobium* ditulis *italic*
- ◆ Pembaca diarahkan ke tabel penunjang data

# TABLES AND FIGURES

- ❖ Jangan sajikan data yang sama **sekaligus** dalam *table* & *figure*
- ❖ Beberapa jurnal membolehkan 3-4 *tables* & *figures*
- ❖ Tabel harus bisa berdiri sendiri tanpa harus membaca teks
- ❖ Keterangan simbol yang digunakan sebaiknya dijelaskan
- ❖ Hindari gambar yang menunjukkan terlalu banyak variabel/kecenderungan sekaligus

**A table's legend appears above it.  
A figure's legend appears below it.**



# Tables and Figures

**Table 3.** Mean number of nodules produced for each treatment with their standard of deviation. *And results of t-tests comparing Number*

Treatments	Avg. # of nodules $\pm$ Std. Dev.	Significant
4 drops	24.858 $\pm$ 11.47	no
8 drops	88.8 $\pm$ 45.9	yes
16 drops	73.36 $\pm$ 19.5	no
24 drops	69.16 $\pm$ 33.9	yes

at what level of significance?

font. Same # of decimals

**Table 1.** Gas exchange characteristics of an *Orontium aquaticum* plant before and after 17 d inside a flow-through cuvette. Values are means  $\pm$  standard deviations. PPFD=photosynthetically-active photon flux density.

	Experimental Treatment	
	Before	After
Photosynthesis ( $\mu\text{mol}^{-2} \text{s}^{-1}$ )	14.7 $\pm$ 0.7	11.8 $\pm$ 2.4
PPFD ( $\mu\text{mol m}^{-2} \text{s}^{-1}$ )	641 $\pm$ 57	531 $\pm$ 24
Ambient [ $\text{CO}_2$ ] (Pa)	38.2 $\pm$ 1.5	34.1 $\pm$ 1.6
Relative Humidity (%)	46 $\pm$ 15	67 $\pm$ 5
Number of Leaves Measured	3	5



## ❖ Catatan tambahan di bagian Hasil:

- ❖ Nomor tabel dan gambar terpisah, dimulai dengan 1.
- ❖ Keterangan ditulis pada halaman yang sama dengan gambar/tabel.
- ❖ Setiap gambar/table dirujuk dalam teks
- ❖ Laporkan ringkasan data, bukan semua data mentah.
- ❖ Hanya gunakan gambar (grafik) jika memberikan representasi **visual** yang **baik**.

# Discussion

- Sajikan sekilas analisis data, **dan** hubungkan dengan penelitian lain.
- **Pembahasan sekurang-kurangnya memuat:**
  1. Hubungan antara hasil yang diperoleh **dan** hipotesis awal penelitian.
  2. Integrasi antara hasil penelitian Anda **dengan** hasil penelitian sebelumnya.
  3. Penjelasan untuk hasil dan pengamatan yang **tidak terduga**.

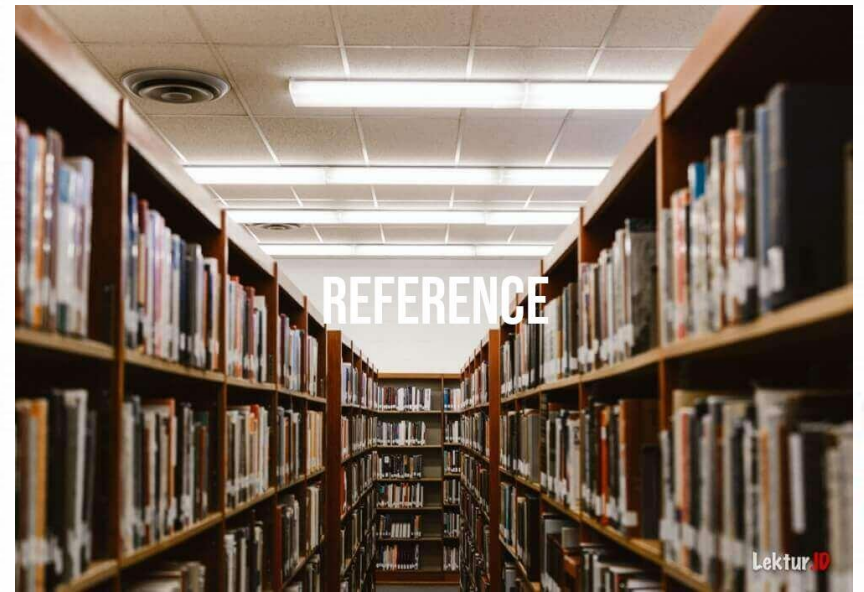
# Discussion

- Kecenderungan yang secara statistic **tidak signifikan** masih dapat didiskusikan
- Hindari **pengulangan** pada bagian Hasil dan Pembahasan
- **Akhiri** bagian diskusi dengan ringkasan poin-poin yang perlu diingat oleh pembaca
- Jangan akhiri dengan kalimat klise seperti:  
*“This problem needs more study.”*



# References

- ◆ Relevan dan terkini
- ◆ Sangat selektif
- ◆ Jangan salah kutip
- ◆ Gunakan gaya yang benar sesuai jurnal








# Tips untuk Penulisan Ilmiah

(dikompilasi dari V.E. McMillan's Writing Papers in the Biological Sciences)

- **PROOFREAD!!!** Untuk memperbaiki kesalahan penulisan dan meningkatkan keterbacaan/kejelasan.
- **Hindari singkatan, lengkap** mis: minimal, October, temperature, ... Kecuali istilah umum misal: ATP dan DNA, satuan ukuran (m, g, cm, °C), rumus matematika atau kimia.
- **Kalimat tidak boleh dimulai dengan singkatan atau akronim.**
- **Perkenalkan akronim** untuk istilah yang sering diulang, misalnya kedelai (*Glycine max*) → lengkap satu kali, selanjutnya *G. max*.
- **Unsur kimia bukan kata benda**, jadi **jangan** gunakan huruf **kapital**. Hanya huruf pertama dari simbol merupakan huruf kapital, seperti nitrogen (N), carbon (C), calcium (Ca).

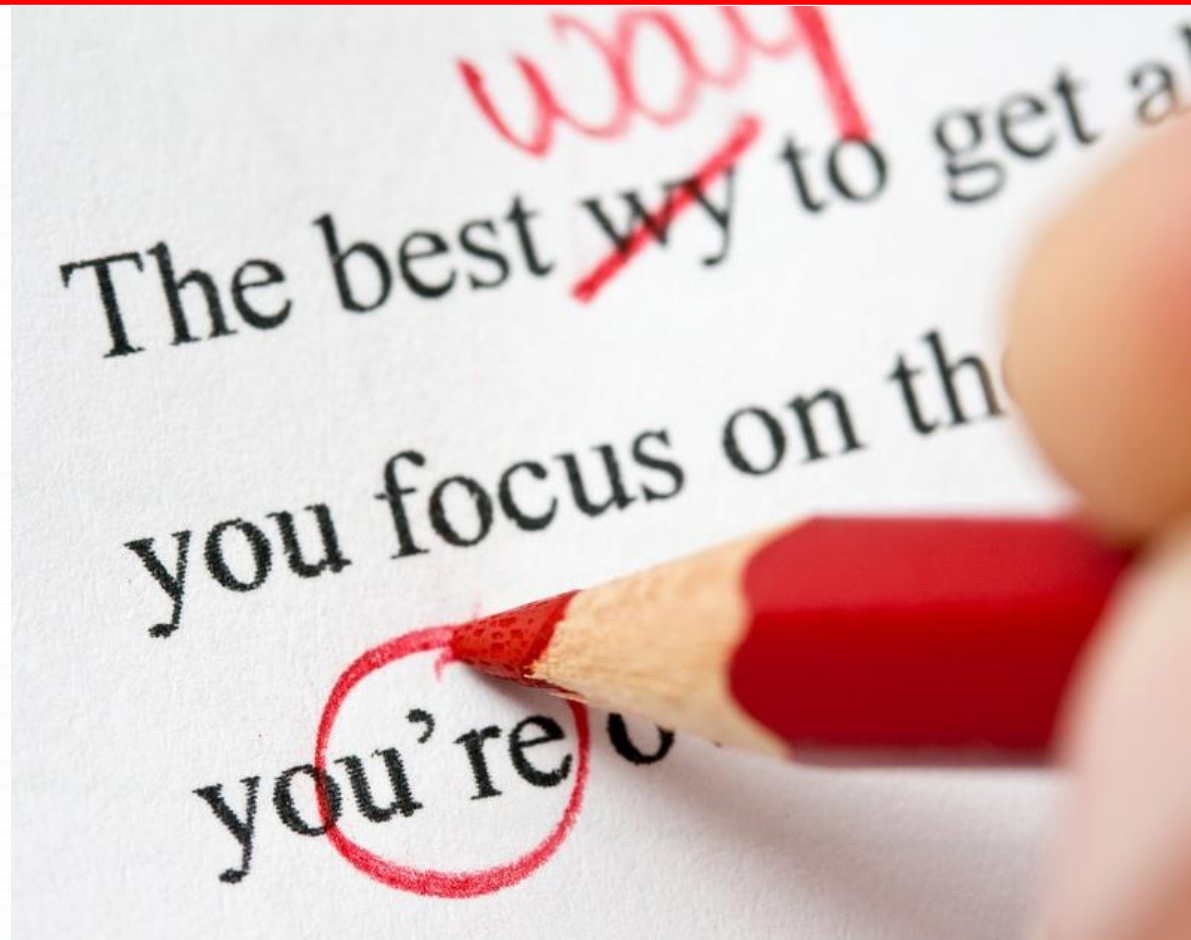
- Semua satuan pengukuran harus mengacu pada metrik atau SI (Sistem internasional).
- Dalam penulisan formal, tidak boleh menggunakan **contractions** (didn't, can't, haven't ...).
- Kata "**data**" berbentuk jamak, seperti "the data **were** collected on January 21, 2001."
- **Kutipan langsung** harus dihindari, **kecuali** jika menyajikan definisi khusus atau label asli dari penulis lain. **Parafrasekan tulisan secara efektif dan ringkas**, namun berhati-hati agar tetap benar.
- **Baca dan baca kembali referensi** Anda.

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- **Tinjau tulisan** untuk memastikan bahwa setiap kalimat menyajikan **ide yang jelas dan urutan yang logis**.
  - Dalam sains, kata "**signifikan**" menyiratkan hasil uji statistik. Anda harus **menganalisis hasil untuk menentukan apakah hasil signifikan** secara statistik dan melaporkan uji statistik yang Anda gunakan.
  - Gunakan istilah ilmiah yang tepat dan hindari **bahasa sehari-hari dan kiasan**.
  - Aplikasi **spell-check** atau **grammar-check** tidak bebas dari **kesalahan**. Beri cukup waktu untuk Anda **mengoreksi** dan **mengoreksi** tulisan.
-



# Final Step is Revision and Proofreading

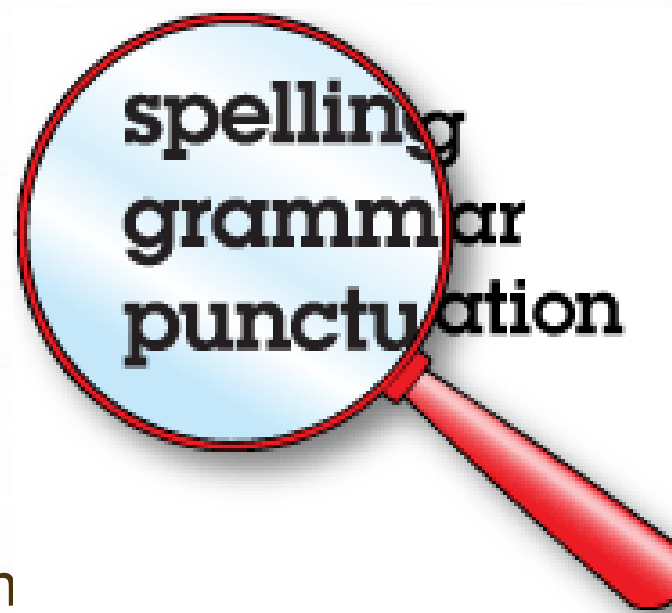
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# Revision and Proofreading

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- ◆ **Proofreading** Semua penulis harus berpartisipasi
- ◆ Grammar and spelling errors
  - ◆ Consistent verb tense
  - ◆ Vocabulary
  - ◆ Tighten the sentences
  - ◆ spell-check
  - ◆ Punctuation
  - ◆ typos
- Technical terms
  - Scientific symbols
  - Reaction scheme
  - Chemical structures/nam
  - References














# PROOFREADING MARKS

## Marks & Meanings

## Examples

	capitalize	They fished in <u>lake tahoe</u> .
	make it lowercase	Five <del>S</del> students missed the <del>B</del> us.
<i>sp.</i>	spelling mistake	The day was cloudy and cold. <i>sp.</i>
	add a period	Tomorrow is a holiday  .
	delete (remove)	Kim knew the <del>the</del> answer.
	add a word	<sup>pups</sup> Six  were in the litter.
	add a comma	He ate peas  corn  and squash.
	reverse words or letters	An otter swam in the  bed  kelp.
	add an apostrophe	The child's  bike was red.
	add quotation marks	 Why can't I go?  she cried.
	make a space	He read two  books.
	close the space	Her favorite game is soft  ball.
	begin a new paragraph	We had fun.  Next we went to

# To avoid

 <b>Jargon</b>	<b>Preferred use</b>
 a considerable amount of	much
 on account of	because
 a number of	several
 Referred to as	called
 In a number of cases	some
 Has the capacity to	can
 It is clear that	clearly
 It is apparent that	apparently
 Employ	use
 Fabricate	make

# Journals

## Choosing the right journal

- ✓ Aims and scope
- ✓ Types of articles
- ✓ Current hot topics
- ✓ Readership



**THINK**



**CHECK**



**SUBMIT**

# Peer Review Process

## Overview of Peer Review Process



WILEY

# Cover Letter

- **Jurnal tertentu meminta *cover letter* sebagai penyerta artikel.**
- Jangan mengirim letter dengan mengatakan "*please find my manuscript attached*", maka *paper* Anda akan terlihat tidak penting
- *Cover letter* adalah kesempatan Anda untuk berkomunikasi dengan editor jurnal target Anda
- Jelaskan kepada editor mengapa temuan Anda penting dan mengapa harus dipublikasikan

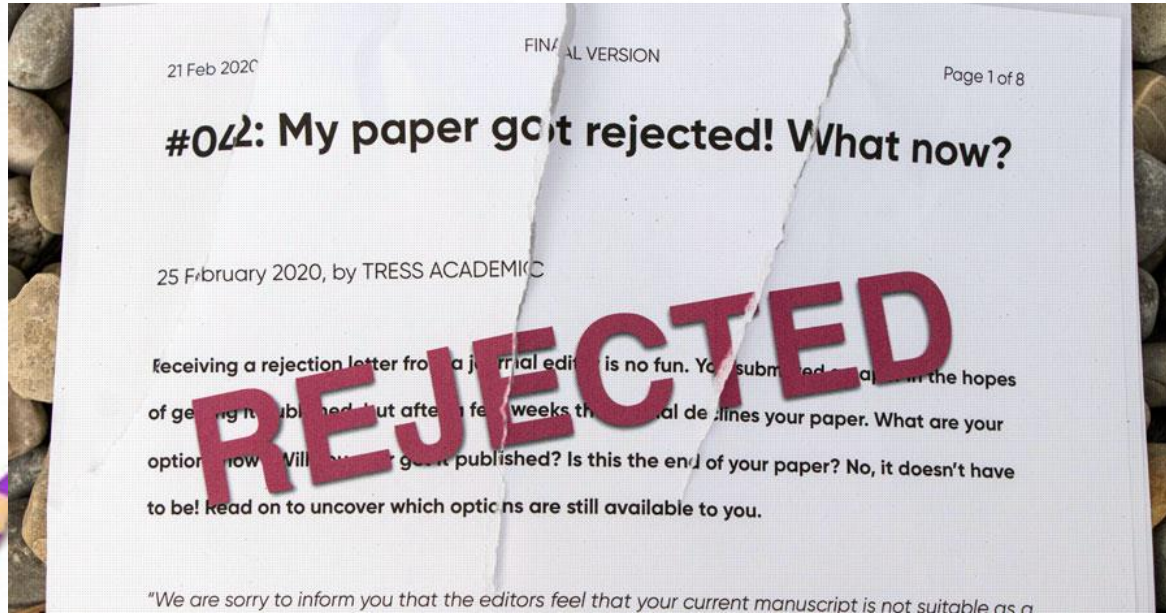
# Cover Letter

Aturan umum untuk *cover letters* :

- Alamat ke editor dengan nama
- Berikan **judul** dan **jenis publikasi** Anda
- Berikan **latar belakang singkat, rasionalitas,** dan **deskripsi hasil penelitian**
- Jelaskan pentingnya temuan Anda dan mengapa temuan itu menarik bagi **audiens target jurnal**
- Berikan detail penulis yang sesuai



# Rejection: not the end of the world



# Alasan Utama Penolakan

- Jurnal tidak sesuai *scope*
- Tidak sesuai "guidelines" jurnal
- Desain eksperimental/analisis data lemah
- Tulisan dan bahasa lemah
- Referensi "tua"/lemah
- Topik "tua"
- *Research gap* lemah
- Diskusi lemah
- Hanya konfirmasi dari penelitian sebelumnya, tidak ada hal baru

# References:

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