Metodologi Penelitian Ilmiah

Penulisan Artikel Ilmiah

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Artikel Ilmiah

- Menulis artikel ilmiah → meyakinkan orang (pembaca)
  - Rencakan
  - Persiapkan sebaik mungkin

REJECTED

ACCEPTED

Artikel Ilmiah

- 😫 Bagian tersulit dalam menulis artikel ilmiah adalah

  MEMULAI

- 🤔 Ketika kita sudah memulai proses menulis, akan muncul 'godaan' untuk melanjutkan dan menyelesaikan

- 😬 Seluruh ide dikepala kita ingin kita sampaikan kedalam artikel

- 😄 Tanpa kita sadari 'tiba-tiba' artikel kita sudah siap kirim

Tips

- Publikasi ilmiah memiliki gaya tersendiri, berbeda dengan karya lisan.
- Publikasi ilmiah adalah untuk mengirimkan apa yang telah Anda lakukan & hasil yang telah Anda temukan.
- Jangan menuliskan hal-hal yang tidak diperlukan.
- Mulailah menulis segera setelah mendapatkan hasil Anda.

  Seseorang cenderung mudah lupa jika menunda dalam menuliskan hasil temuannya.
- Gunakan kata-kata sederhana, pastikan arti setiap kata.

Struktur Umum Artikel dan Tingkat Kesulitan

IMRaD:

- Title (easy)

- Abstract (easy)

- **I**ntroduction (moderate)

- Literature review (difficult)

- **M**ethods **(Most difficult)**

- **R**esults (easy—just the facts)

- **D**iscussion **(Second-most difficult)**

- Conclusions (easy)
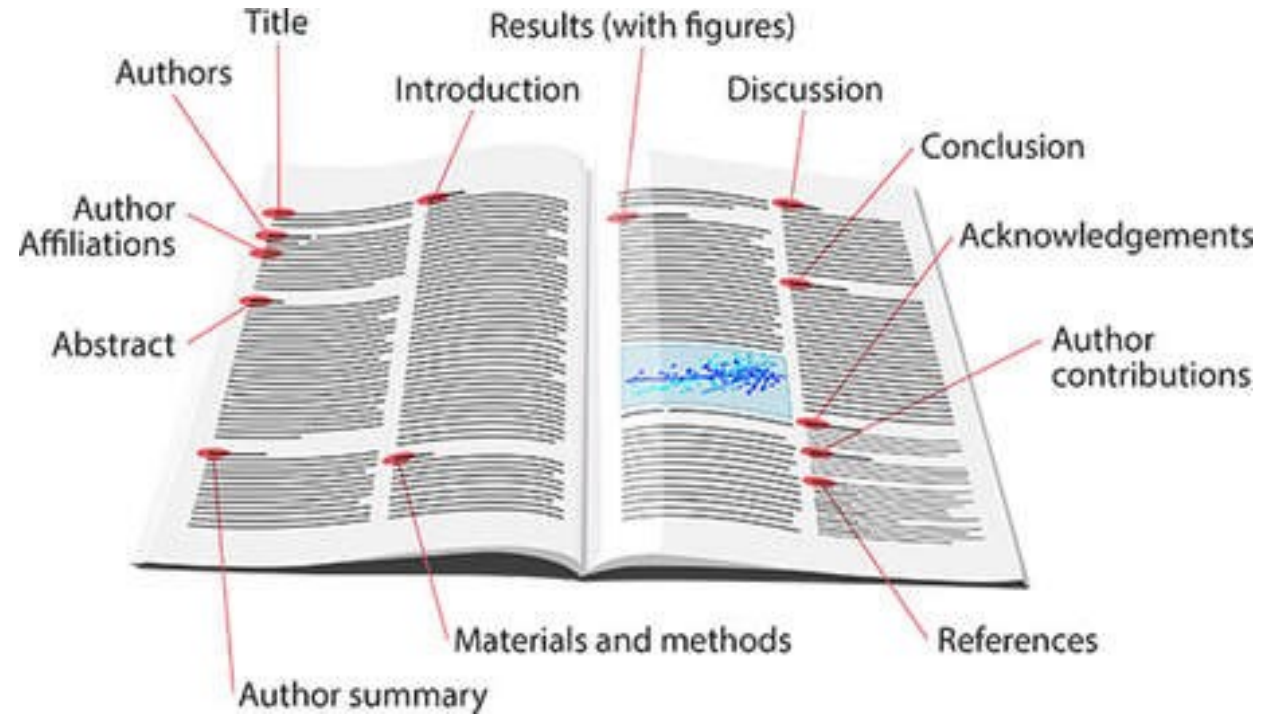
1. Menarik perhatian pembaca secara singkat (*at a glance*).

2. Secara akurat menggambarkan elemen utama studi.

3. Sedikit kata, tetapi cukup menggambarkan isi &/atau tujuan penelitian.

4. Jelas, tepat, informatif, tidak ambigu & relevan.

5. Tidak mengandung istilah teknis, atau jargon. Penggunaan akronim harus dibatasi.

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ELSEVIER

Computational thinking for teachers: Development of a localised E-learning system

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ABSTRACT

Malaysia has introduced computational thinking skills as part of a curriculum integration update to meet the global trends in 21st-century education, focusing on empowering digital literacy. Nevertheless, a preliminary investigation revealed an apparent lack of understanding of computational thinking skills in general among teachers. The study explores the feasibility of developing a localized E-learning system to train computational thinking skills among teachers. An E-learning system, termed as myCTGWBL, was developed on the basis of a newly proposed conceptual framework to present computational thinking teaching–learning repertoire to the teachers. The hypothesis is that myCTGWBL would develop teachers' computational thinking and its position in teaching–learning understanding. myCTGWBL relevance was tested through DeLone and McLean's information system and Urbach's collaboration quality construct. To determine the success factors, partial least squares structural equation modeling was used. A total of 369 teachers participated in a two-stage survey. Participants' understanding of computational thinking and perceptions were recorded at the pre- and post-intervention phases. Open-ended questions of the surveys were analyzed using a simple text analysis technique. The closed-ended questions surveys were analyzed using SPSS Statistics 22.0. A significant improvement in teachers' computational thinking teaching–learning repertoire in a relatively short period has been recorded. Teachers also demonstrated increased confidence in the future delivering computational thinking-based lessons. The E-learning conceptual framework has illustrated the predictive power between user intent, user satisfaction, and Computational thinking (CT) knowledge benefits. Results demonstrate that myCTGWBL could be used to guide future planning when establishing CT knowledge acquisition initiatives, particularly among teachers.

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Volume 192

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About the journal

An International Journal

Computers & Education aims to increase knowledge and understanding of ways in which digital technology can enhance education, through the publication of high-quality research, which extends theory and practice. The Editors welcome research papers on the pedagogical uses of digital technology, …

View full aims & scope

- Ringkasan poin-poin utama dari makalah penelitian.
- Biasanya dalam satu paragraf terdiri dari 300 kata atau kurang
- Untuk memberi kesan pertama kepada editor, reviewer, dan pembaca.
- Untuk menyajikan setiap aspek utama dari makalah.
- Untuk membantu pembaca memutuskan apakah mereka ingin membaca seluruh isi makalah.

Form one students' engagement with computer games and its effect on their academic achievement in a Malaysian secondary school

Yee Leng Eow [a,*], Wan Zah bte Wan Ali [b,1], Rosnaini bt. Mahmud [b,2], Roselan Baki [c,3]

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ARTICLE INFO

ABSTRACT

The main purpose of the study was to address the association between computer games and students' academic achievement. The exceptional growth in numbers of children playing computer games, the uneasiness and incomplete understanding foundation when starting the discussion on computer games have stimulated this study to be conducted. From a survey conducted on 236 form one students in one of the Malaysian secondary school, 75.8 percent were gamers. Playing computer games seemed to be more stereotypically boy's activity with 91.3 percent of the boys engaged in computer games compared to 54.1 percent among the girls. They spent an average of 8.47 hours per week playing computer games. Parents and teachers' concern about computer games was not something that went unwarranted as an overall result was predicting computer games as having negative associations with students' academic achievement. However, in-depth analyses by combinations of classes done step by step indicated that the initial results could be overruled by students from the last class, whom need extra attentions. As a conclusion, the findings in this study suggest some interesting yet ultimately weak associations between playing computer games and students' academic achievement. Nevertheless, caution is warranted in making any generalization as looking at the population as a whole will be different from its components. The generalizability of this study's findings is limited by the nature of the sample. Even so, blaming computer games for the students' bad academic performance in school is unjustified as there are many more other factors to look into before finding computer games as the scapegoat.

Artikel Ilmiah – Abstrak

Abstrak:

- Introduction (Pendahuluan)

- Objectives (Tujuan)

- Methodology (Metode)

- Main result (Hasil / Temuan Utama)

- Implication (Dampak)

- Kata Kunci
  - Alat untuk membantu pengindeks & mesin pencari menemukan makalah yang relevan.
  - Membantu meningkatkan jumlah pembaca, menghasilkan lebih banyak kutipan.
  - Mewakili isi naskah Anda
  - Spesifik untuk bidang atau sub-bidang

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1. Introduction, 2.Objectives, 3. Methodology, 4. Main result, 5. Implication

Artikel Ilmiah – Pendahuluan

- Membantu pembaca memahami makalah.
- Membantu pembaca menghargai pentingnya penelitian.
- Memberikan isu-isu spesifik yang diteliti.
- Untuk memberikan RQ & RO.
- Tinjauan literatur yang komprehensif (kebanyakan 5 tahun terakhir)
- Berikan permasalahan saat ini (atau masa lalu), tren, dan perkembangannya

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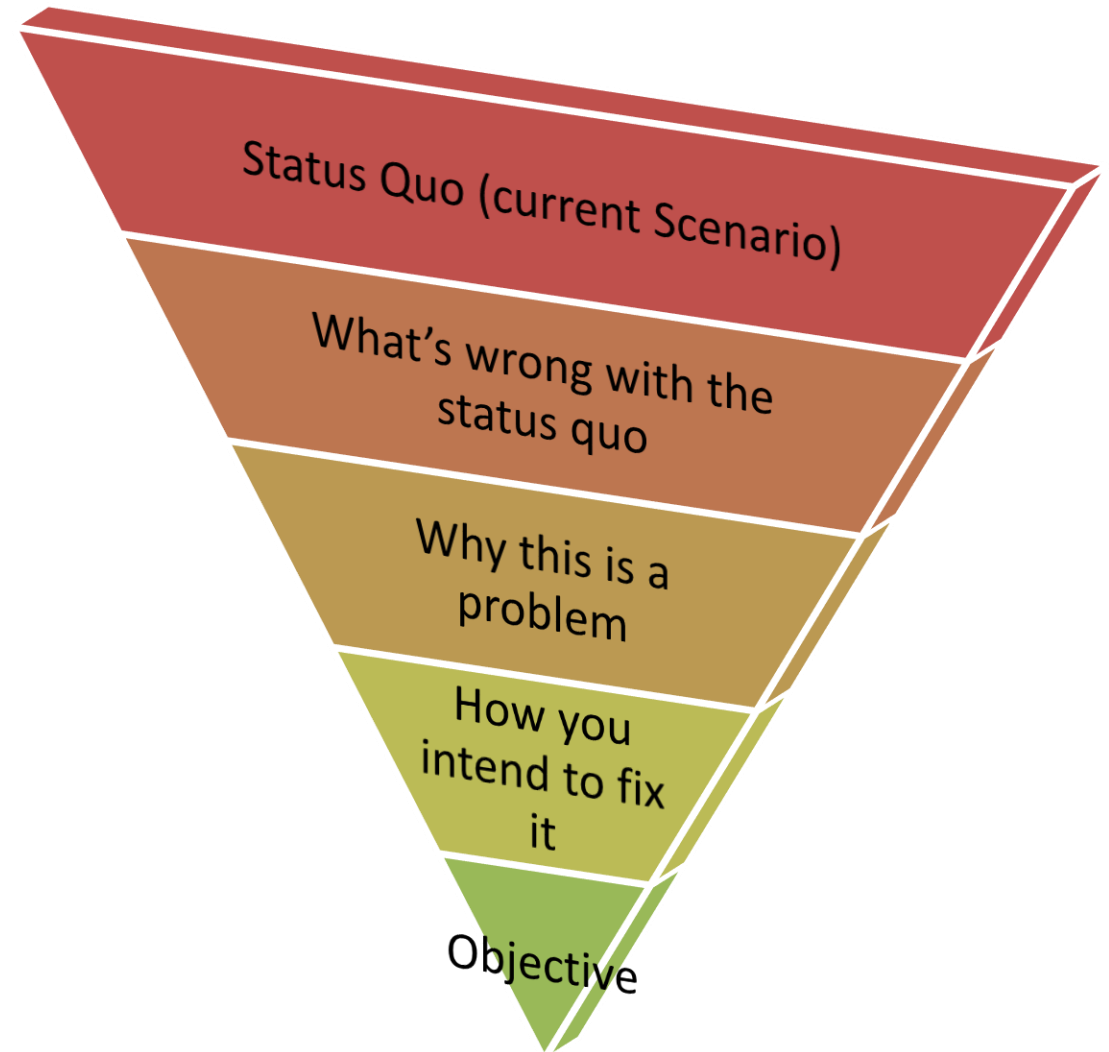[c] Department of Language and Humanities, Faculty of Educational Studies, University Putra Malaysia, 43400 Serdang, Selangor, Malaysia

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Artikel Ilmiah – Pendahuluan

- Pendahuluan sebaiknya berbentuk piramida terbaik, bergerak dari umum ke khusus.

- Struktur umum:
  - Informasi tentang pentingnya topik
  - Penekanan penelitian sebelumnya yang relevan
  - Identifikasi isu yang belum terjawab & kesenjangan.
  - Pendekatan yang digunakan untuk mencari jawaban / memecahkan masalah

Status Quo (current Scenario)

What's wrong with the status quo

Why this is a problem

How you intend to fix it

Objective

Artikel Ilmiah – Pendahuluan

Identifikasi

- Dimulai dengan subjek umum, lalu fokus ke subjek khusus

Penafsiran / Interpretasi

- Meninjau (review) penelitian sebelumnya
  - Tujuan
  - Metodologi
  - Sampel data dan metode evaluasi
  - Hasil
  - Tinjauan penelitian terkait, berikan pendapat tentang kekuatan dan kelemahan pendekatan yang ada sehingga perlu pendekatan Anda

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1. Introduction

The current generation is growing up with a pastime that demands interaction and play (Becker, 2007) which can be accommodated through various computer gaming activities. This is mostly due to the fact that computer games comply with the children's contemporary needs, habits and interests (Henderson, 2005). However, not only children are fascinated with computer games, adults too are found to be deeply interested in these gaming activities particularly during their leisure hours (Saulter, 2007). This is not surprising at all because play is a natural way to learn as it is joyful and provide the opportunities to unconsciously integrate ideas (Petty, 1997; Pivec, 2007; Prensky, 2007). Basically, playing educational computer games is beneficial to most children since these games allow diverse opportunities for them to become more creative as compared to when they are in a more conventional learning environment.

According to Olson et al. (2007), findings on boys who seldom or have never played computer games are quite rare since gaming is often regarded as a social activity for boys. Nevertheless, nowadays, playing computer games is no longer dominated by boys. The number of girl gamers is found to be rapidly increasing too. In their study, Olson et al. (2007) found that one third of the boys being studied played computer games nearly every day while one in eight boys played 15 hours or more per week. Although in the past, males are found to spend more time playing games than their female counterparts, results form studies demonstrate that the gaps in terms of gender and time spent in gaming activities is closing in significantly. The Entertainment Software Association. (2007) reported that the average adult woman

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[3] Tel.: +60 03 89468179.

Artikel Ilmiah – Pendahuluan

Evaluasi

- Setelah menyelesaikan review, Anda harus mengevaluasi:
  - Kelebihan dan kekurangan masing-masing karya
  - Mampu memberikan komentar kritis
  - Menekankan permasalahan umum saat ini

Sintesis

- Mampu menyampaikan tujuan penelitian
- Mampu menentukan peluang perbaikan (*tidak wajib di Strata 1*)

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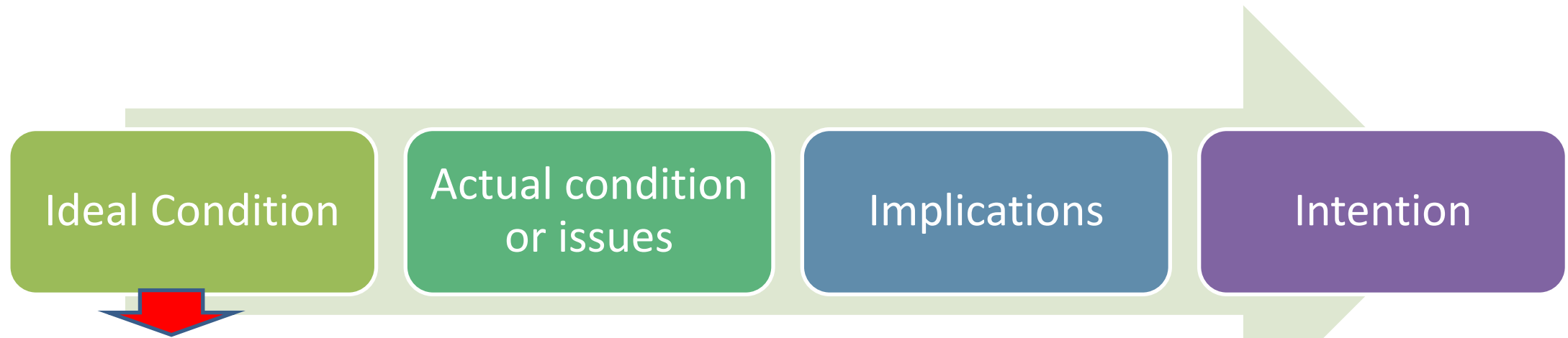[c] Department of Language and Humanities, Faculty of Educational Studies, University Putra Malaysia, 43400 Serdang, Selangor, Malaysia

Despite all the concerns, at present, computer games environment has become the main building block of the children's world (Funk, Buchman, Jenks, & Bechtoldt, 2003; Gazit, 2006). According to Wittwer and Senkbeil (2008), computers had no significant influence on their academic achievement no matter how they used it, either for academic purposes or entertainment such as playing computer games. Along similar lines, Cagiltay (2007) reported that computer games had positive effects on students' academic achievement. Computer games are also reported to have been positively motivating students (Schaefer & Warren, 2004), attracting students' attention in classroom (Inal & Cagiltay, 2007; Roussou, 2004) and initiating students to learn something new (Bailey & Moar, 2001). Thus, it can be seen that researches done on computer gaming and its effects on students' learning and performance have provided conflicting findings. The question is, are we, the educators, going to stop computer games expansion (which is surely an unrealistic move) or are we going to move parallel and adapt it into our educational needs (which students will definitely enjoy playing them)? It surely needs a lot of researches and debates into making decisions about computer games adaptation into the world of education.

Most of the studies done were foreign based, mainly carried out in developed western countries. What is lacking here is a local study in Malaysia that addresses the question of whether computer games do affect students' academic achievements negatively. Many educators and parents neither played nor developed computer games (Oblinger, 2006), and this is especially true in the Malaysian context. So far, not many local researches have looked into the educational values offered by computer games. In the context of this study, computer gaming is considered as an entertainment system in which a computer is used to drive a video display and interacted with players using a variety of input devices. Beside that, computer games are consider to involve elements such as rules, goals, challenges, fantasy, mystery, curiosity, competition, skill and/or conflict (Saulter, 2007). Therefore, computer animations without some of these elements are just another visual display which would not being considered as computer games in the study conducted.
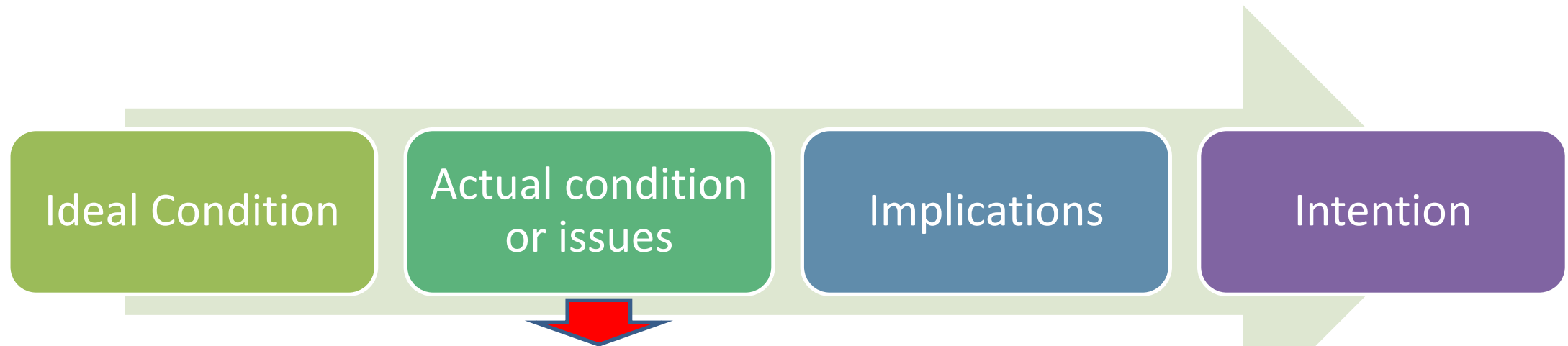
The exceptional growth in numbers of children playing computer games (Carbonaro et al., 2008) has stimulated this study to be conducted. In addition, many people begin the discussion on computer games with some uneasiness and with an incomplete understanding foundation (Oblinger, 2006). Apart from that, computer games are blamed for everything from youth obesity to fostering violence (Bartholow, Bushman, & Sestir, 2006; Carnagey, Anderson, & Bushman, 2007; Funk et al., 2003). Parents, educators, administrators and policy makers are generally more aware of the negative effects and easily hold computer games as responsible for whatever bad consequences shown. The rationale of the study is to enable parents, educators, administrators and policy makers to develop a better understanding on the effects of computer games on students' academic achievement before making any unjustified judgement on the contemporary youth culture. Thus, by probing the effects of computer games on students' academic achievement thoroughly, further decision on the acceptance of computer games as a new innovation in school could be considered. In the mean time, this paper also serves to provide a better view of the local students' current engagement in computer games. On the whole, the main question to be answered is whether computer games are negatively affecting students' academic achievements. Besides that, did the total time students spent a week on computer games affected their academic achievement as well? Therefore, is it justified to put computer games as the blame for students' bad performance in school?

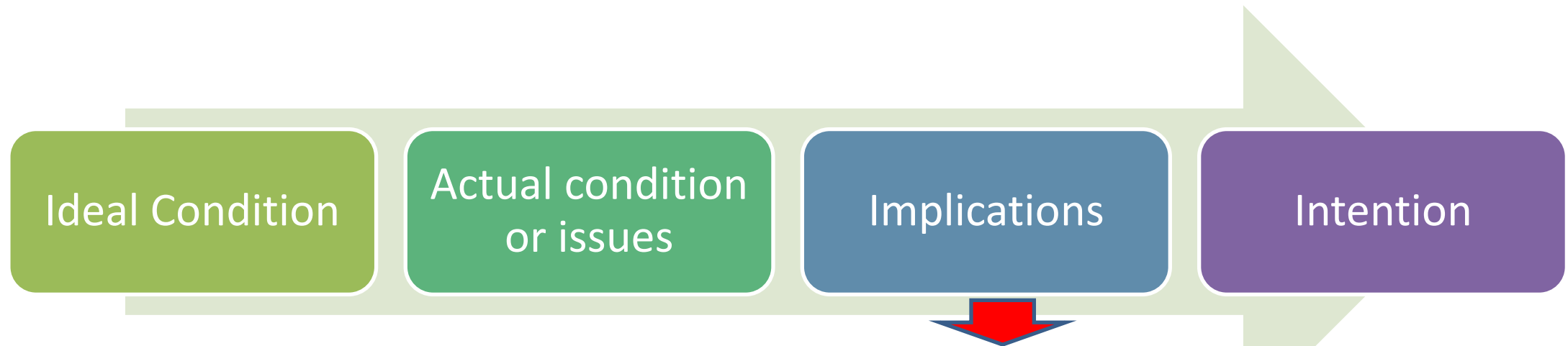| Ideal Condition	Actual condition or issues	Implications	Intention

The current generation is growing up with a pastime that demands interaction and play (Becker, 2007) which can be accommodated through various computer gaming activities. This is mostly due to the fact that computer games comply with the children's contemporary needs, habits and interests (Henderson, 2005). However, not only children are fascinated with computer games, adults too are found to be deeply interested in these gaming activities particularly during their leisure hours (Saulter, 2007). This is not surprising at all because play is a natural way to learn as it is joyful and provide the opportunities to unconsciously integrate ideas (Petty, 1997; Pivec, 2007; Prensky, 2007). Basically, playing educational computer games is beneficial to most children since these games allow diverse opportunities for them to become more creative as compared to when they are in a more conventional learning environment

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Artikel Ilmiah – Tinjauan Pustaka

- Sebuah penilaian kritis pada bahan bacaan dari apa yang telah publikasikan pada suatu topik oleh para akademisi & peneliti sebelumnya.
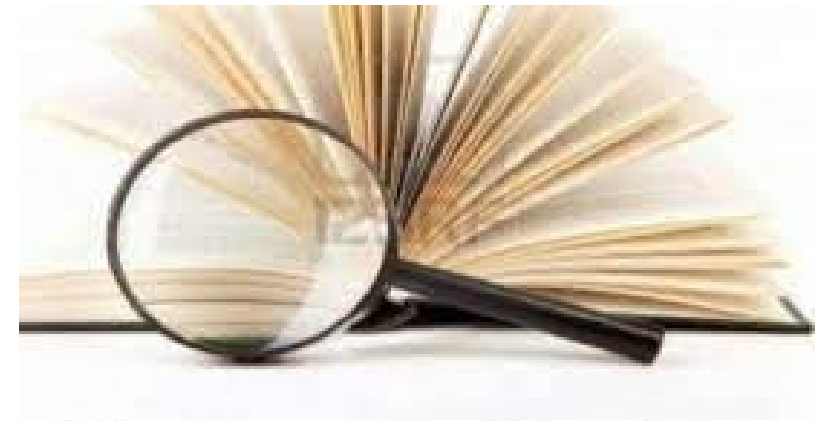
Literature Review

Artikel Ilmiah – Tinjauan Pustaka

- Menunjukkan orisinalitas & relevansi masalah penelitian.

- Identifikasi apa yang telah dilakukan & apa yang harus dilakukan.

- Mengidentifikasi pengetahuan/ilmu yang ada (teruji) tentang suatu topik.

- Menjadi dasar untuk penelitian lebih lanjut.

- Mengidentifikasi strategi & prosedur penelitian.

- Membantu dalam interpretasi data.
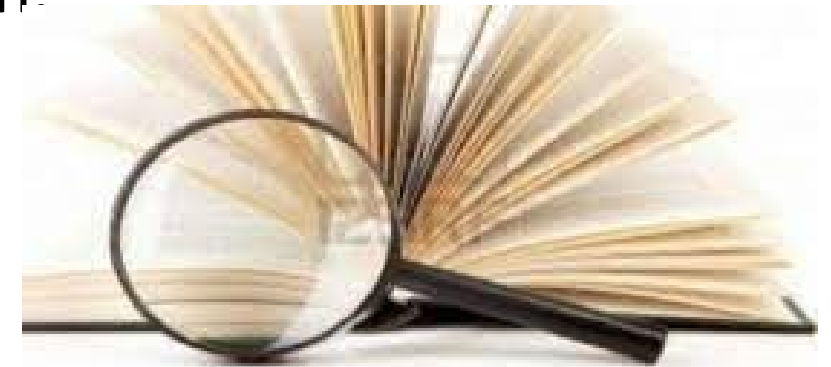
Literature Review

Artikel Ilmiah – Tinjauan Pustaka

- Isu-isu terkait tinjauan Pustaka:
  - Cenderung meringkas artikel, daripada mengkritiknya.
  - Gagal menyampaikan konsep dengan jelas & kritis.
  - Gagal menghubungkan konsep dengan teori yang mendasari penelitian.
  - Tidak dapat membedakan apa yang harus ditulis dalam TP kerangka teori, & hipotesis.
  - "copy & paste" yang mengarah ke plagiarisme.
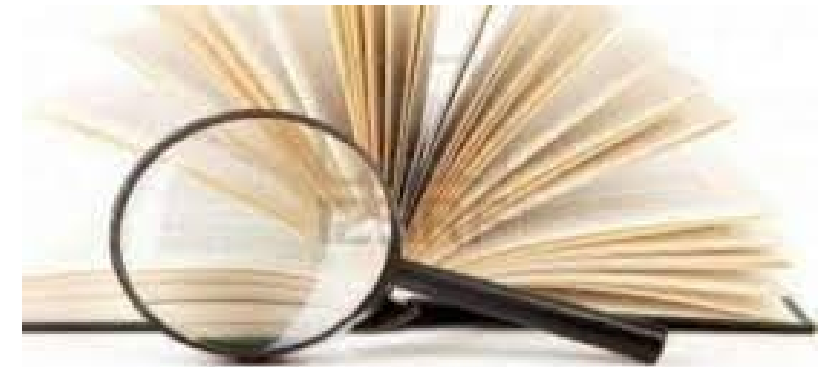
Literature Review

Artikel Ilmiah – Tinjauan Pustaka

- Penilaian kritis:
  - Tunjukkan kekurangan dalam literatur.
  - Tunjukkan keterbatasan studi sebelumnya.
  - Tunjukkan kontribusi pada pengetahuan (secara teoritis atau praktis).
  - Tunjukkan bagaimana studi Anda memperluas penelitian sebelumnya.
  - Tunjukkan mengapa studi yang Anda usulkan adalah solusi terbaik untuk menyelesaikan masalah.
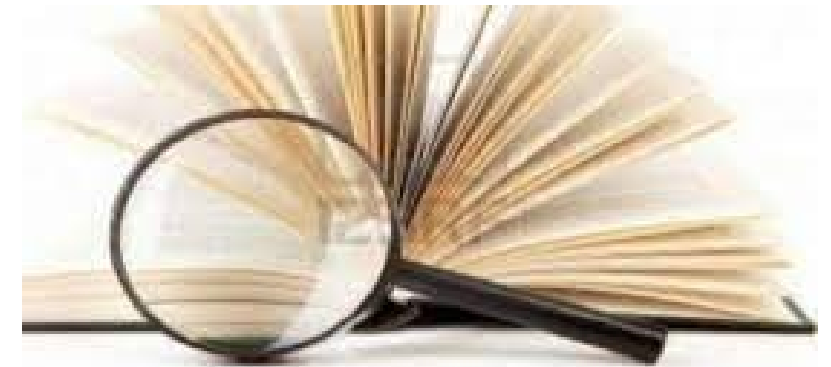
Artikel Ilmiah – Tinjauan Pustaka

- Menulis Tinjauan Pustaka
  - Pengantar
    - Tujuan peninjauan, gambaran singkat tentang masalah
  - Isi
    - Menyajikan dan mendiskusikan temuan dari literatur (menganalisis/mensintesis)
  - Ringkasan
    - Meringkas pengetahuan saat ini, mengidentifikasi kesenjangan (bagaimana penelitian Anda mengatasi kesenjangan, membangun kerangka penelitian, dll.)

Literature Review

- Gunakan kata kerja transisi / penghubung

Establishing the importance of the topic for the world or society

X is fundamental to …

X has a pivotal role in …

X is an important aspect of …

X is frequently prescribed for …

X is fast becoming a key instrument in …

X plays a vital role in the metabolism of …

X is the most widely distributed species of …

X plays a critical role in the maintenance of …

Xs have emerged as powerful platforms for …

X is essential for a wide range of technologies.

Artikel Ilmiah – Tinjauan Pustaka

- Gunakan kata kerja transisi / penghubung

A number of	studies researchers	have found … have reported … have identified …. have shown that … have attempted to … have demonstrated that … have investigated whether … have found an association between … have explored risk factors associated with …

It has been	noted that … argued that … shown that … reported that … assumed that … suggested that … established that … demonstrated that …. conclusively shown that …

Artikel Ilmiah – Tinjauan Pustaka

- Contoh penilaian kritis:

  Despite all the concerns, at present, computer games environment has become the main building block of the children's world (Funk, Buchman, Jenks, & Bechtoldt, 2003; Gazit, 2006). According to Wittwer and Senkbeil (2008), computers had no significant influence on their academic achievement no matter how they used it, either for academic purposes or entertainment such as playing computer games. Along similar lines, Cagiltay (2007) reported that computer games had positive effects on students' academic achievement. Computer games are also reported to have been positively motivating students (Schaefer & Warren, 2004), attracting students' attention in classroom (Inal & Cagiltay, 2007; Roussou, 2004) and initiating students to learn something new (Bailey & Moar, 2001).

  Thus, it can be seen that researches done on computer gaming and its effects on students' learning and performance have provided conflicting findings. The question is, are we, the educators, going to stop computer games expansion (which is surely an unrealistic move) or are we going to move parallel and adapt it into our educational needs (which students will definitely enjoy playing them)? It surely needs a lot of researches and debates into making decisions about computer games adaptation into the world of education.

Penutup

- Hal yang paling sulit dalam menulis adalah memulai
- Sebagai peneliti dan penulis kita harus kritis dan mampu menyampaikan penelitian kita sesuai dengan kaidah ilmiah

"Ikatlah ilmu dengan menuliskannya"

- Mulailah untuk menulis agar ilmu tidak hilang

- Pada pertemuan berikutnya kita akan membahas tentang Metodologi - Kesimpulan

TERIMAKASIH

Metodologi Penelitian Ilmiah

Penulisan Artikel Ilmiah (2)

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Artikel Ilmiah - Metodologi

"Combination of systematic strategies or methods that outlines the way in which things to be undertaken."

- Metodologi:
  - Desain penelitian
  - Alur penelitian
  - Alat ukur / pengujian
  - Populasi, sampel & Teknik sampling
  - Teknik pengumpulan data
  - Teknik analisys data

The effects of coding on children's planning and inhibition skills, Computer & Education, 148 (2021), 103807

Artikel Ilmiah - Metodologi

- Tuliskan informasi secara rinci, sehingga pembaca (sesuai bidang) dapat melakukannya kembali (mereproduksi penelitian)

- Jangan menuliskan ulang algoritma yang sudah ada, cukup rangkumkan secara umum (*broad summaries*)

- Gunakan diagram jika dibutuhkan

- Reviewer akan memberikan kritik pada deskripsi yang tidak lengkap atau salah (berpotensi penolakan artikel)
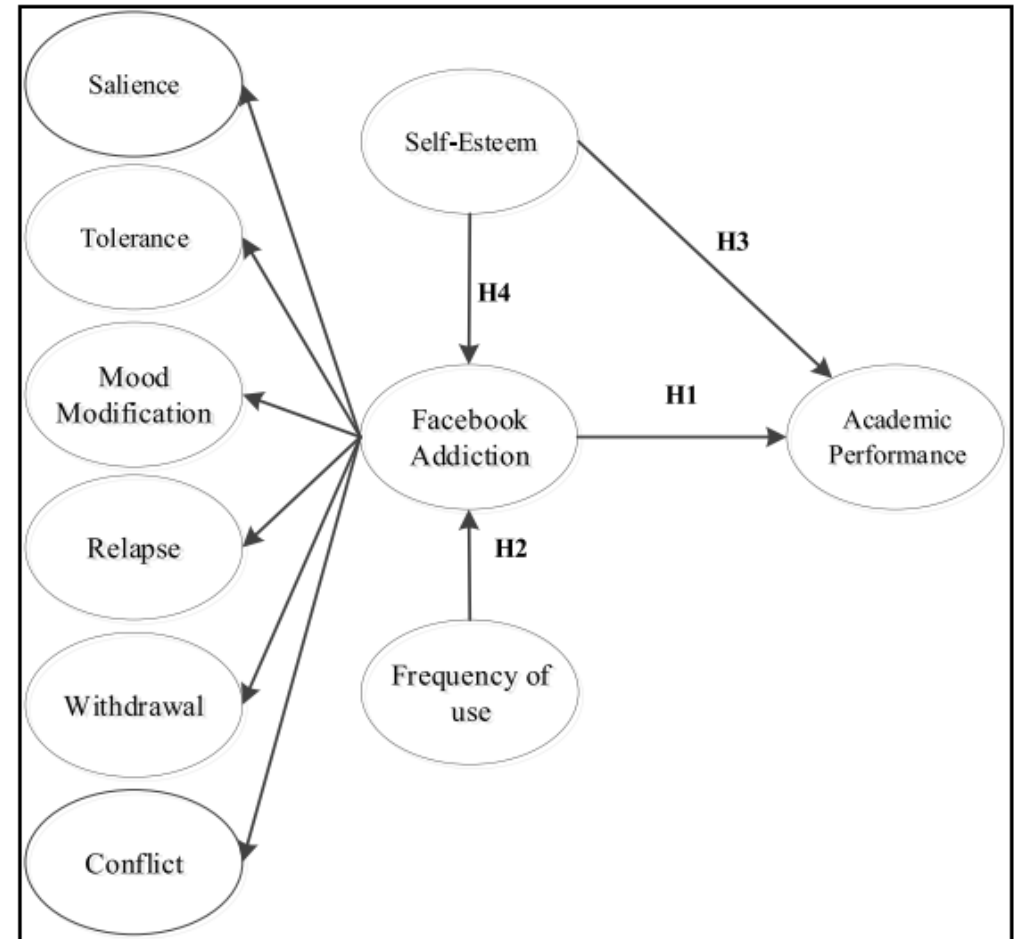
Fig. 1. Research model and hypotheses.

The impact of Facebook Addiction and self-esteem on students' academic performance: A multi-group analysis, Computer & Education, 142 (2019), 103651

- Metodologi adalah bagian yang paling diperhatikan oleh reviewer

- Reviewer memutuskan apakah hasilnya dapat dipercaya atau tidak.

- Metode yang pernah diterbitkan harus ditunjukkan dengan kutipan

The detailed steps of the proposed scheme can be described as follows:

1. Read the original image A
2. Divide into B image blocks with a size of 4x4 and perform Arnold Scrambling on B
3. Set the LSB value of the entire image block to zero

$$C = B - (B \bmod 2) \qquad (8)$$

where C is the new image block

4. Generate matrix S through the Hadamard matrix block

$$S = \frac{H_4 * C * H_4}{4} \qquad (9)$$

and take the largest element $S(1)$ which is the first element of the matrix

5. The next process is the same as the steps in Kang [21] starting from the 6th until the 19th equations for the embedding process and the equations 20 and 21 for the authentication or extraction process.

(a)i

(b)i

(c)i

Artikel Ilmiah – Hasil / Temuan

- Inti dari sebuah artikel ilmiah, menampilkan hasil yang diperoleh selama penelitian

- Singkat

- Hindari pengulangan

- Pilih hasil yang diperoleh

- Identifikasi hasil yang penting lalu tuliskan

- Membandingkan hasil dengan studi yang ada
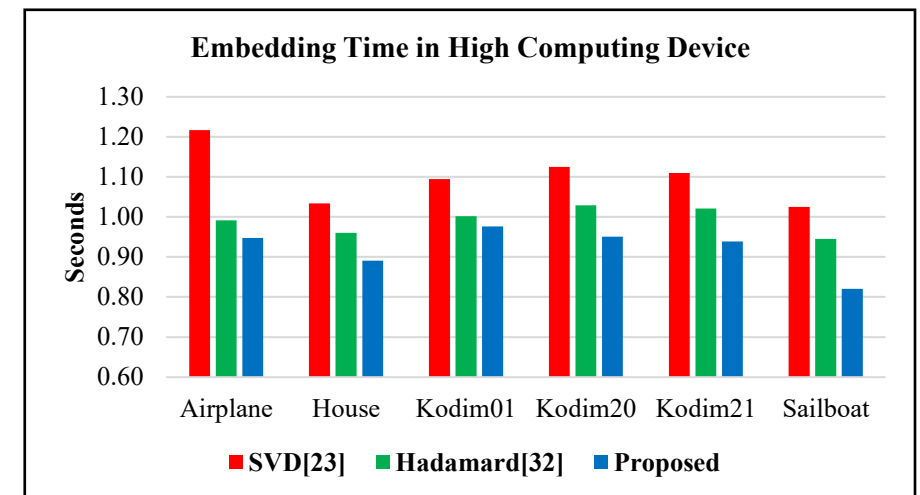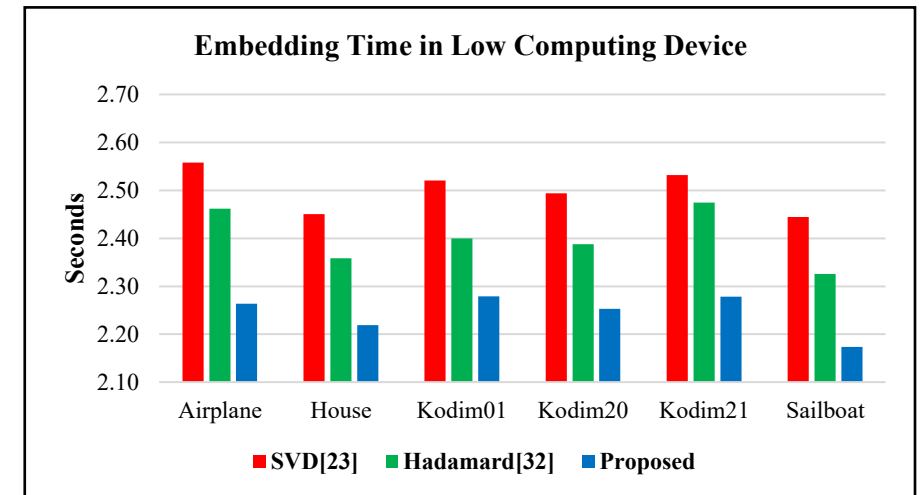
- Menafsirkan hasil:
  - Apakah penelitian mengkonfirmasi/menolak hipotesis?
  - Jika tidak, apakah hasilnya memberikan hipotesis alternatif?
  - Penafsiran apa yang bisa dilakukan?
  - Apakah hasilnya sesuai dengan penelitian lain?
  - Implikasi studi untuk lapangan ?
  - Saran untuk perbaikan dan penelitian selanjutnya?

- Terdapat gaya penulisan yang menuliskan 'Hasil dan Pembahasan' dalam satu subbab.
  (*sesuaikan dengan pedoman penulisa*n)

The experiment results on two different computing devices showed that the increase in speed is directly proportional to the capabilities of the devices used. In low computing devices, the average improvement of the Dyadic Walsh method compared to the SVD method is only 10% in both embedding and extraction time while the results on high-end devices showed a maximum improvement is 22% in the embedding process and . . .

Embedding Time in Low Computing Device

Embedding Time in High Computing Device

- Tentukan:
  - Yang tuliskan pada Hasil, dan
  - Yang dimasukkan ke Pembahasan

- Secara umum:
  - Di bagian hasil, jelaskan hasilnya, tetapi jangan banyak menafsirkannya.
  - Pada bagian pembahasan, berikan interpretasi & perbandingan dengan literatur, tanpa mengulang semua hasil.

Table 15 illustrates the statistics of students' academic achievement scores for all the combinations formed. In all the combinations being formed, the results obviously showing that non-gamer students gained better mean scores in term of academic achievement compared to gamer students. As to support the superficial results from the mean scores of academic achievements, analyses were done using independent sample t-test with 0.05 level of confidence in order to test its significance differences for all combinations.

Table 15
Statistics of students' academic achievement scores for classes combinations.

Combination		N	Mean	SD	SE
A, B, C	Gamer	63	38.51	7.309	0.921
	Non-Gamer	26	39.08	6.305	1.237
A, B, C, D	Gamer	86	36.86	7.752	0.836
	Non-Gamer	38	37.47	6.128	0.994
A, B, C, D, E	Gamer	109	34.46	8.609	0.825
	Non-Gamer	43	35.95	7.270	1.109
A, B, C, D, E, F	Gamer	134	33.00	8.587	0.742
	Non-Gamer	46	35.39	7.588	1.119
A, B, C, D, E, F, G	Gamer	151	32.19	8.707	0.709
	Non-Gamer	56	33.93	7.927	1.059
A, B, C, D, E, F, G, H	Gamer	179	30.29	9.599	−0.717
	Non-Gamer	57	33.86	7.873	1.043

Artikel Ilmiah – Hasil atau Pembahasan?

Table 15
Statistics of students' academic achievement scores for classes combinations.

Combination		N	Mean	SD	SE
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Interpretation: The questions that have not been answered here are that if these students were not playing any computer games, would they perform any better academically? Were they performed badly in their UPSR examinations due to other factors such as having low interest towards learning and school? Or was it caused by low cognitive abilities? The opposite situations might have applied to those with good and excellent academic achievement gamer students. In order to make a better justification on students in class H, researchers had sought for more information about students in class H from the school's administrators. According to the school's administrators, most students in class H were placed there because of discipline problems, being slow in learning and unable to follow instructions. Therefore, other factors might have more effect on these students' academic achievements rather than computer games. Nevertheless, without scientific data findings, computer games can be easily becomes the black sheep for the weak and very weak students' bad performance in school.

Artikel Ilmiah – Gambar dan Tabel

- Gunakan gambar untuk menunjukkan hasil utama, jika memungkinkan.
- Gambar umumnya lebih mudah dibaca daripada tabel.
- Setiap gambar harus dirujuk dalam teks.
- Menafsirkan angka-angka dalam teks utama.
- Berikan keterangan untuk setiap gambar
- Gunakan gambar beresolusi tinggi
- Label harus rapi dan dapat dibaca

Y.L. Eow et al./Computers & Education 53 (2009) 1082–1091
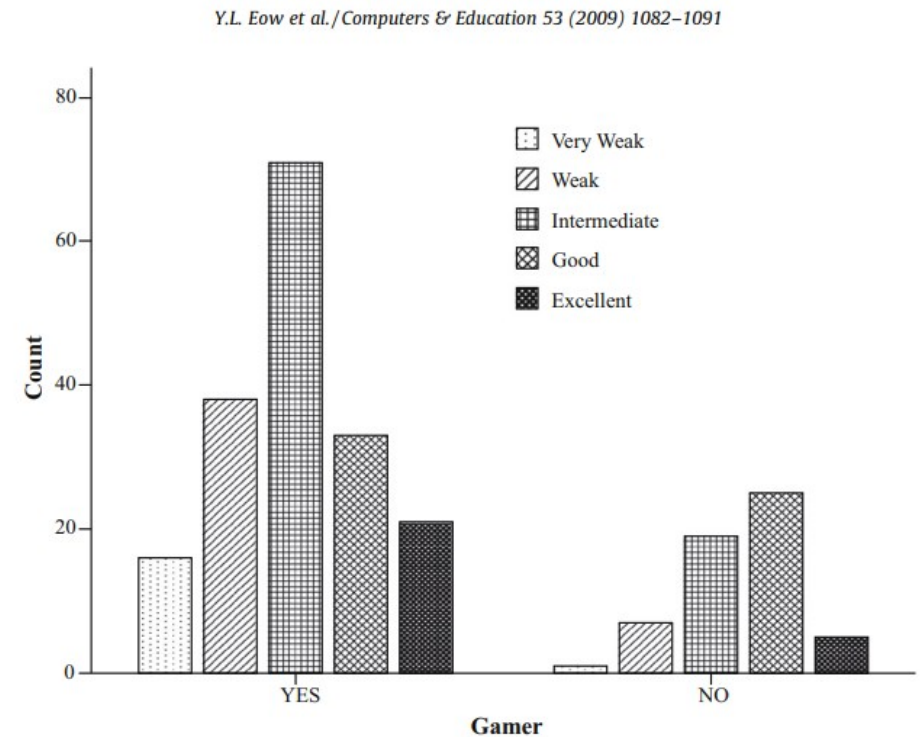
Fig. 2. Distribution of gamer and non-gamers across students' academic achievements categories.

Artikel Ilmiah – Gambar dan Tabel

- Buat tabel jika:
  - Terdapat sejumlah angka yang tidak dapat ditampilkan ke dalam gambar
  - Nilai ambang / float (dibelakang koma) penting.
- Setiap tabel harus memiliki keterangan
- Letakkan tabel panjang (melebihi 1 halaman) di lampiran

Table 15
Statistics of students' academic achievement scores for classes combinations.

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	Non-Gamer	57	33.86	7.873	1.043

Artikel Ilmiah – Pembahasan

- Salah satu hal yang sulit untuk ditulis karena memerlukan:
  - Latihan logika,
  - pengetahuan literatur
  - pengalaman tentang bidang yang diteliti

- Isi pembahasan antara lain:
  - Menafsirkan, mendiskusikan & menyimpulkan hasil/temuan yang disajikan.
  - Menunjukkan kemampuan sebagai peneliti untuk berpikir kritis tentang suatu masalah & menemukan solusi.
  - Menyajikan makna yang mendasari sebuah penelitian. Untuk menunjukkan pentingnya sebuah penelitian.

- Jika memungkinkkan dapat ditambahkan:
  - Kesamaan atau perbedaan dengan temuan sebelumnya (milik sendiri, orang lain, atau keduanya).
  - Kemungkinan alasan untuk persamaan & perbedaan.

Artikel Ilmiah – Pembahasan

- **Jika memungkinkkan** dapat ditambahkan:
  - Kesamaan atau perbedaan dengan temuan **sebelumnya** (milik sendiri, orang lain, atau keduanya).
  - Kemungkinan alasan untuk persamaan & perbedaan.

Embedding Time in High Computing Device — Seconds; SVD[23], Hadamard[32], Proposed; Airplane, House, Kodim01, Kodim20, Kodim21, Sailboat

Extraction Time in High Computing Device — Seconds; SVD[23], Hadamard[32], Proposed; Airplane, House, Kodim01, Kodim20, Kodim21, Sailboat

Embedding Time in Low Computing Device

Extraction Time in Low Computing Device

Embedding Time in High Computing Device

Extraction Time in High Computing Device
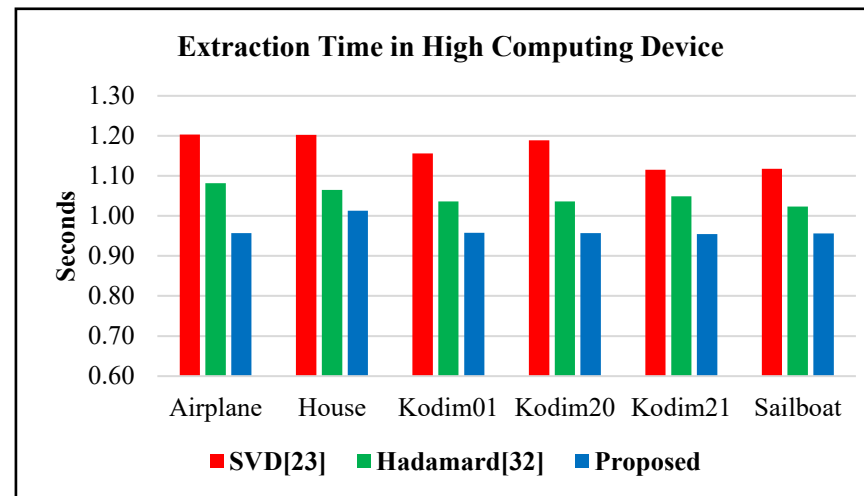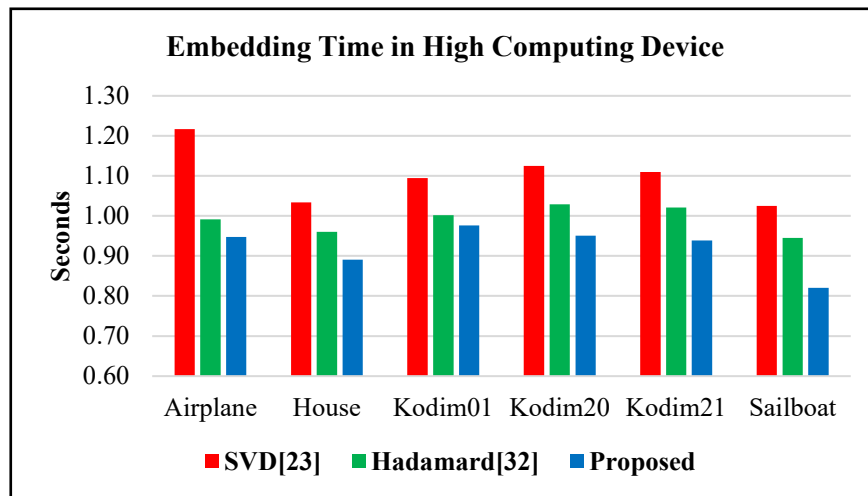
[23] Q. Kang, K. Li, and H. Chen, "An SVD-based Fragile Watermarking Scheme With Grouped Blocks," in *ICITEC* , 2014, pp. 172–179.

[32] P. W. Adi and P. Arsiwi, "A novel watermarking method using hadamard matrix quantization," *J. ICT Res. Appl.*, vol. 14, no. 1, pp. 1–15, 2020, doi: 10.5614/itbj.ict.res.appl.2020.14.1.1.

Artikel Ilmiah – Pembahasan

- **Jika memungkinkan** tambahkan
  - Aplikasi dan Implikasi, misal:
    - Kemungkinan penggunaan praktis dari temuan (bisnis, kebijakan publik, pertanian, dll)
    - Hubungan temuan dengan teori/model yang ada:
      - Mendukung / sesuai ?
      - Menyangkal / tidak sesuai ?
      - Menyarankan modifikasi?

Narrow Context

Discussion Section

The Beginning Part
- the answers of the research questions provided by the findings

The Middle Part
- a comparison with previous works (to support the study)
- the interpretations of the results (to defend the answers)
- the strength and limitations of the study

The End Part
- the conclusion of the study
- the significance of the study to fill the gap in the field of study

Broad Context

Artikel Ilmiah – Pembahasan

- **Jika memungkinkan** tambahkan
  - Kekuatan studi
    - Misalnya: metode unggul, data ekstensif.
  - Keterbatasan studi
    - Lebih baik menyebutkan batasan, daripada reviewer & pembaca berpikir bahwa Anda tidak menyadarinya.
    - Jika keterbatasan tidak mempengaruhi kesimpulan (asumsi), dapat menjelaskan alasannya.
    - Contoh: Ukuran sampel kecil, data tidak lengkap, kemungkinan sumber bias, masalah dengan prosedur eksperimental.

Narrow Context

Discussion Section

The Beginning Part
- the answers of the research questions provided by the findings

The Middle Part
- a comparison with previous works (to support the study)
- the interpretations of the results (to defend the answers)
- the strength and limitations of the study

The End Part
- the conclusion of the study
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Broad Context

Artikel Ilmiah – Pembahasan

Scribbr
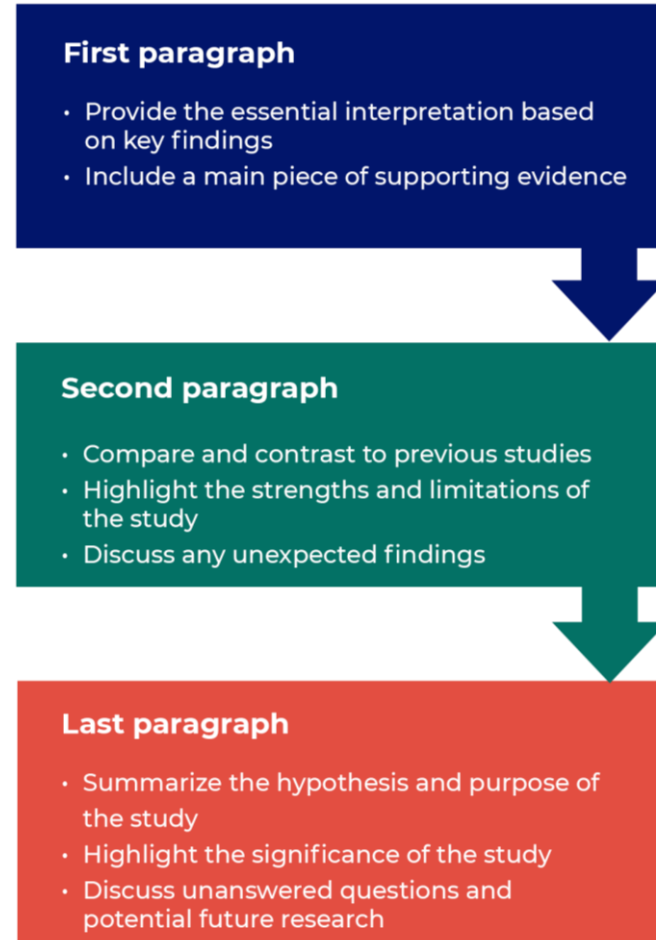
PLOS
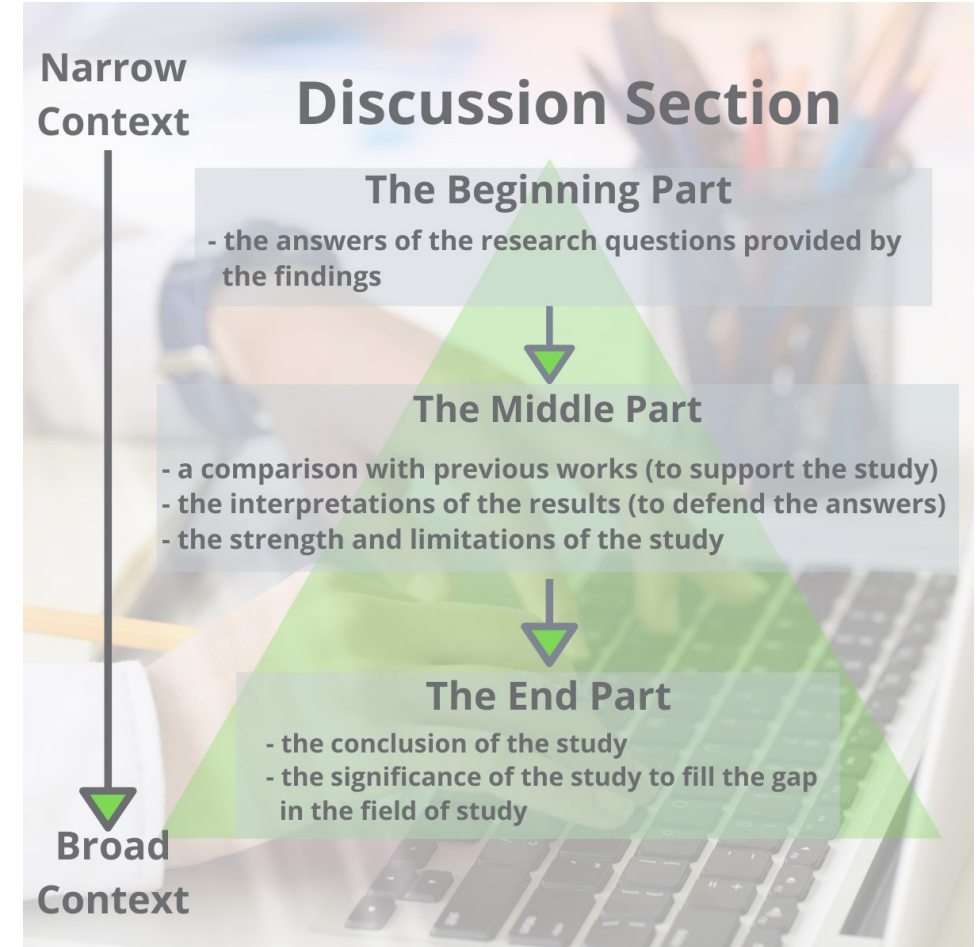
Goldbio

Artikel Ilmiah – Daftar Pustaka / Referensi

- Berisi referensi atau studi yang terkait dengan penelitian Anda

- Fungsi daftar pustaka antara lain:
  - Memberikan pengakuan kepada orang lain (kutipan) atas studi mereka
  - Menambah kredibilitas penelitian Anda dengan menggunakan sumber informasi yang valid
  - Membantu menjunjukkan hubungan dengan studi sebelumnya
  - Membantu pembaca menemukan informasi lebih lanjut

- Terdapat beberapa gaya pengutipan /sitasi, sesuaikan dengan panduan

- Gunakan alat pengelola referensi (Reference Manager)

Proses Penerbitan Artikel Jurnal

1. Kirim artikel
2. Editor
   - Sesuai
   - Tidak sesuai
3. Reviewer
   - Komentar, kritik, masukkan
4. Editor
   - Terima (*lanjut*)
   - Tolak
5. Revisi (*jika diterima*)
   - Setuju dengan reviewer
   - Tidak setuju, argumen
6. Keputusan
   - Terima
   - Tolak

Proses 3 & 4 dapat berlangsung beberapa babak (round)

OJS Editorial and Publishing Process

Author | **Editor and Section Editor** | **Journal Manager, Reviewer, Copyeditor, Layout Editor, and Proofreader**

Submission
Author uploads file to journal Web site, and enters metadata for OAI indexing
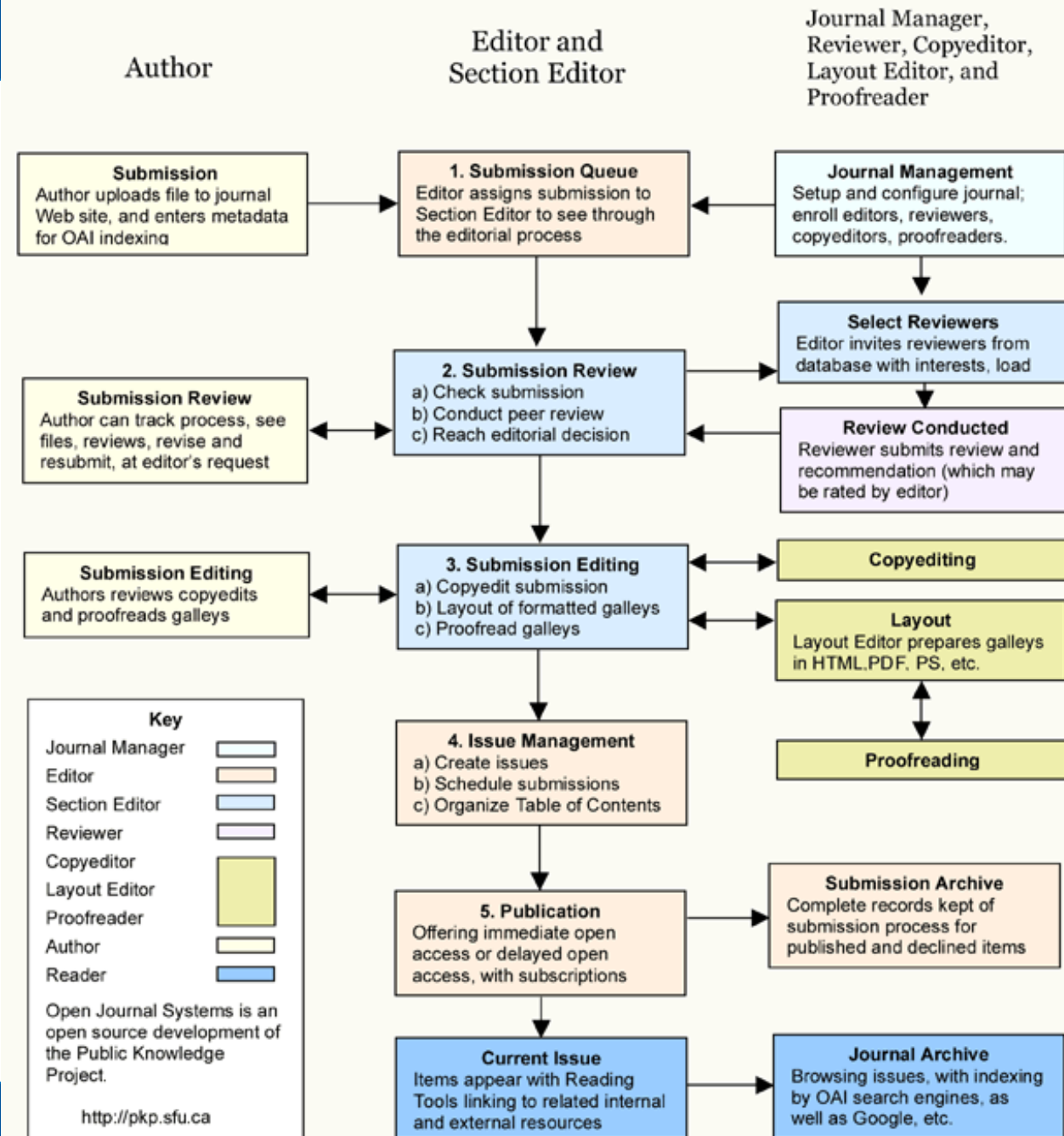
1. Submission Queue
Editor assigns submission to Section Editor to see through the editorial process

Journal Management
Setup and configure journal; enroll editors, reviewers, copyeditors, proofreaders.

Select Reviewers
Editor invites reviewers from database with interests, load

Submission Review
Author can track process, see files, reviews, revise and resubmit, at editor's request

2. Submission Review
a) Check submission
b) Conduct peer review
c) Reach editorial decision

Review Conducted
Reviewer submits review and recommendation (which may be rated by editor)

Submission Editing
Authors reviews copyedits and proofreads galleys

3. Submission Editing
a) Copyedit submission
b) Layout of formatted galleys
c) Proofread galleys

Copyediting

Layout
Layout Editor prepares galleys in HTML, PDF, PS, etc.

Proofreading

4. Issue Management
a) Create issues
b) Schedule submissions
c) Organize Table of Contents

5. Publication
Offering immediate open access or delayed open access, with subscriptions

Submission Archive
Complete records kept of submission process for published and declined items

Current Issue
Items appear with Reading Tools linking to related internal and external resources

Journal Archive
Browsing issues, with indexing by OAI search engines, as well as Google, etc.

Key

Journal Manager	
Editor	
Section Editor	
Reviewer	
Copyeditor	
Layout Editor	
Proofreader	
Author	
Reader	

Open Journal Systems is an open source development of the Public Knowledge Project.

http://pkp.sfu.ca

Isu-isu Terkait

- Ketika hendak mengirimkan sebuah artikel ilmiah umumnya terdapat 2 isu yang sering dialami
  - Penelitian bidang informatika harus menghasilkan kontribusi berupa perbaikan atau penemuan metode baru
  - Reviewer adalah orang yang paling hebat, hasil rekomendasi reviewer wajib diikuti

Isu-isu Terkait

- Penelitian bidang informatika harus menghasilkan kontribusi berupa perbaikan atau penemuan metode baru?
    - Tidak untuk jenjang S1, kontribusi berupa implementasi dan pengembangan. Namun jika ada akan lebih baik. Sesuaikan dengan level jurnal yang akan dituju.
    - Wajib untuk jenjang S2 & S2

Aspek	Tugas Akhir (D3/D4)	Skripsi (D4/S1)	Tesis (S2)	Disertasi (S3)
Level Kontribusi	Penguasaan Kemampuan Teknis	Pengujian Teori	Pengembangan Teori	Penemuan Teori Baru
Bentuk Kontribusi	Implementasi dan pengembangan	Implementasi dan pengembangan	Perbaikan Secara Inkremental dan Terus Menerus	Substansial dan Invention
Target Publikasi	-	Domestic Conference	International Conference	International Journal

(Permendikbud No 3 tahun 2020 tentang SNPT)

Isu-isu Terkait

- Reviewer adalah orang yang paling hebat, hasil rekomendasi reviewer wajib diikuti
  - Tidak, kita boleh mengikuti saran reviewer atau mempertahankan pendapat dengan memberikan argument yang valid
  - Contoh mengikuti saran reviewer:

P. W. Adi and P. Arsiwi, "A Novel Watermarking Method using Hadamard Matrix Quantization", *J. ICT Res. Appl.*, vol. 14, no. 1, pp. 1-15, Jul. 2020.

Isu-isu Terkait

- Reviewer adalah orang yang paling pintar, hasil rekomendasi reviewer wajib diikuti
  - Contoh mempertahankan pendapat / berargumen:

2. The 2nd comment:
Contribution is **not** seems to be that much **novel**. Can you give proper justification regarding this?

Response:
The Hadamard matrix is an existing method, but the paper proposed a new embedding algorithm that utilizes it to replace the SVD. The **novelty** is the **equation (6) - (12)** that run faster than SVD [14],[15] (briefly described in equation 2 & 3). It is result in same robustness and imperceptibility

4. The 4th comment:
What is its significance? NC values of **0.93 and 0.92 are low** robustness. Author needs to compare to the existing benchmark of watermarking scheme

Response:
NC value is between **0 and 1, so 0.92 – 0.93 is high** NC value. Almost of the watermark research use it to measure the robustness.

6. The 6th comment:
. You have shown comparisons **only** with **SVD**. You must **compare** your work with some most recent works.

Response:
The main **objective** of this paper is to **reduce** the computational time of previous **SVD** based method from [14] and [15]. So this paper only perform a comparison with the related scheme of SVD

P. W. Adi and P. Arsiwi, "A Novel Watermarking Method using Hadamard Matrix Quantization", *J. ICT Res. Appl.*, vol. 14, no. 1, pp. 1-15, Jul. 2020.

Projek Artikel Jurnal

- Bentuklah kelompok beranggotakan maksimal 3 orang

- Tentukan topik penelitian yang akan anda lakukan

- Presentasikan
  - Latar Belakang : Pertemuan 11
  - Studi Literatur : Pertemuan 12
  - Metode : Pertemuan 13
  - Hasil dan Pembahasan : Pertemuan 14

- Draft artikel penelitian akan digunakan sebagai penilaian UAS

TERIMAKASIH