

RUJUKAN



LAPORAN AKHIR PROJEK PENYELIDIKAN GERAN SHORT TERM USM

Tajuk geran: Physiological Demands and Time Motion Analysis of
Singles' Badminton Play Following Implementation of
21 Point Scoring System

Penyelidik: Dr. Chen Chee Keong
Prof. Madya Asok Kumar Ghosh

No Geran: 304/PPSP/613576



SENARAI SEMAKAN UNTUK BUKU LAPORAN AKHIR GERAN USM JANGKA PENDEK

NAMA PENYELIDIK UTAMA	: Dr. Chen Chee Keong		
NAMA CO-RESEARCHER	: Assoc. Prof. Asok Kumar Ghosh		
TAJUK GERAN	: Physiological Demands and Time Motion Analysis of Singles' Badminton Play Following Implementation of 21 Point Scoring System		
NO.AKAUN	: 304/PPSP/6131576		
SENARAI SEMAKAN SEMASA PENYERAHAN BUKU LAPORAN AKHIR (Sila Tandakan (4) Pada Kotak Yang Berkenaan)			
NO.	PERKARA	ADA	TIADA
1.	Borang Laporan Akhir Projek Penyelidikan USM Jangka Pendek	✓	
2.	Borang Laporan Hasil Penyelidikan, PPSP	✓	
3.	i) Salinan Menuskrip	✓	
	ii) Salinan surat/email bukti penghantaran kepada mana-mana journal		
4.	Penyata Perbelanjaan (Financial Statement) (Sila dapatkan daripada Jabatan Bendahari)	✓	
5.	Laporan Komprehensif (termasuk kertas persidangan atau seminar dan penerbitan saintifik hasil daripada projek ini)	✓	
6.	Surat pemakluman penghantaran Laporan Akhir ke Bhg. Penyelidikan	✓	

Nota:

- * Sila buat 3 salinan buku laporan Akhir
- * No. 1-5 - Perlu dimasukkan dalam Buku Laporan Akhir
- * No.6 - Hantar terus Kepada Pn. Che Merah Ismail (RCMO) hanya salinan kepada Bhg. R&D, PPSP

My doc/checklist borang2/sue

LAPORAN AKHIR PROJEK PENYELIDIKAN JANGKA PENDEK
FINAL REPORT OF SHORT TERM RESEARCH PROJECT

Sila kemukakan laporan akhir ini melalui Jawatankuasa Penyelidikan di Pusat Pengajian dan Dekan/Pengarah/Ketua Jabatan kepada Pejabat Pelantar Penyelidikan

1. Nama Ketua Penyelidik: **DR. CHEN CHEE KEONG**

Profesor Madya/
Assoc. Prof.

Dr./
Dr.

Encik/Puan/Cik
Mr/Mrs/Ms

2. Pusat Tanggungjawab (PTJ): **UNIT SAINS SUKAN, PPSP**
School/Department

3. Nama Penyelidik Bersama: **PROF. MADYA ASOK KUMAR GHOSH**
Name of Co-Researcher

4. Tajuk Projek:
Title of Project **PHYSIOLOGICAL DEMANDS AND TIME MOTION ANALYSIS OF SINGLES**
BADMINTON PLAY FOLLOWING IMPLEMENTATION OF 21 POINT SCORING
SYSTEM

5. Ringkasan Penilaian/Summary of Assessment:

	Tidak Mencukupi Inadequate		Boleh Diterima Acceptable	Sangat Baik Very Good	
	1	2		3	4
i) Pencapaian objektif projek: Achievement of project objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Kualiti output: Quality of outputs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Kualiti impak: Quality of impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Pemindahan teknologi/potensi pengkomersialan: Technology transfer/commercialization potential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v) Kualiti dan usahasama : Quality and intensity of collaboration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi) Penilaian kepentingan secara keseluruhan: Overall assessment of benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

6. Abstrak Penyelidikan

(Perlu disediakan di antara 100 - 200 perkataan di dalam Bahasa Malaysia dan juga Bahasa Inggeris. Abstrak ini akan dimuatkan dalam Laporan Tahunan Bahagian Penyelidikan & Inovasi sebagai satu cara untuk menyampaikan dapatan projek tuan/puan kepada pihak Universiti & masyarakat luar).

Abstract of Research

(An abstract of between 100 and 200 words must be prepared in Bahasa Malaysia and in English).

This abstract will be included in the Annual Report of the Research and Innovation Section at a later date as a means of presenting the project findings of the researcher/s to the University and the community at large)

Please refer to Appendix A

7. Sila sediakan laporan teknikal lengkap yang menerangkan keseluruhan projek ini.

[Sila gunakan kertas berasingan]

Applicant are required to prepare a Comprehensive Technical Report explaining the project.

(This report must be appended separately)

Please refer to Appendix B

Senaraikan kata kunci yang mencerminkan penyelidikan anda:

List the key words that reflect your research:

Bahasa Malaysia

Bahasa Inggeris

Badminton

Badminton

Keperluan fisiologi

Physiological Demands

Analisis Masa Pergerakan

Time Motion analysis

8. Output dan Faedah Projek

Output and Benefits of Project

(a) * Penerbitan Jurnal

Publication of Journals

(Sila nyatakan jenis, tajuk, pengarang/editor, tahun terbitan dan di mana telah diterbitkan/diserahkan)

(State type, title, author/editor, publication year and where it has been published/submitted)

Chee L.M., Chen, C.K., & Ghosh, A.K. (2008). Time Motion and Notational Analysis of 21 Point and

15 Point Badminton Match Play. *International Journal of Sports Science and Engineering*, 2(4), 216-222.

- (b) **Faedah-faedah lain seperti perkembangan produk, pengkomersialan produk/pendaftaran paten atau impak kepada dasar dan masyarakat.**
State other benefits such as product development, product commercialisation/patent registration or impact on source and society.

NIL

* Sila berikan salinan/Kindly provide copies

- (c) **Latihan Sumber Manusia**
Training in Human Resources

- i) **Pelajar Sarjana: Chee Lee Ming**
Graduates Students
(Perincikan nama, ijazah dan status)
(Provide names, degrees and status)

MSc in Sports Science,

Graduated in August 2009

- ii) **Lain-lain:**
Others

9. Peralatan yang Telah Dibeli:

Equipment that has been purchased

1. Heart rate monitor

2. Digital psychrometer

3. Silicon Coach Pro (software)

4. Time wrap (software)


Tandatangan Penyelidik
Signature of Researcher

30/3/2011
Tarikh
Date

Komen Jawatankuasa Penyelidikan Pusat Pengajian/Pusat
Comments by the Research Committees of Schools/Centres

Research project completed successfully
and all objectives achieved

The output include one publication
in International Journal of Graduate
Science on Engineering : 21(6 2008)K
and one MSc Sport Science
graduate.

The report has been assessed
by an independent reviewer and
approved by the PTJ panel
committee.

PROFESSOR AHMAD SUKARI HALIM
Chairman of Research Committee
School of Medical Sciences
Health Campus
Universiti Sains Malaysia

TANDATANGAN PENERUSI
JAWATANKUASA PENYELIDIKAN
PUSAT PENGAJIAN/PUSAT
Signature of Chairman
[Research Committee of School/Centre]

20/7/11

Tarikh
Date

