FSKKP Colloquium

Tips and Tricks on How to Write & Win FRGS & Best FRGS Award

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Granted MOHE Grants (Project Leader))

- ✓ A New Binary Vote Assignment Grid Quorum (BVAGQ) Algorithm to Preserve Synchronous Data Replication Consistency, Fundamental Research Grant Scheme (FRGS), Vote Project: RDU100109, Total amount: RM 40,420, Duration: 15/09/2010-14/09/2012, Project Leader.

- ✓ A New Fault Tolerance Algorithm on Binary Vote Assignment on Cloud Quorum (BVACQ) Replication Technique to Preserve Data Availability, Exploratory Research Grant Scheme (ERGS), Vote Project: RDU120608 , Total amount: 70,000, 15 July 2012 – 14 Jan 2016, Project Leader.

- ✓ A New Design of An Artifact-Attrubute Social Research Networking Eco-System for Malaysian Greater Research Network (MyGRANTS), Malaysian Greater Research Network (MyGRANTS) KPT, Vote Project: RDU 120702, Total amount: RM 3,000,000.00; Duration: 15/11/2012-14/11/2015, Sub-project Leader Database Expert Group, Title: Binary Vote Assignment Grid Data Mining.

- ✓ Binary Vote Assignment on Grid Quorum with Load Balancing (BVAGQ-LB) Algorithm for Managing Replication, Load Balancing and Transaction of Distributed Database Systems, Fundamental Research Grant Scheme Extension Grant/ Top-Down Special FRGS Grant, Ministry of Education Malaysia, Vote Project: RDU140101, Total=RM80,000, Duration 20/3/2014-19/3/2017, initial official result: 8/1/2014.

Granted MOHE Grants (Researcher)

✓ A New Design of Multiple Dimension Parameterless Data Clustering Technique (MaxD K-Means) based on Maximum Distance of Data Point and Lloyd K-Means Algorithm, Fundamental Research Grant Scheme (FRGS), Vote Project: RDU 110104, Total amount: RM 60, 000, Duration: 1/12/2011-3 1/1/2013, Researcher.

✓ An Interval-Valued Fuzzy Soft Set Based Model For Evaluation System, Fundamental Research Grant Scheme (FRGS), Vote Project: RDU130115, Total amount: RM 87100, Duration: 1/12/2013-30/11/2015, Researcher.

✓ Stochastic Model of Cancer Growth with the Effect of Glycosaminoglycans (GAGs) as Anticancer Therapeutics, Fundamental Research Grant Scheme (FRGS), Vote Project: RDU130122,Total amount: RM 108,800, Duration: 1/12/2013-30/11/2016, Researcher.
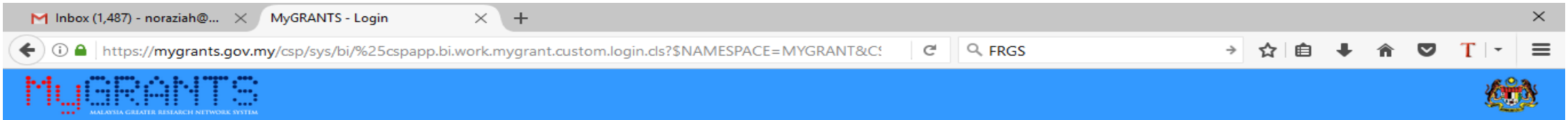
TIPS: How to write FRGS Proposal

✓**Research – Practiced Blue Ocean Strategy**

✓**Expertise Background**

✓**Writing Skill:**
Concise + Proper Proposal Structured + Well Plan

✓**Team Researchers**
- **Do I need mentor?**
- **Do I need members? – various competency**
- **Do I need postgrad?**
- **Do I need external expert?**

✓**CQI Practiced:**
"Be patient, be strong, never give up"

Portal MyGRANTS

http://mygrants.gov.my/main.php

Grants Application through MyGRANTS

https://mygrants.gov.my/csp/sys/bi/%25cspapp.bi.work.mygrant.custom.login.cls?$NAMESPACE=MYGRANT&CSPCHD=0350020400003d7y9zX5sm0000QE6NTWHA3eAiBdOqYUs4jw

Best FRGS Award (Sharing experience)

✓ Submission document to P&I, UMP on 29/7/2013

✓ Presentation at P&I, UMP on 28/10/2013

✓ Presentation at PICC, Putrajaya on 12/11/2013

-5 projects have been selected to represent UMP

✓ Presentation at JPT, Ministry of Education on 28/11/2013 (30 best project has been selected from 100 projects that presented in PICC, only 1 project has been selected to present for next stage under ICT area.

FRGS Best Project Award 2010 (Required Document)

1. FRGS_Lampiran 2:

- **TEMPLATE PENCALONAN PROJEK TERBAIK SEMINAR HASIL PENEMUAN PENYELIDIKAN SKIM GERAN PENYELIDIKAN FUNDAMENTAL (FRGS) TAHUN 2010**

2. Slide presentation

- **Pencalonan Anugerah Projek Terbaik FRGS 2010**

- **SEMINAR HASIL PENEMUAN PENYELIDIKAN TERBAIK SKIM GERAN PENYELIDIKAN FUNDAMENTAL (FRGS) TAHUN 2010**

- **KERTAS CADANGAN LANJUTAN PROJEK TERBAIK SEMINAR HASIL PENEMUAN PENYELIDIKAN SKIM GERAN PENYELIDIKAN FUNDAMENTAL (FRGS) TAHUN 2010**

3. BORANG FRGS – A1 (R)

MORE TIPS & TRICK….

Taklimat Panel Penilai
Geran UMP (FRGS & PRGS)

Resource: Jolius Gimbun, Panel KPT 2016

FUNDAMENTAL RESEARCH

❑Basic research

❑Pure research

   ❑Fundamental research generates new knowledge (theories, concepts and ideas) and technologies to deal with **unresolved problems**.

   ❑Fundamental Research leading to the advancement of knowledge in the areas of human and natural sciences

   ❑The research should focus on:

      ❑Accumulation of theories

      ❑Fundamental structures

      ❑Fundamental processes

❑ It contributes towards the **advancement of knowledge**.

❑ It leads to new discoveries and technological inventions in science.

KPT RESEARCH GRANTS
Curiosity: To answer the question

FRGS	• Fundamental Research Grant Scheme (FRGS) • Generation of new theories, concepts and ideas • Answer to "WHY?" and "HOW?"

PRGS	• Prototype Development Research Grant Scheme (PRGS) • R&D product generation prior to commercialization

TRGS	• Transdiciplinary Research Grant Scheme (TRGS) • Capable of establish collaboration partnership across various research clusters and transdiciplined

NRGS	• Niche Research Grant Scheme (NRGS) • NRGS targets on levering and developing research niche area in every public HLI towards respective uniqueness and strength - Comprehensive University and Focused University

LRGS	• Long Term Research Grant Scheme (LRGS) • Fundamental research that requires implementation period more than 3 years

ACE-GS	• Acculturation Collaborative Effort (ACE) • ACE enables Non-RU status HLI to enhance research acculturation through collaboration network between all public HLI

RESEARCH CHARACTERISTICS
- ## FRGS

Why (theory) is this happening ?

How (theory) did this happened ?

Tailor your research such that it deals with solving problem at the fundamental level

(This is very important)

- ## PRGS

Product of Research but not commercialised yet !

Not a product yet !

OBJECTIVES OF FRGS

- ✓ Fundamental research is <u>research</u> carried out to increase understanding of <u>fundamental</u> principles.

- ✓ The end results have no direct or immediate commercial benefits

- ✓ Fundamental research can be thought of as arising out of <u>curiosity</u>.

- ✓ However, in the long term, it is the basis for many commercial products   and <u>applied research</u>.

Role as UMP Panel

- ✓ To guide UMP applicant to improve their proposal
- ✓ To help
- ✓ To make sure more UMP applicants succeed
- ✓ Judgment is not the priority of UMP Panel, although Panel must say NO to those who don't change!

- ➤ KPT Panel is instructed to REJECT the less than excellent proposal from other university!
- ➤ UMP Panel is responsible to help UMP applicant!
- ➤ Over 5000 applicants, funding is given only to the top ~15% proposal. Best proposal win!

UMP Panel must HELP & GUIDE

☐ External evaluation
  �’ Sponsor level
  �’ Many constraints

  ➢ Number of proposals, amount of money available, etc.
  ➢ To find mistakes/weaknesses, etc. (*quality...quality...quality*)
  ➢ To find ways on...

How to "reject"

Proposal in general

Successful proposal write-up

It's not about who researchers are…

It's about **what researchers do**

It's not about what researchers need…

It's about **what need researchers serve**

It's not about researchers background and history…

It's about **researchers vision and future**

Proposal in general

Most common reasons for grant writers not receiving funds

1. Not new or lack of original ideas
2. Diffuse, superficial or unfocused research plan
3. Lack of knowledge of published relevant work
4. Lack of experience in the essential methodology
5. Uncertainty concerning the future directions
6. Questionable reasoning in experimental approach
7. Unacceptable scientific rationale
8. Unrealistically large amount of work
9. Insufficient experimental detail
10. Uncritical approach

Internal Panel must help to fix any issue in the proposal

Proposal Evaluation

Proposal Evaluation Method

Title (1)
Details of Researcher
Research Information
Executive Summary (2)
Research Background
        Problem Statement (3)
        Hypotheses
        Literature Review
Research Objectives (4)
Methodology/Research Design (5)
Timeline/Schedule
Expected Results (6)
Facilities and Special Resources
Budget (7)
Resume/Brief CV
Appendices

Panel will be able to see the similarity index of the proposal including the original proposal from which the similarity is detected!

Plagiarism **X** Checker

Check whether the Title, Executive summary, Problem statement, Objective, Methodology is synchronize

MyGrants Useful actionable comments

- ✓ **Title:** Title does not reflect fundamental issue / Title too long

- ✓ **Problem statement:**
  - ✓ No fundamental issue to be resolved. The proposed project is already solved by Jasper et al. (2010).
  - ✓ The problem statement is not understood, no reference to prior work, although a quick search on google scholar/Scopus on the keywords of this project returned 56000 papers.
  - ✓ Reference used to develop the problem statement is too old (> 5 years) it is not clear if the stated problem is still an issue now.

- ✓ **Hypothesis:** The hypothesis is too long and not explicitly related to the proposed project.

- ✓ **Research question:** Research question not aligned with the problem statement and objective.

- ✓ **Methodology:** Method outline is not understood. It is not clear how the problem stated will be solved by the method proposed. No measurement on XYZ which is vital for solving the identified problem in the method. No method of verifying the validity of the result.

- ✓ **Budget:** Lacking details quantity & price, not linked to the method used.

Proposal Evaluation

Budget

- ✓ **Don't cut** vot 27000 (material) and 11000 (student fund)

- ✓ Vot 21000 should be restrained around RM10k

- ✓ Minimise vot 35000 (equipment), 24000 (rental), 28000 (maintenance). If needed provide a letter of justification. Cite the letter in budget.

- ✓ Be meticulous i.e. unit quantity x price/unit, etc.

- ✓ Be reasonable keep the total below RM160k

- ✓ Vot 29000 (professional service) is allowed but make sure it is tally with the methodology and outcome

Proposal Evaluation

Outcome: Make it tally with budget, method, objective

- ✓ 2 ISI journal, mention which journal
- ✓ Postgrad student e.g. MSc/PhD
- ✓ IP
- ✓ Conference

Guide for evaluation

Research Title

- ✓ Indicate the type of study.
- ✓ Address the main problem.
- ✓ Be concise, short, and descriptive.
- ✓ Convey to the evaluator the main focus of the research.
- ✓ Use the correct terms in the title.
- ✓ Should be intelligible to non-specialists.
- ✓ Limit the title to a single sentence.
- ✓ Relevant in 2 years time?

Guide for Evaluation

Executive summary

An informative abstract, giving evaluators the chance to grasp the essentials of the proposal without having to read the details

✓ Applicant must present their project concisely

✓ State significance Clearly

✓ State Hypotheses, Research Problem, Solution

✓ Methods and Rationale

✓ Expected output.

✓ Include socio-economic benefit or related policy

Guide for Evaluation

Problem statement

- The most important aspect of a research proposal is the clarity of the research problem

- The problem statement is the focal point of the research

- Evaluators **must ensure** that…

✓ Applicant give a short summary of the research problem that have been identified from the literature. Must be a scientific knowledge gap!

✓ The research proposal may not acceptable or credible if applicant not clearly identify the problem.

✓ Applicant present the persuasive arguments as to why the problem is important enough to study or include the opinions of others (politicians, futurists, other professionals)

✓ This section should be written like an introduction of a Q1 journal paper!

Guide for Evaluation

Research background: Panel must ensure that….

- ✓ Applicant are not "reinventing the wheel".

- ✓ Applicant demonstrate their knowledge of the research problem.

- ✓ Applicant demonstrate their understanding of the theoretical and research issues related to their research question.

- ✓ Applicant show their ability to critically evaluate relevant literature information.

- ✓ Applicant indicate their ability to integrate and synthesize the existing literature.

- ✓ Applicant provide new theoretical insights or develops a new model as the conceptual framework for their research.

- ✓ The proposal will make a significant and substantial contribution to the literature (i.e., resolving an important theoretical issue or filling a major gap in the literature).

Guide for Evaluation

Reference

- ✓ Up-to-date
- ✓ Highly relevant with the problem
- ✓ Original source

First Order : High Impact Journals and Books

Second Order : Indexed Proceeding Publications

Third Order : Reputable Technical Report

Guide for evaluation

Methodology

✓ Many **proposals are turned down** due to unsound methodology.

✓ Applicant must explain how they plan to carry out and measure each objective.

✓ Basically, applicant must provide answers to the following questions:

i. What activities needed to meet the objectives?

ii. What are the start and finish dates for the activities?

iii. Who has responsibility for completing each activity?

iv. How will participants be selected? (Check…!?)

v. What factors determine the suitability of applicant methodology?

vi. Does this project build on models already in existence? If not, how is it superior?

vii. What facilities and equipment will be required to conduct the activities?

Guide for evaluation

Flowchart

✓ Applicant must clearly show the research activities and milestones

✓ Reflection of the project objectives, methodologies, outputs, etc.

✓ Very important!

Proposal Evaluation

FRGS requirement: Novelty, Cutting Edge, High Impact

✓ Does the research use novel techniques, tools, and procedures?

✓ Is new data required?

✓ Is data gathered in a new way?

✓ Is existing data utilised in a new way?

✓ Can an existing application be used in a new way?

✓ Is the proposed research potentially patentable and publishable?

Guide for evaluation

Why grants fails…

Problem: The planning process is not well organized, resulting in a poorly written proposal

➢ The grant proposal is difficult to read or is not concise

➢ The applicant uses incorrect grammar or incorrect terms

➢ The flow of the proposal is not logical and is hard for reviewers to follow

➢ Applicant does not collect the relevant information for planning

➢ Applicant does not delegate tasks

➢ Applicant does not develop a timeline

Thank you...