MSc SBIT Research Methods Unit - Project Proposal and Assessment Template June 2008

Student Number	123456	Cam Number	Cam90909
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This is a sample completed template, written by a student in the last cohort. I am sending it to you so that you may see what it is possible to write and get a feel for the sort of comments you will get can at the proposal stage (Q1-6) and later for all the questions.

I am doing this to add a bit of realism to what you see as examples and here you may well learn much more by looking at the errors made and what the tutor said then looking at what the student did about the feedback (unfortunately it was often nothing).

We at the University are often reluctant to give examples as many students try to use them as templates, fitting their answer by changing words in the example. This is not only lazy but a sure way to get into deep trouble because whatever you say at this stage you have to follow it through in the project and if you have no real understanding then it spells trouble.

You may have always been used to looking up answers up in books or on the Internet but here you cannot do that, you cannot look up a problem or a target or an actor in a book; you have to struggles with doing it yourself and the sooner you realises that and get started the better supported by the principles we have discussed over the last few weeks.

Be encouraged, it can be done if you are willing to struggles with the ideas. As Vince Lombardi said - "The only place success comes before work is in the dictionary."

Personal Profile
Job Title:
Company Name:
Company Profile:
Country:
Job Description:
Year of Professional IT Experience:
Areas of Expertise:
Academic Qualifications:
Other Qualifications:
PgD College Name:
SBIT Acceptance Basis:
A sample profile can be found in the guidance pack

Provisional	Project
Title	

Server Virtualization in Data Centres

Q1a - Give an outline of the setting, topic area, presenting problem and a rationale for Strategic Business IT usage in its resolution (max 200 words)

Reference | Workbook section 4.2 plus topical hints

Student Answer

An investment bank is leading other group entities into becoming "South East Asia's most valued universal bank". Its staff for grew from 1000 to 24,000 while is previous customer base grew from a few thousands into few hundred thousands.

IT has strategic roles to play in the company's pursuit of this vision by year 2010. As the leading entity, it is expected that all computing resources will be deployed from its data centre. While it has no immediate plan to shift data centre shortly, it is also faced with lack of physical space in its data centre due to its rapid growth.

This proposal is set out to explore "What list of options and considerations of these options that can be used by an IT Manager, leading an investment bank merger into a universal bank, can consider when lacking physical space to maximize computing resources within current physical floor space occupied by servers aged above 3 years old". Note: Presenting Problem is abbreviated to PP hereon.

Assessor Feedback and Assessment (✓)

Good

Fair

Poor

Reasonable attempt but it lacks real clarity on the 4 requires elements: problem setting, presenting problem, topic area and use of strategic business IT

O1b Student revised answer after careful consideration of the feedback

My word count is

My word count

113

166

An investment bank is leading other Group entities into becoming "South East Asia's most valued universal bank". Its staff for grew from 1000 to 24,000 while is previous customer base grew from a few thousands into few hundred thousands.

New IT projects often includes more hardware into a finite data center, exerbating space, thermal, power, operations, maintenance and human resources issues.

Inability to achieve IT's mission of 4Es - Efficent, Effective, Enabling and Economical would hamper IT's strategic roles in the Group's pursuit of its vision by year 2010.

It is imperative that IT new initiatives must go on to provide information and collaboration needs of its growing staff force and customer base.

Assessor Feedback

This is rather weak as it seem to lack the 4 eassesential features and one wonder if you took any notuce at all of the feedback:

Problem - not all that clear but seems to be about space or mission and you seem to be mistaking being asked to do something as equivalent to a problem defintion. **Topic** - I cannot say from this what litearture you will research so that you gain the necessary academic knowledge. **Startegic** = this may be here but its not clear to me what is implied as to your outcome or what kind of solution you have in mind. Setting - an investment bank is not good enough and we need somthing more postiove than that

Q2a - Briefly discuss problem causes and hence suggest a possible outcome that when used by appropriate situation actors my solve or partially resolve the problem (Max 200 words)

Reference

Workbook section 4.4, 4.5 and 4.10 plus topical hints

S

Student Answer My word count is 61

It is suspected that the existing data centre does not meet mission expectations because of increasing usage and no consequent changes in technology given the space involved has not been increased. It is therefore suggested that new MS server virtualization technology is considered and it is therefore planned to produce a set of recommendations on this plus associated support best practices.

Assessor Feedback and Assessment (✓)

Good

Fair

Poor

This is a good start at an answer but with only one cause listed one wonders if the problem has not been properly explored and you are possibly fixated on the virtualization idea.

Q2b Student revised answer after careful consideration of the feedback

My word count is

96

It is suspected that the existing data centre does not meet mission expectations. It is not entirely clear why this might be so but it may be related to: a mix of technology, poor network infrastructures, uncontrolled use of user applications or simply lack of space for adequate expansion of services.

However, after a preliminary investigation and a review of mission needs a relatively simple way forward is to consider new MS server virtualization technology and it is therefore planned to produce a set of recommendations on this plus associated technician and usage support best practices.

Assessor Feedback

This is better and now it makes more sense overall. Later in the project you will have to elaborate on this and demonstrate that in fact a full analysis was indeed conducted

Q3a - What is your intended general research approach, style and method (Max 200 words) Reference Workbook section 5.2, 5.3, 5.4 and 5.5 to 5.16 (as appropriate) plus topical hints

Student Answer My word count 97 is

Main project activities:

- 1. Represent PP using model
- 2. Explore PP in relation to bank's vision and mission
- 3. Make list of technical specs of current servers above 3 years old
- 4. Make list of technical requirements popularly used software
- 5. Make list of technical specs of servers available in the market
- 6. Literature Review to understand options available to solve PP

Problem solving approaches and reason:

- 1. Modelling the PP and possible solution would help solving it bottom-up and verify is completion
- 2. Lists assist in synthesizing large amount of data in processing solution and considerations

Assessor Feedback and Assessment (✓)	Good	Fair	Poor	✓
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It is possible to answer this question by telling us what activities you will do but that is not a substitute for explaining what your approach is. One also might say that some of these activities look impossible, for example, item 5 simply cannot be done and one might also say that it seems pointless to do item 3.

You don't seem to have any clear notion of what a research approach is and there is no hint of a style or research methods here. Frankly, I don't think you have bothered to look at the references or hints and arrogantly decided you already knew what these things are or just guessed instead implying that your whole problem solving approach is flawed.

Q3b Students revised answer after careful consideration of the feedba	k	My word count	127
		is	

Project activities:

- 1. Search & review existing literature to provide thorough understanding of research topic.
- 2. Appraise effect of current resource utilization practice on cost of data center operation.
- 3. Prepare for and collect baseline data through sampling and observation of current situation.
- 4. Conduct experiment of selected technologies that predictably cuts cost.
- 5. Process collected data to critique technologies and best practices applicability to bank.
- 6. Complete dissertation, review and send for marking.

Research approaches:

Qualitative case study into bank's problem to recognize aspects that contributes to the problem. Ouantitative experiment carried out on subset of data centre resource could further proof a hypothesis. I would use deductive research approach to derive a causal inference from the problem in order that my recommendations to be valid.

Assessor Feedback

This is a start but some of this looks a hugh amount of work - for examle item 4 and I am not sure you are really thinking about this in any sort of practical manner. Here you talk about a hypothesis but don't tell us what it is and the idea that you will prove anything at all is fatuous.

I can't make out for sure this 'causal inference' - do you mean you have a theory about how this issue (whatever it is) will be solved – if that is what you thought then you are on the right track? However, you seem to be saying your recommendations will be valid just because you are deductive but that make no sense to me. Frankly, it looks a bit like you are being fooloish and using terms without quite understanding what they mean and this is the second time I have had to speak to you about this.

One simply cannot just guess or submit something that sounds good, it has to be suppoted by understanding. Again to ignore the feedback is a shockling iditement of your commitment and a serious

Q4a – What is your single project aim and its associated project objectives (Max 200 words)				
Reference	Workbook section 4.11 plus topical hints			
S				
Student An	swer	My word count	94	
		is		

Aim:

To create list of options & considerations to be used by an IT Manager by scrutinizing servers aged above 3 years old in order to overcome PP via technology or business model.

Objectives:

- 1. To examine through modelling current operating environment
- 2. To evaluate type of data required for data collection
- 3. To identify the sources if data required
- 4. To evaluate which data collected can be used for Project information
- 5. To examine various model that overcomes PP
- 6. To provide a list of options & considerations for choosing the generated options

Assessor Feedback and Assessment (✓)	Good		Fair		Poor	√
This is not really at a strategic level. Your project should aim to do more than creat a list of old						
equipment and to think that is sufficient—is absurd. Go back to Question 1 and think more deaply.						
Q4b Student revised answer after careful consideration of t	the feed	back	My w	ord cou	int 9	05
			is			

Aim:

To propose IT technologies and best practices recommendation that reduces data centre operation cost by considering current resource utilization practices.

Activities:

- 1. To investigate & describe in report issues faced in current data centre operation.
- 2. To appraise through report available IT technologies and best practices in data centre management.
- 3. To assess in report selected experiment of IT technologies.
- 4. To evaluate through checklist conformity of technologies and best practices recommendation against Central Bank of Malaysia's guidelines.
- 5. To compile a list of recommended IT technologies and best practices that may be adopted.

Assessor Feedback

This is better but it is also vague - what for instance **sorts** of best practice are you talking about here: best practive in choice of technology, best practice by technicians, etc? This is also very wooden as all you can say is the most vague idea of a milesone as a report. In most of these the data spotlight is not all that clear. Consider item 5, where will you get this information, what is your spotlight?

Q5a – Wha words)	t resources (other than trivial ones) will you need to complete this	project idea (Max 2	000	
Reference s	Workbook section 5.17 plus topical hints			
Student An	swer	My word count is	33	

Resources needed:

- 1. Access to various libraries (public, private or online) to create Literature Review
- 2. Manuals of servers aged above 3 years old containing technical specification to supplement computer maker's homepage searches
- 3. Manuals of software commonly used containing minimum operating spefication to supplement online software make's homepage searches

Primary data access method:

- 1. I will require entry permission to Data Centre described in PP
- 2. I will need letter of support from my local college to start this project
- 3. I will require evaluation hardware and software from appropriate parties that may be part of the solution

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	Assessor Feedback and Assessment (✓)	Good	✓	Fair		Poor	
I am not sure you need item 2 under resources as you are not interested in the technical aspects as such					ıch		
	are you. Keep your project at a strategic level. Can you really get hold of the software mentioned in						
	item 3 and if you cannot will that mean the whole project will fail?						

Q5b Student revised answer after careful consideration of the feedback	My word count	
	is	

Resources needed:

- 1. Access to various libraries (public, private or online) to create Literature Review.
- 2. Letter of support from my local college to start this project.
- 3. Copy of IT department's vision and mission to understand its aspirations.
- 4. Server statistics tools e.g. SNMP monitor.
- 5. Central Bank of Malaysia's computing guidelines.

Data access method:

- 1. Permission to enter data centre for observation and statistic extraction usually preceded by non-disclosure agreement.
- 2. Hardware and software for experiment.

Response:

Permission and support letter granted. Evaluation h/w & s/w can be rented (worst case) - without them, it affects outcome evaluation but not a show stopper.

Assessor Feedback

This is a start but although we have a permission we have nothing here about needs. Its a bit worrying that you are focusing so much on detailed information about servers but neglect the wider strategic aspects plus I find it impossible to see how you can get from data in a server log to a set of guidlines and recommendations

Q6a – How will you evaluate your project outcome (before it is used) and research practice (Max 200 words)

Reference Workbook section 7.5 plus topical hints

Student Answer My word count is

- 1. Solve PP using available technology or business model
- 2. Produce acceptable outcome as planned
- 3. Allow an IT Manager to understand options available and factors in deciding those options to solve PP

Assessor Feedback and Assessment (✓)	Good	Fair	poor	
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Tell us much more here. How will you use the technology and what technology is it? The question is how will you measure/test achievement? So you must tell us what you will measure/test and how you will do it.

Q6b Student revised answer after careful consideration of the feedback	My word count	
	is	

Aim & objectives evaluation:

- 1. Logical comparison of possible positive & negative risks & impacts consequent of recommendations made to check if it's practical to be implemented.
- 2. An experiment of virtualization conducted during project could gauge & provide confidence on IT recommendations.
- 3. General comparison using case study to align best practices recommendation to those observed in data centre management.

Problem-solving approach evaluation:

- 1. Basic reflection by looking at good and bad aspects of chosen approach helps judge approach suitability.
- 2. Focused reflection on each main activity will provide opportunity to avoid mistakes and understand constraints in approach. Response: IT technology is used in experiment that assists to form the final project outcome.

Assessor Feedback

This is better but I just get the feeling you don't quite understand evaluation but this is a good start. Item 3 looks to me as if it is somthing that can only be done AFTER your MSc project ends. The point here is that the objectives are measured by their milestones so in a sense they evaluate themselves. So its seems you may be missing the point because you are supposed to be evaluating the outcome you produce **before** it is put into use.

With regard to practice anyone can look at good and bad aspects of any approach. What we want is to know how well it went for you so instead of serious that thought about that you revert to something you can find in any book so in effect you are avoiding the question.

You cannot avoide mistakes as you suggest in question 2 because by the time you do this evaluation the work will be over and your outcome derived.

Optional Student Additional Comments on the proposal (Q1a to Q6a) (Max words)

I found if difficult to formulate the problem because the answer seemed so obvious and my managers want me to take a certain stance on its solution and it felt like I was being forced to just go through the motions

Optional Additional Comments from Assessor

It is usually very unwise to take this attitude to any problem no matter how obvious it might seem. It is unfortunately all too easy to be taken in by the data we have and jump to conclusions about its meaning. Also we cannot know what will happen tomorrow and these considerations taken together mean that we cannot avoid a thorough analysis if we are to have any sense of security about what we are doing.

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Assessors comment on this students ability to communicate in written English			
The level of English is good here although the spelling is not always as accurate as it might be			
Assessor name	F.J. Sheen	Date	20.05.08
Provisional Supervisor	Dr Du Maurier		

References	describe your intended target effects (max 50 words) Workbook section 4.3 plus topical hints		
Student Answer		My word count is	31
expressed in	ting problem can be resolved we would expect a better fit with mis a better utilization of the existing and future server hardware and s	systems.	
Q7b : Descriwords)	be your primary data spotlight and activity plus a suggested data co	ollection method M	Iax (100
References	Workbook section 4.10 plus topical hints		
Student Answer		My word count is	22
	e is being used in daily operation concise and lucid Research Question that includes all the 6 requir	red features. (Max	100
References	Workbook section 4.9 plus topical hints		
Student Ans	wer	My word count is	44
		1.5	
(outcome), to (actor) in or	rogative) IT technologies and data centre management best practice hat reduces resource wastage (problem) can be adopted by an IT later to avoid escalating data centre operation cost (target), by consactices (spotlight)?	es recommendation Data Centre Manag	er
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Primary data is analysed through IT technology and best practice for formulation of project outcome

Assessor Feedback

I have no idea what 'analysed through technology and best practice' means. Frankly this tells us NOTHING. We need to see a clear process or model at each stage in the sense that someone else would be able to repeat it more or less exactly. So we need to see what model or process you use to give structure your primary dara and then need to see — a clear process or model, assited by your expert knowledge in this area used to transform the structured primary data into your suggested outcome

Q9: Develop a plan for your Literature Review here. A good plan will normally make clear: the topic area, an original theme for the review, a content map of about 6-10 headings, a suggested review conclusion and finally an indicative list of 5-10 primary sources. (Max 300 words)

References Workbook section 3.4, 3.5 and 3.13 plus topical hints

Student Answer My word count is 295

Topic: data centre operation and server virtualisation

Originality: From the synthesis of information gathered, it is my view that going forward, technology must be coupled with best practice to achieve a balance of efficiency & effectiveness versus economy.

Map of Important Areas:

- 1. Introduction to topic area by highlighting resources found in data centre
- 2. Report on applicable standards used in data centres
- 3. Highlight problem of escalating data centre operational cost in general context
- 4. Appraise prevalent technologies and its worth in overcoming data centre operational costs
- 5. Highlight data centre best practices in its area of application (e.g. power, thermal, space, staffing, etc)
- 6. Evaluate cause & effect of "technologies & best practices" vs "operational cost"

Review Conclusion: While it seems that technology can maximize capacity, if IT Data Centre Manager deploys these saved resources without good governance, the opportunity cost will may subsequently be lost

Primary Sources:

- 1. US EPA (2007). Report to Congress on Server and Data Centre Energy Efficiency.
- 2. Committee on Coping with Increasing Demands on Government Data Centres, et al (2003). Government Data Centres: Meeting Increasing Demands.
- 3. Brill, K.G. (2007). The Invisible Crisis in the Data Centre The Economic Meltdown of Moore's Law.
- 4. The Green Grid (2007). The Green Grid Opportunity Decreasing Datacenter and Other Energy Usage Patterns.
- 5. The Green Grid (2007). Guidelines for Energy-Efficient Datacenters.
- 6. Patel, C.D. & Shah, A.J. (2005). Cost Model for Planning, Development and Operation of a Data Centre.
- 7. Intel (2004). Addressing Power and Thermal Challenges in the Data Centre.
- 8. Novell (2006). Virtualization in the Data Centre.
- 9. Govekar, M. & Haight, C. (2008). Server Virtualization Forces Rise in Chargeback Interest.
- 10. Da Rold, C. et al. (2008). The Impact of Virtualization and Alternative Models on Outsourcing.

Assessor Feedback

Generally good but I don't think your topic area is all that clear and this might degenrate into you telling us about your Bank and that must be avoided. The map is fair but you should include something about what best practice is in this context as well as end user pshychology.

Strictly, primary sources are things like Journals, postion papers, government white papers but here we don't seem to have any that are of this nature. It is permissible to use books but books are always essentially second hand sources

Q10: Write a simple project plan. It will be sufficient to develop a plain list of clear staged activities and approximate timings in weeks. The plan must be at least 18 weeks but no longer than 52 weeks. (max 200 words)

Student Answer	My word	78
	count is	

Outline:

Activity Duration (weeks)

Literature search & review 10

Data collection 1 4
Data processing 1 2
Experiment setup 2
Controlled experiment 4
Data collection 2 4
Data processing 2

Review & send for marking 1

total effort = 40 weeks

10

Note: It is expected that Data collection 1 involving problem environment will be conducted simultaneously with Experiment setup. This is done in order to utilize idle time while data is collected.

Assessor Feedback

Write dissertation

In cannot say I like this as it is so generic it might apply to just about anything. **No one** in the world could even guess what this project is about from this so in my view
you have not really considered your project activities at all all here

Assessor	Prof. N. Taleb		
Name			
Assessor Overal	1 Comments	Final Mark	55%

This is a fairly good attempt but often the student simply assumes we know what he is talking about and so there are lots of gaps and I worry that he has no real appreciation of his own weaknesses demonstrated by a lack of attention to key elements and this could prove fatal in the project.