Singapore Management University
ANLY482 Analytics Practicum

Supervisor Minutes 4 as on 17th February 2017

Time Start:	8:35am
Time End:	9:30am
Location:	SIS Meeting Room 4-3
Recorded by:	Peh Zhan Hao
Vetted By:	Heng Kok Chin

Attendees:	
Dr Kam Tin Seong	Associate Professor of Information Systems (Practice)
Heng Kok Chin	Undergraduate, Singapore Management University
Peh Zhan Hao	Undergraduate, Singapore Management University

Absent with Apologies:	
Tan Yong Kiong, Alson	Undergraduate, Singapore Management University

Agenda
1.   **Update Supervisor Regarding Our Dataset**
2.   **Update Supervisor on our Progress and Analysis**
3.   **Supervisor's Advice**

No.	Discussion:	Action by:	Deadline:
1	**Update Supervisor Regarding Our Dataset**		
	- Professor Kam recommended that we look into the various classes/bands for the increase/decrease in scores for our box-plot diagrams. - For example, Secondary 1 CA1 and SA1 results are very close to their PSLE scores, find out whether their scores are consistent with their PSLE scores. Are they showing the same kind of distributions? - In order to perform the analysis for Part 1 (based on our mind map), we need a control experiment. For example, we need to take a group of students who qualify for double/triple science, then put them into combined science combination and see what their results are. If we don't have the control experiment, we cannot compare the data. Kok Chin and Zhan Hao concluded that it is not feasible to proceed with further analysis in this aspect. - Instead, to analyze if there is/are any correlation or trends in the historical grades (O Level vs Sec 3 or 4), we should build a model based on students' historical results. - For example, we can include the CA1, SA1, CA2, SA2 (as independent / explanatory variable) results in and determine how is it going to affect their O Level results (response variable)? - Professor Kam also advised that we need to take into account their learning path. Don't limit our analysis to just the scores of each of the exams, but also track the differences between the results.	Edufy	24th February 2017

	• For example, is student A continuously maintaining his/her grade annually? How is it going to influence his/her O Level results? If the student grades decline by 5% every year/every exam (consistently drops), it is a sign that his/her learning ability is getting weaker and may not be capable of handling more subjects. If we only track their absolute results, we would not be able to tell. Need to analyze their rate of change instead. • For our analysis for CCA, Professor recommended that perhaps we might want to look into their "CCA Time of Involvement". Every student should have a log book where they record how much time or effort they have spent on their CCA • Due to the fact that our sample size is too small, if we analyze at the individual level for each CCA, we are unlikely to draw conclusive results (not significant). • Professor suggested that we combine all 3 batches to try and have a more "conclusive observation" and compare the statistics of it. We can use JMP Pro (Fit Y by X, bi-variate analysis and between group variation) find out what is their mean, median, standard deviation and ANNOVA test to test their variance) • To compare the variations in their means, we can also use "Means Comparison → Comparisons for all pairs using Tukey-Kramer HSD" • Professor Kam commented that our current method of analysis of using Microsoft Excel is not efficient (need to do it 1 by 1 all over again for different batches). He suggested that we use SAS Enterprise Guide or JMP Pro get the step and save it into a script so that we can generate the report. • For Class Analysis: We can perform the use "Analyze → For Distribution": Put S3_S4_Class, SA2_Overall scores put into Y-Column; For Fit Y by X, X-factor = Class, Y-factor = Scores • If we want to perform multiple-regression, we need to do a logistic regression which is only available in JMP13. Need to download the latest version of JMP to have latent class analysis.		Edufy	24th February 2017
2	**Supervisor's Advice**			
	• As we only have 20mins for our Interim Presentation and Sponsor Interim Presentation, we should only point out the main findings for our exploratory analysis. Don't talk about everything as we would not enough time. • Professor Kam also recommended that we should compare O Level results with Prelim results before interim presentation with Sponsor next week.		Edufy	20th February 2017
3	**Set Agenda for Next Meeting**			
	1. Continue to complete Exploratory Analysis using JMP Pro 2. Discuss and prepare slides and findings for Interim Presentation			