PISA

2 Mar 2017 Supervisor Meeting 8

Created by: Gareth Ng (02/03/17)
Edited and Vetted by: Jeremy Ong(02/03/17)

DATE	TIME	VENUE
02-Mar-17	2:00 PM – 3:00 PM	SMU SIS MR 4.6

Meeting Type	Supervisor Meeting
Facilitator	Jeremy Ong
Note taker	Gareth Ng
Timekeeper	Chermain Ang
Attendees	Chermain Ang (CA), Gareth Ng (GN), Jeremy Ong (JO), Prof Kam Tin Seong (TS)
Absentees	NA
Agenda	1. Updates and clarification for changes performed after Interim presentation

MEETING ITEM 1: Updates and clarification for changes performed after Interim presentation		Time Allocated 60 mins
Name	**Discussion**	**Follow Up By**
JO	a. Updated Prof Kam on the treatment of missing values in the dataset following the interim presentation – to treat them as a 'response type' (impute missing values as 9999) instead of considering them as no-credit. b. Showed Prof Kam the steps we performed towards Latent Class Analysis (LCA) – binning of response rates in 10% blocks, as well as how we identified the clusters into Easy, Medium, and Hard.	
TS	c. Commented that the LCA steps and results looks fine.	
JO	d. Highlighted to Prof Kam that only the Hard and Medium clusters have questions with 0.5 credit (majority of questions with 0.5 credit are in the Hard cluster), and asked if questions with 0.5 credit can be considered as a Hard question, since there are only a small number of questions with 0.5 credit.	
TS	e. Concurred with the suggestion, and shared that the idea is to be able to assign a weight to the Easy, Medium, and Hard questions, and suggested to assign a weight on 1,2, and 4 to the Easy, Medium, and Hard questions respectively.	
JO	f. Asked if the scoring should be performed separately for each subject component as well, or	

<div align="center">

PISA

2 Mar 2017 Supervisor Meeting 8

Created by: Gareth Ng (02/03/17)
Edited and Vetted by: Jeremy Ong(02/03/17)

</div>

	to do up a standardized scoring for the booklets only.	
TS	g. Mentioned that it would be good to have scores for each subject in the booklet, as well as the total scores for each booklet. h. Suggested to tabulate the maximum scores for each booklet and derive the percentage score of each student based on the booklet they took, to have a standardized form of comparison.	JO
JO	i. Mentioned to Prof Kam that we intent to do an ANOVA test on the results after performing the standardized scoring, to identify if there are differences between Public and Private schools, and if there are no significant differences, to consider them all together in our following steps.	
TS	j. Recommended to consider looking into doing two models, one which combined both types of schools, and one which considers them separately, as they might have different form of teaching/syllabus.	
JO	k. Asked Prof Kam for suggestions on what other statistical test methods to read up on/consider for the PISA dataset	
TS	l. Mentioned that for between group tests, ANOVA will be good enough. Subsequent steps to consider is on descriptive analysis, to see if there are any clear differences between different schools. Next, for explanatory analysis, to consider the relationships between school's services and performance for example, and for students, to identify student's performance with the factors available (e.g. family background). m. Suggested to read up on the Fit Linear Model chapter in the JMP help book, as well as to consider Stepwise analysis as well, to reduce the number of variables.	GN
JO	n. Checked with Prof Kam on the considerations for using Mean or Median to look at the data distribution.	
TS	o. Advised to look at the spread of the data. p. Mentioned that the team has only around 3 weeks to focus on data analysis, following which, to work on writing a practice paper.	

2 Mar 2017 Supervisor Meeting 8

Created by: Gareth Ng (02/03/17)
Edited and Vetted by: Jeremy Ong(02/03/17)

JO	q. Thanked Prof Kam for his advice and called an end to the Supervisor Meeting.	
Remarks		

To-do

No.	Action Items	Person I/C	Deadline	Remarks
1h	1. Assign weight to questions based on assign cluster and perform scoring analysis	JO	5 Mar 17	
1l, m	2. Perform ANOVA test on the standardized scores for schools. 3. Read up on the statistical methods mentioned and how to perform the analysis using JMP.	GN	6 Mar 17	