**Ideas about analyzing survey data**

**Two Survey Data**: MT1 and MT2

**Difference**:

1. MT1 contains Before.N, Before.Good,, G.Exp3\_1, G.Exp3\_2, G.Exp3\_3, Recc.Mid and Recc.Final variables and MT2 contains G.Exp2\_5,G.Exp3\_4, G.Exp3\_5, G.Exp3\_7, G.Exp3\_8 and 10 personality variables.
2. Different way to form groups

**Same**:

1. The rest variables are the same—can compare.
2. Students from same class

**Purpose**: What we are looking for from those two surveys? – To investigate what factors would matter the results of group exams or what factors could help students learn better in group exams.

**Data Analysis Ideas: --ANOVA Analysis**

1. **Confounding Variables identification**

* Identify Confounding Variables the may affects student’s learning experience (e.g. how they contribute, how well do they know each other, and how they make a decision…)
* Decide levels of each confounding variable (e.g. Contributions (Parti.Range difference) can have two levels: Parti.Range changes(+1) from MT1 to MT2 and unchanged (-1)).

1. **Blocks Identification**

Identify how many different blocks (groups) do we have here.

For example, we can have **two** blocks(groups):

Let 0 be students in the same group in MT1 and MT2 and 1 means students in different groups in MT1 and MT2. Then four groups are 0 and 1.

Or we can have **four** groups

1. students said they are unsatisfied with the group in MT1 but in the same groups in MT2
2. students said they are unsatisfied with the group in MT1 and choose other groups in MT2

10-- students said they are satisfied with the group in MT1 but choose the other groups in MT2

11—students said they are satisfied with the group in MT1 and in the same groups in MT2

You must confuse what are those variables for—All those treatment variable sand block variables can give us a table like below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Blocks  Treatments | 00 | 01 | 10 | 11 |
| Contributions (Parti.Range)  Balanced (+1) and unbalanced (-1). |  |  |  |  |
| Know (Know.Avg difference) |  |  |  |  |
| Decide  (Decide.Disc difference) |  |  |  |  |
| Other confounding variables |  |  |  |  |

What should be in those empty cells?

1. **Response Variable**

I suggest doing sensitive analysis here. That means separately do two regression analysis here with two different response variables—G.Exp\_Avg and Group exam score.

* **G.Exp\_Avg**

1. More works are needed here. Since we are comparing between MT1 and MT2. They have difference G.Exp variables. We need to figure out a way to produce two comparable G.Exp averages such that we can look at the mean difference between those two averages.
2. Then, put mean difference into those empty cells
3. Do ANOVA analysis for confounding variables and blocks (interactions)
4. Produce a prediction model at the end

* **Group Exam Score**

1. Fill Group Exam Score mean difference into this table according to the ID checking
2. Do ANOVA analysis for confounding variables again
3. Produce a prediction model

* **Compare Results**

1. By looking at those two analysis results, comparing the results (significant confounding variables) to see if there are any difference between those two analyses.
2. If not, then our results are solid
3. If there are some difference appears, more detailed analysis will be needed

**More Ideas about Data Analysis**

* Using NVivo to screen key words in each advice, then putting top 50 words in words frequency into a priority list. Second step, like what we did last time, is screening each comment and conclude it with any word from the priority list. Then creating a node with the word. (This can help to filter out those redundant words like “my”, “group”)
* After Screening comments, a list of nodes would be produced. The names of those node represent keys words of advices. Combining similar words (e.g. communication and discussion) is the last step.
* Lastly, comparing this result (those key words) with our data analysis result from above.