

Gearing up for

DATA GATHERING

Revising the Paper, Selecting the samples,
Planning the Procedure

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Planning the Procedure*

1 Determine how to improve the research proposal by reflecting on the proposal defense

DISCUSSION OBJECTIVES

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1

Determine how to improve the research proposal by reflecting on the proposal defense

2

Explain some of the basic features of Microsoft Excel as statistics software.

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Explain some of the basic features of Microsoft Excel as statistics software.

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Identify samples by performing random sampling through Microsoft © Excel

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Plan out the data gathering procedure by writing a time table indicating specific tasks to be carried out by the group.

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This slideshow presentation will be made available through the course website: mathbychua.weebly.com. Download the document to use it as reference.

1

What were some of the specific concerns that the panel had with your paper?



Revising the Paper

1

What were some of the specific concerns that the panel had with your paper?

2

Were there questions that the panel raised that you weren't able to answer?

Revising the Paper



1

What were some of the specific concerns that the panel had with your paper?

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Were there questions that the panel raised that you weren't able to answer?

3

On a scale of 1 to 10 (10 highest) how would you rate your research team's performance in the proposal defense?

Revising the Paper



1

What were some of the specific concerns that the panel had with your paper?

2

Were there questions that the panel raised that you weren't able to answer?

3

On a scale of 1 to 10 (10 highest) how would you rate your research team's performance in the proposal defense?

4

Are there things you wish you could have done that would have made your defense better? What did you learn from your experience in the proposal defense?



Revising the Paper

In establishing relationships the researcher must be able to provide evidence that there is a theoretical basis for the variables being studied.

A theory is a conceptual idea used to describe, explain, predict, or understand a certain phenomenon.

what theory?

Terms to be defined in a research must be limited to the variables and sub-variables (or subscales) in the research.

Some terms need to be conceptually defined (universally accepted definition) while others must be operationally defined (researchers limited definition)

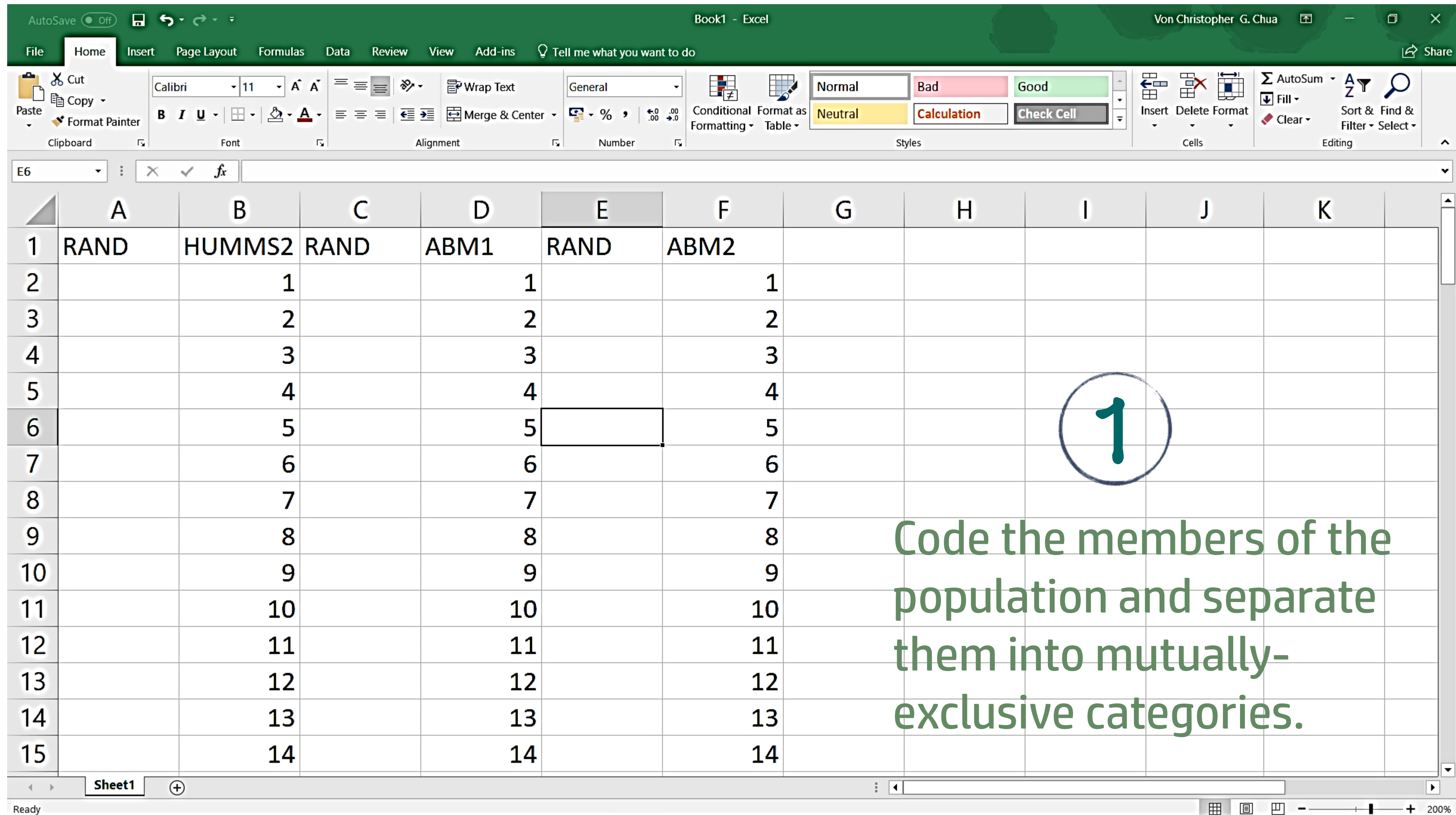
Defining Terms...

wait, which terms exactly?

The research instrument must:

- (1) be from a reputable source (published research);
- (2) measure exactly the same variable in the study based on the operational definition.

Questionnaire troubles



The screenshot shows the Microsoft Excel interface with the following data table:

	A	B	C	D	E	F	G	H	I	J	K
1	RAND	HUMMS2	RAND	ABM1	RAND	ABM2					
2		1		1		1					
3		2		2		2					
4		3		3		3					
5		4		4		4					
6		5		5		5					
7		6		6		6					
8		7		7		7					
9		8		8		8					
10		9		9		9					
11		10		10		10					
12		11		11		11					
13		12		12		12					
14		13		13		13					
15		14		14		14					

A circled number '1' is overlaid on the grid, and a text box explains the first step:

Code the members of the population and separate them into mutually-exclusive categories.

F	G	H	I	J	K
ABM2		N	PROP	n	
1	HUMSS2	26	=H2/\$H\$5		
2	ABM1	43			
3	ABM2	40			
4		109			
5					
6					
7					

2

Compute for the sample size per group (or strata) based on the population.

The screenshot shows an Excel spreadsheet with the following data:

F	G	H	I	J	K
ABM2		N	PROP	n	
1	HUMSS2	26	24%	=I2*50	
2	ABM1	43	39%		
3	ABM2	40	37%		
4		109			
5					
6					
7					

2

Compute for the sample size per group (or strata) based on the population.

F	G	H	I	J	K
ABM2		N	PROP	n	
1	HUMSS2	26	24%	12	
2	ABM1	43	39%	20	
3	ABM2	40	37%	18	
4	Total	109		50	
5					
6					
7					

2

Compute for the sample size per group (or strata) based on the population.

The screenshot shows the MS Excel interface with the Formulas tab selected. The function library is open, and the RAND function is selected. The spreadsheet data is as follows:

	A	B	C	D	E	F
1	RAND	HUMMS2	RAND	ABM1	RAND	ABM2
2	=rand	1		1		1
3		Returns a random number greater than or equal to 0 and less than 1, evenly distributed (changes on recalculation)				
4		2		2		2
5		3		3		3
6		4		4		4
7		5		5		5
8		6		6		6
9		7		7		7
10		8		8		8
11		9		9		9
12		10		10		10
13		11		11		11

3

Generate random values for each member of the population using the RAND function of MS Excel

Under the “RAND” column for the first group, enter “=rand” then double click RAND from the options that would appear. Press ENTER.

The screenshot shows the Microsoft Excel interface with the 'Formulas' ribbon selected. The 'Function Library' group is visible, containing 'Insert Function', 'AutoSum', 'Recently Used', 'Financial', 'Logical', 'Text', 'Date & Time', 'Lookup & Reference', 'Math & Trig', and 'More Functions'. The 'Name Manager' and 'Defined Names' groups are also visible. The active cell is A2, and the formula bar shows '=RAND()'. The spreadsheet below shows a table with columns A through F and rows 1 through 12. Column A contains the formula 'RAND', column B contains 'HUMMS2', column C contains 'RAND', column D contains 'ABM1', column E contains 'RAND', and column F contains 'ABM2'. The values in column A are random numbers, and the values in columns B, D, and F are integers from 1 to 11.

	A	B	C	D	E	F
1	RAND	HUMMS2	RAND	ABM1	RAND	ABM2
2	0.90289	1		1		1
3	0.32489	2		2		2
4	0.86844	3		3		3
5	0.23502	4		4		4
6	0.17191	5		5		5
7	0.35143	6		6		6
8	0.48594	7		7		7
9	0.26669	8		8		8
10	0.16254	9		9		9
11	0.32233	10		10		10
12	0.47301	11		11		11

3

Drag down from the first cell until all members of the population is assigned with a random number.

3

Select all random numbers for this group, copy it and paste as number.

The screenshot shows the Microsoft Excel interface. The ribbon is set to 'Formulas'. The formula bar displays '=RAND()'. The spreadsheet has columns A, B, C, and D, and rows 1 through 5. Cell A1 contains the text 'RAND'. Cell A2 contains the value '0.2779'. A context menu is open over cell A2, showing options: Cut, Copy, Paste Options, and Paste Special... The Paste Options menu is expanded, showing icons for 'All', 'Numbers' (123), 'Formulas' (fx), 'Values and Formulas' (fx and 123), 'Values' (123), and 'Formulas and Values' (fx and 123).

	A	B	C	D
1	RAND			ABM1
2	0.2779			
3	0.4116			
4	0.8573			
5	0.5533			

The screenshot shows the Microsoft Excel interface with the 'Data' tab selected. The spreadsheet contains the following data:

	A	B	C	D	E	F
1	RAND	HUMMS2	RAND	ABM1	RAND	ABM2
2	0.59077	1		1		1
3	0.52224	2		2		2
4	0.71041	3		3		3
5	0.87281	4		4		4
6	0.6316	5		5		5
7	0.938	6		6		6
8	0.42173	7		7		7
9	0.96798	8		8		8
10	0.33195	9		9		9
11	0.69742	10		10		10
12	0.56177	11		11		11

3

Select all random numbers and the codes for the members in the population, sort them from smallest to largest.

EXCELing

How to use MS Excel to randomly generate the samples from the population

	A	B	D	E	F
1	RAND	HUMM	ABM1	RAND	ABM2
2	0.0027	25	1		1
3	0.05324	21	2		2
4	0.06535	23	3		3
5	0.10286	12	4		4
6	0.13671	17	5		5
7	0.25715	9	6		6
8	0.33195	13	7		7
9	0.401	7	8		8
10	0.42173	22	9		9
11	0.4338	24	10		10
12	0.47686	20	11		11
13	0.48634	2	12		12
14	0.52224	11	13		13
15	0.56177		14		14

3

Note how many samples you need from this group and highlight the first n members. This will be the samples from this group.

Book1 - Excel | Von Christopher G. Chua

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RAND	HUMMS2	RAND	ABM1	RAND	ABM2		N	PROP	n				
2	0.0027	15	0.01561	40	0.02197	5	HUMSS2	26	24%	12				
3	0.05324	25	0.03219	15	0.03456	32	ABM1	43	39%	20				
4	0.06535	21	0.033	20	0.04854	13	ABM2	40	37%	18				
5	0.10286	23	0.05756	10	0.05371	23	Total	109		50				
6	0.13671	12	0.07852	6	0.07015	17								
7	0.25715	17	0.11824	35	0.14056	14								
8	0.33195	9	0.13619	7	0.14775	12								
9	0.401	13	0.14499	2	0.14869	37								
10	0.42173	7	0.16127	32	0.17317	36								
11	0.4338	22	0.16408	18	0.21039	41								
12	0.47686	24	0.17969	5	0.22565	35								
13	0.48634	20	0.1883	27	0.24471	30								
14	0.52224	2	0.23333	3	0.28807	15								
15	0.56177	11	0.24003	34	0.29078	29								
16	0.56327	16	0.24312	23	0.30281	4								
17	0.57491	14	0.25109	14	0.32517	28								
18	0.59077	1	0.2605	12	0.3296	22								
19	0.6316	5	0.26515	37	0.36436	6								
20	0.69742	10	0.30487	13	0.36889	3								
21	0.71011	2	0.31364	10	0.37062	18								

4

Do the same for the other groups.

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G
1	HUMMS2	ABM1	ABM2		N	PROP	n
2	7	2	4	HUMSS2	26	24%	12
3	9	3	5	ABM1	43	39%	20
4	12	5	12	ABM2	40	37%	18
5	13	6	13	Total	109		50
6	15	7	14				
7	17	10	15				
8	21	12	17				
9	22	13	22				
10	23	14	23				
11	24	15	28				
12	25	18	29				
13		20	30				
14		23	32				
15		27	35				
16		32	36				
17		34	37				
18		35	41				
19		37					
20		40					
21							
22							

5

Refer back to the list of members of population, decode the respondent numbers to identify who specifically your samples are.

GROUP TASK:

Rethink your Data Collection Procedure. Be specific by using the table below as template.

Date, Time	Objective	Task	Person Assigned	Target Accomplishment
11/08/2017	Determine the samples	Use MS Excel to do stratified random sampling and identify who the samples are.	All members of the research team.	List of Samples

Gearing up for Data Gathering

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RAND	HUMMS2	RAND	ABM1	RAND	ABM2		N	PROP	n				
2	0.0027	15	0.01561	40	0.02197	5	HUMSS2	26	24%	12				
3	0.05324	25	0.03219	15	0.03456	32	ABM1	43	39%	20				
4	0.06535	21	0.033	20	0.04854	13	ABM2	40	37%	18				
5	0.10286	23	0.05756	10	0.05371	23	Total	109		50				
6	0.13671	12	0.07852	6	0.07015	17								
7	0.25715	17	0.11824	35	0.14056	14								
8	0.33195	9	0.13619	7	0.14775	12								
9	0.401	13	0.14499	2	0.14869	37								
10	0.42173	7	0.16127	32	0.17317	36								
11	0.4338	22	0.16408	18	0.21039	41								
12	0.47686	24	0.17969	5	0.22565	35								
13	0.48634	20	0.1883	27	0.24471	30								
14	0.52224	2	0.23333	3	0.28807	15								
15	0.56177	11	0.24003	34	0.29078	29								
16	0.56327	16	0.24312	23	0.30281	4								
17	0.57491	14	0.25109	14	0.32517	28								
18	0.59077	1	0.2605	12	0.3296	22								
19	0.6316	5	0.26515	37	0.36436	6								
20	0.69742	10	0.30487	13	0.36889	3								
21	0.71041	10	0.31264	10	0.37062	10								

GROUP TASK:

Submit a print-out of the result of your sampling through MS Excel.

Assignment