2018 Communication 2
UNIT 2
Data Collection and Description

Aim of the unit

The aim of this unit is to learn about an important method of data collection: surveys.

Learning outcomes

By the end of the unit, it is expected that students will:

- Understand what surveys are and what they are used for;
- Know how to design and conduct a survey;
- Be able to gather survey data and display it appropriately;
- Be able to get meaning from survey data; and
- Be able to communicate the results of a survey.

Expected output

- A research question
- A plan to conduct a survey
- A short essay and/or presentation which describes the survey, presents the results and discusses the significance of the results.

Table of contents:

Lesson 1 - Introduction to surveys

Learning aims:

- Understand what a survey is.
- Understand how they are used in society.
- 'Observe' the students in your class and think of some questions.

What is a survey?

A survey is a form of research which is conducted to understand something about a group of people. A survey is a set of questions which the group of people are asked to answer. The creation of the questions and possible answers, the execution of the survey (online, paper, or by phone), and the analysis of the answers needs to be carefully planned and carried out. The responses are then gathered and analysed. Finally, the results of the survey are communicated to others.

Surveys can vary from very simple (see Task 2.1.1 below) to complex. They can also be as small-scale as a class survey, or as large-scale as a national census (国勢調査), answered by millions of people. Even simple surveys require careful thought and planning for them to be successful and meaningful.

Task 2.1.1

Here is a survey. The purpose of the survey is to help you and your teacher learn something about the students in the class. Answer the questions and then analyse the results.

1. What course do you want to do?
2. What do you want to do after graduating from FUN with an undergraduate degree?
3. Ideally, what size of company/institution do you want to work for in your first job after graduating from FUN/graduate school?
4. What type of job do you want to do?
5. Rank the following factors in order of importance when choosing your first job after graduating from FUN/graduate school?

- Culture/Atmosphere of company
- Company history
- Company size
- Future prospects
- Location
- On the job training
- Salary
- Type of company/industry
- Work life balance

6. Where do you want to work?

Task 2.1.2

Look at the survey results and answer these questions:

A. Who answered the survey? (circle one)

1. All FUN students
2. All Communication 2 students
3. Most students in classes E & F
4. All students in classes E & F

B. Write down three results from the survey that you think are interesting/surprising/unusual.

_____

_____

_____

Task 2.1.3

Surveys are carried out by different people and organizations for various reasons. Below is a table with six examples of surveys. Write the name of the organization that conducted it. Choose from the list below the table.

	Purpose of the survey	Who conducted it?
1	To find out what people think of their food and service.	
2	To find out what people think about an issue.	
3	To find out how people use their products and what they think of them.	
4	To find out how many fish are caught in a lake every year.	
5	To find out the best way to promote the city to foreign tourists.	
6	To find out what students think of a course so it can be improved for next time.	

Department of Tourism	A teacher	A software company
A hamburger restaurant	Department of Fisheries	A political party

Task 2.1.4

There are many ways to conduct a survey. In our class, we have used the FUN Moodle course page. Here are some other ways of conducting a survey:

- telephone
- mail / letter
- ask people questions in a public space
- SNS
- open website, which anybody can access
- closed website, which only people with a 'password' or 'key' can access

Which of these methods do you think is the best way to conduct a survey and why?

_____

_____

Task 2.1.5

Step 1: Access and read the following news article and then read Column A. http://www.japantimes.co.jp/news/2015/07/14/national/people-spending-time-surfing-web-less-time-watching-tv/

Step 2: Search for some news stories online and find one that describes the results of a survey. Answer the following questions in Column B (in English). Make sure there is enough information - you should not have to write "I don't know" more than twice.

	Column A	Column B
Where was the survey conducted?	Japan	
When was the survey conducted?	February and March 2015	
Who conducted the survey?	NHK	
Who was surveyed?	People over 15	
How many people were surveyed?	2,442	
How were they asked?	I don't know	
What was the topic?	People's attitude to TV	
What was learnt from the survey?	People now watch less TV and use the Internet more	
Source:	The Japan Times	

Lesson 1 Personal Reflection:

1. What did you learn in this lesson?
2. How would you assess your own performance as a student?
3. Were your communication efforts successful?
4. What aspects of your own performance do you want to improve?
5. What can you use from this lesson to help you achieve your study goals?
6. Do you have any questions for the teacher about this unit or about Communication 2?

Lesson 2 - Survey populations and research questions

Learning aims:

1. Understand what a survey population is.
2. Understand what a research question is.

Survey populations

As you learnt in the previous lesson, the main purpose of a survey is to understand something about a specific group of people. This specific group is known as a survey population (母集団); they are the target of the survey. When carrying out a survey, you only want people who are in your target survey population to answer your questions.

For example, if you are collecting data about people who drive then your survey population would probably be 'people who have a driver's license'. Or, if you were doing research into the use of SNS, then your survey population could be 'people who use SNS on their smart devices'. Another possible survey population could be 'students who eat lunch in the FUN cafeteria' if your research goal was to find out what FUN students think about the FUN cafeteria.

It is very important to understand exactly who is in (and who is not in) a survey population. Why? It makes it easier to think of questions and the kinds of responses that people might give to the questions. Also, if people who are not in the survey population do the survey, then the results of the survey cannot be applied to the survey population and so the results cannot be trusted.

Do Tasks 2.2.1 to 2.2.2 with a partner. They are designed to help you to think about the members of different survey populations at FUN.

Task 2.2.1

In the following tables, three survey populations are described. Below each one is a list of four people. Who is definitely included in each survey population?

Survey population 1: Undergraduate students who entered FUN this year.		
Takayuki	A second-year student	In / Out
Ken	He is a member of the music club with Takayuki	In / Out
Motoko	She is a first-year Master's student	In / Out
Taro	He is doing Communication 1 for the first time	In / Out

Survey population 2: First-year students who passed the Suisen or AO exam		
Ai	She is a Communication 4 student. She passed the Suisen exam	In / Out
Shunsuke	He is doing VEP 3. He passed the AO exam	In / Out
Kurama	He is doing Communication 2 for the first time. He passed the AO exam	In / Out
Masanori	He has lunch with Ai every day. He passed the AO exam	In / Out

Survey population 3: Communication 2 students		
Kentaro	He is a second-year student doing Communication 2 for the 2nd time	In / Out
Your teacher	He/she loves teaching Communication 2	In / Out
Taka	He is doing Communication 2 for the first time	In / Out
Maya	She is a PhD student	In / Out

It is very important that ONLY people in your survey population answer your survey!

Task 2.2.2

An important step in planning a survey is to brainstorm and gather information about the survey population. The more you know about the survey population, the easier it will be to plan the next steps of the survey. Work with a partner and write down as many things as you can about students in your FUN Communication 2 class.

Survey population =

Students in your FUN Communication class.

Research Questions

As mentioned in this unit's first lesson, a survey is a form of research that is conducted to understand something about a specific group of people. It could be to find out what people do, what people think or believe, or what trends there are in the survey population. An important step in planning a survey is to write down what you want to understand about the survey population. This can be written as a question: 'a research question'.

How do you make a research question? Well, think back to Unit 1 of this course. The first steps of the scientific process involve:

- making an observation, then
- asking questions.

Task 2.2.3

Think of (and look at) the students in your Communication 2 class. Write about 5 observations and related research questions that are about them. The research questions need to be something about which you are interested in finding out. Refer to the examples to help you write your own observations and research questions.

	Topic	Observation	Research question
Ex1.	Tired students	Many Communication 2 students look tired.	Do Communication 2 students have too much homework?
Ex2.	commuting	Students commute to FUN in different ways.	How do Communication 2 students get to FUN?
Ex3.	Food in class	Some students eat during classes.	What do Communication 2 students think about eating in classrooms during lessons?
Ex4.	Smart phones	Almost all students have a smart phone.	How do Communication 2 students use their smart phones?
Ex5.	Password management	Students need many passwords to access web sites and online services.	How do Communication 2 students manage their passwords?
Ex6.	Second-year courses	Students have to choose a second-year course.	How do Communication 2 students choose their second-year course?
1)			
2)			
3)			
4)			

Task 2.2.4

If you had to choose only ONE observation and research question from Tasks 2.2.3, which one would it be? Which is the most interesting for you?

Observation	Research question

Unit 2 Assignment

The final project for Unit 2 is to plan, prepare and conduct a survey, and then collate the data and describe the results.

Your teacher will give you details of the assignment, which may include the following:

- Solo work or group work: _____
- Survey population: _____
- The topic of your survey: _____
- Survey question types to be used: _____
- Survey type (online / paper etc): _____
- Number of demographic questions: _____
- Number of survey questions (including demographic questions): _____
- Conduct a test survey (Y/N): _____
- Size of survey sample (number of responses): _____
- Format of final assignment: _____
- Final deadline: _____
- Submission details and other instructions: _____

_____

_____

Personal Reflection:

1. What did you learn in this lesson?
2. How would you assess your own performance as a student?
3. Were your communication efforts successful?
4. What aspects of your own performance do you want to improve?
5. What can you use from this lesson to help you achieve your study goals?
6. Do you have any questions for the teacher about this unit or Communication 2?

Lesson 3 - Survey questions and responses

Learning aims:

- Understand some of the question types that can be used in a survey.
- Understand the types of answers that these questions can generate.
- Understand the need to think carefully about the research question when making survey questions.

Data & Question types

In Lesson 2 you learnt that a research question is the basis of a survey. When you write a survey, however, you do NOT simply ask the research question! You need to ask other questions that will help you answer your research question.

Here is example of an observation, a related research question, and some survey questions designed to help answer the research question.

Topic	Observation	Research question	Survey questions
Tired students	Many Communication 2 students look tired.	Do Communication 2 students have too much homework?	1. What time do you usually go to bed on a weekday? 2. How many hours a day do you do homework?

In this lesson, you will learn about four types of data and related questions. Here is a summary of the four data types:

	Qualitative data 定性的データ		Quantitative data 定量的データ	
Type	Type 1: Nominal (名義尺度)	Type 2: Ordinal (順序尺度)	Type 3: Interval (間隔尺度)	Type 4: Ratio (比例尺度)
Key feature	labels, no order	order BUT intervals not necessarily equal	measurable BUT has no true zero	measurable AND has a true zero
Data examples	blood type, gender, favourite subject, food preference, religion, web browser	level of agreement, rank (1st, 2nd, 3rd), order of favourite subjects, political orientation (right, centre, left)	temperature, time of day, IQ, any scale with equal intervals	height, weight, income, test results, income
Example questions	Which cities have you visited? What is your gender?	All students should visit the Meta-learning lab – agree or disagree? How do you feel today? Good – OK - Bad	What is the average day-time December temperature in Hakodate? What time do you go to bed on weekdays?	What is your TOEIC Bridge score? How much do you get paid per hour?

Task 2.3.1

Write four survey questions; one question for each data/question type. Then write some possible responses (choices) for each question.

Type 1: Nominal (名義尺度) : _____

_____

_____

_____

_____

Type 2: Ordinal (順序尺度) : _____

_____

_____

_____

_____

Type 3: Interval (間隔尺度) : _____

_____

_____

_____

_____

Type 4: Ratio (比例尺度) : _____

_____

_____

_____

_____

Task 2.3.2

Find a partner and answer each other's questions.

Then, evaluate your partner's questions. For example:

1. Were the questions clear?
2. Were the possible answers (choices) clear?
3. Were there enough possible answers?
4. Did the possible answers overlap?

List of possible answers (choices or responses)

When making questions you often have to provide a list of possible answers (choices). The following things are important when making a list of possible answers:

1. The list of possible answers should be complete: includes all reasonable possibilities.
2. The list should contain no redundant responses: all responses in the list are possible.
3. The list should not be too short or too long.
4. There should be no overlaps is the list.

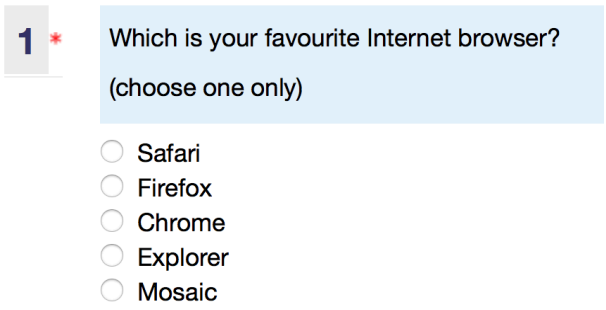
Task 2.3.2

Look at this question:

What is wrong with the list of responses? Hint: which browser have you never heard of?

_____

_____

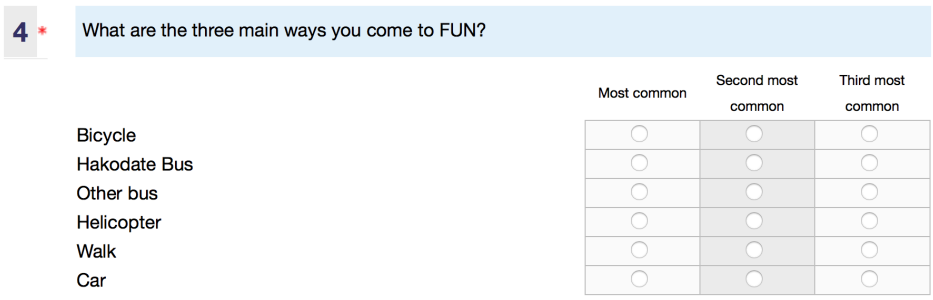


That's right, you've never heard of Mosaic. It was first developed over 20 years ago and it does not exist now. It should not be in the response list. It is a redundant response.

Task 2.3.3

Look at this question:

There are two problems with the responses in this. Can you find them? Hint: one response should not be there. Another response is not there but should be!



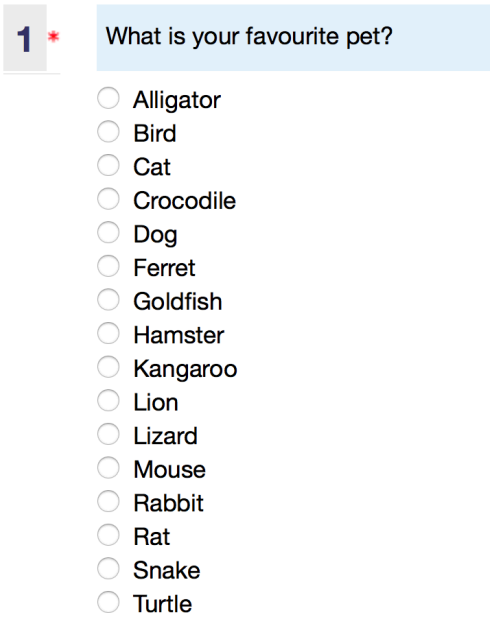
1: (should not be there) _____

2: (should be there) _____

That's right, "helicopter" is a redundant response and should be removed. In addition, some students come to FUN by motorbike. The option "Motorbike" should be included.

Task 2.3.4

Look at this question:



What is wrong with the list of responses?

_____

_____

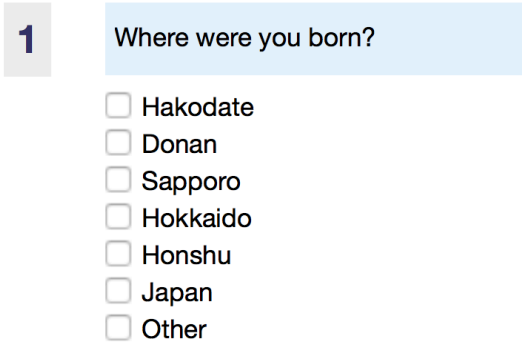
That's right, there are 16 responses in this list. It is OK if you are surveying hundreds of people, but for a small survey population, it is too many. It is difficult to organise the answers after the survey. One solution is to write the main possible responses, and with a final response called "other". This allows the respondent to indicate that they have a less popular response.

What are the main possible answers of a survey question? There are two ways of finding out:

- Use your common sense, or
- Test the question on some people before conducting the survey.

Task 2.3.5

Look at this question:



What is wrong with the list of responses?

_____

_____

That's right, there are overlaps in this list. This means that some responses are included in others. In this example, Hakodate and Sapporo are separate, but they are both in Hokkaido and Japan. It is very confusing for the responders and the responses will be meaningless! You need to be very careful to make sure there are no overlaps in your list of responses.

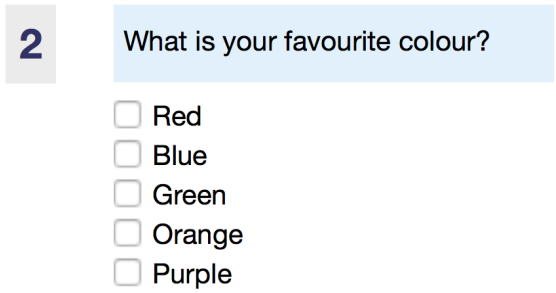
Task 2.3.6

Look at this question:

What is wrong with the list of responses?

_____

_____



That's right, there are gaps in this list. This means that some possible responses are missing. In this example, many colours are missing, such as white, black, brown, light blue, cyan, grey, and so on. For questions like this, you should add an option called “other”, and ask the responder to type in their response, unless you want to force respondents to choose one of the five colours.

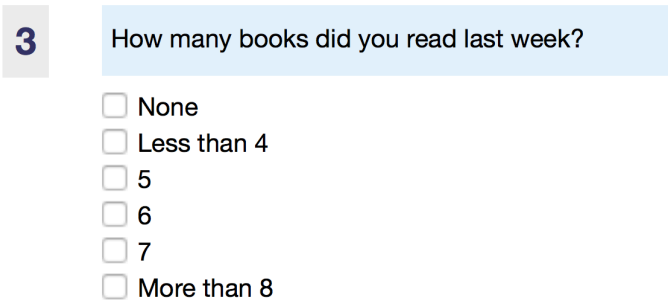
Task 2.3.7

Look at this question:

What is wrong with the list of responses?

_____

_____



That's right, there are gaps in this list, too. This means that some possible responses are missing. In this example, people who read 4 or 8 books cannot answer this question! To fix this, use "4 or fewer" and "8 or more" instead.

Open & Closed ended questions

So far, we have looked at closed-ended questions (回答選択式質問). With these questions, you give the respondent (回答者) some choices/ However, it is also possible to ask open-ended questions (回答記述式質問). Open-ended questions are useful when there are too many possible answers to list, or you cannot predict all the possible answers. They are also useful when you want respondents to share their opinions with you. However, the disadvantage of Open-ended questions is that they are hard to analyse.

Personal Reflection:

1. What did you learn in this lesson?
2. How would you assess your own performance as a student?
3. Were your communication efforts successful?
4. What aspects of your own performance do you want to improve?
5. What can you use from this lesson to help you achieve your study goals?
6. Do you have any questions for the teacher about this unit or about Communication 2?

Lesson 4 – Creating, Checking and Executing your survey

Lesson aims:

- To understand some issues relating to survey questions: neutrality, clarity and flow.
- To understand what demographic questions are and how to include them in a survey.
- To understand the value of organising questions on a flow chart.
- To check the survey questions and responses by conducting a test survey.

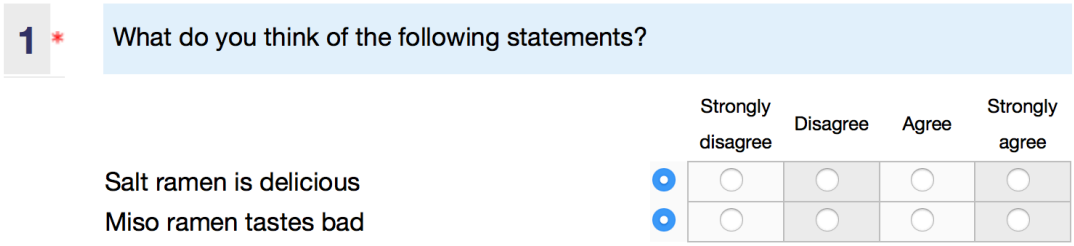
Issues related to survey questions:

Neutrality

Because you want results that are unbiased (先入観を持たない, 公平な), the survey questions must be neutral (中立の, 公平な). In other words, they must not contain any particular opinion. A question that contains an opinion is called a biased question. This could affect the thinking of the respondents and affect the results of the survey.

Task 2.4.1

Look at the following survey question:



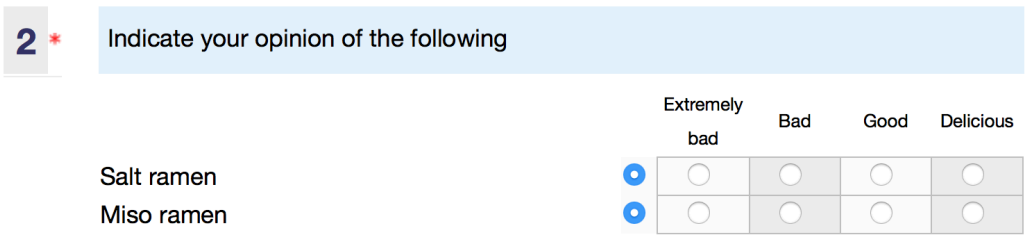
Is the question biased or neutral? (circle one) biased / neutral

Which statement is positive? _____

Which statement is negative? _____

Task 2.4.2

Look at the following survey question:



Is the question biased or neutral? (circle one) biased / neutral

Clarity

All the questions in your survey must be understood by all respondents in one and only one way: the way you intend them to be understood. If your questions lack clarity the survey data might be worthless.

Task 2.4.3

Consider the question "Where are you from?" What could this question mean? Circle the correct interpretation(s) below:

1. The town in which you were born
2. The town in which you grew up
3. The town in which your family lives now
4. The town in which you now live

Actually, all these are possible. For some people, the answer to each of these questions could be a different town! This question needs to be rewritten so that it means the same to all the responders.

Task 2.4.4

Look at this question:

How often do you check your phone in class?

- All the time
- Most of the time
- Often
- Sometimes
- Occasionally
- Rarely
- Never

What is wrong with the above list of responses?

_____

_____

That's right, the responses are unclear. Of course, "all the time" and "never" are understood the same way by everyone, but the other words are not. The meaning of each is different, depending on the person. If this question was in a survey, its results would be unreliable. If you want to ask a question like this, provide more specific responses such as "two or three times a week", "less than 5 times a week" and so on.

Task 2.4.5

Look at this question:

How often do you ride your bicycle to FUN?

- Every day
- 3 or 4 times a week
- 1 or 2 times a week
- 1 to 3 times a month
- Less than once a month
- Never

What is wrong with the question?

_____

_____

That's right, this is difficult to answer because the response change with the seasons. If the question is about an activity that people do not do with the same frequency all year round, it should be very clear about when the respondent should think about. A solution to this could be "How often do you ride to FUN in summer"? You could also write "…during the semester" to be very clear.

Flow

Once the questions and suggested answers have been chosen, the next step is to consider the order in which they appear in the survey. There are a couple of basic rules:

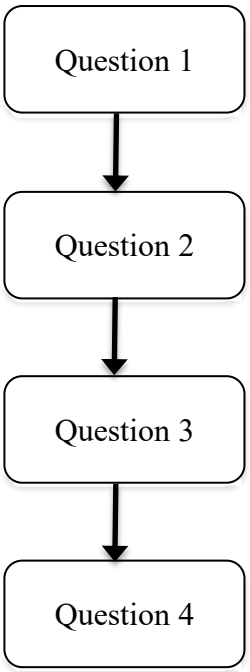
- Never start a survey with an open-ended question (回答記述式質問)
- Start with simple, easy questions, and
- Finish with more difficult questions.

A good way to visualise the survey is to write the questions in a flowchart. If there are no 'filter questions' (回答に応じて質問を表示すること) it will be a straight line. If there are filter questions, the path branches and possibly rejoins. Here is an example of each:

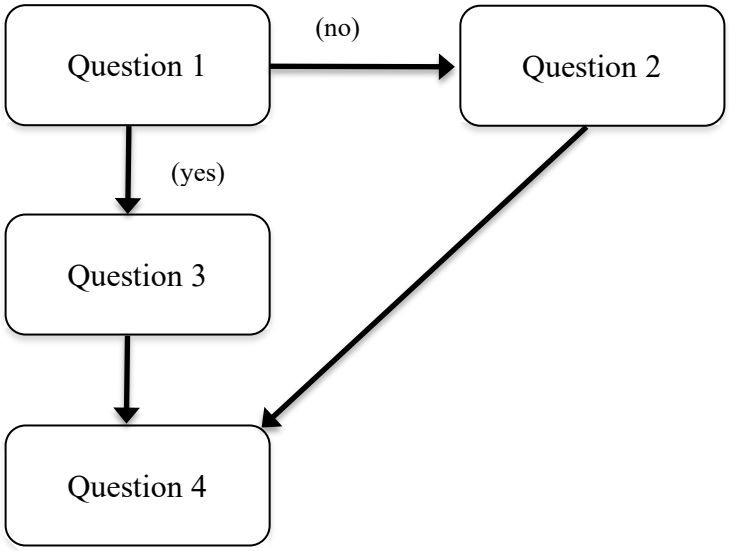
Research Question and survey questions

As you write and check your questions, check that each question in your survey is related to the research question. It is important that you make sure that all the survey questions will help you answer your Research Question. Any questions that do not help you answer your Research Question should be changed or removed.

A flowchart showing a simple survey structure, with one question leading to the next:



A flowchart showing a more complex survey structure in which there is a 'filter question', which branches respondents to different questions depending on how they answer a previous question:



Demographic questions

Until now you have been preparing questions that help to answer the research question. It is also useful to include some demographic questions (社会的な特性を表す質問) into the start of your survey. Demographic questions can help you discover what factors may influence respondents' answers. Collecting demographic information will help you to compare subgroups to see how responses vary between these groups. These questions are usually located at the start of the survey

Examples of demographic questions include:

- How old are you?
- What is your marital status? (Single / Married / ...)
- What is your employment status? (Employed for wages / Self-employed / A student / …)
- What is your annual income? (less than 2,000,000 yen / between 2,000,000 and ...)
- What is your highest level of education (high school / college / university ...)
- How did you enter FUN? (General / AO / Suisen ...)
- * Which is your gender? (Male / Female)

Demographic data does not answer the research question but it can help when trying to find explanations for other answers.

* For a small survey, it is possible to identify specific people with demographic data. Do not make it easy to identify people from your data. So, if there are only a few people of a certain subgroup in your target audience do not ask a question that can identify them.

Check the questions

Once you have made your survey you need to check the questions. This means you need to show the survey to a small group of people from the target population to:

1. make sure that the survey questions are relevant to the Research Question;
2. make sure that the questions are clear;
3. check that the suggested responses are complete, appropriate and clear; and
4. confirm that the flow of the survey questions is logical.

Make a plan

After you have checked the questions in your survey, you need to plan three things:

1. How will you get people to answer your survey?
2. How will you download the data?
3. What application will you use to analyse the data and make graphs?

After you have a had a few people check your survey, you should download the results and check that the results appear in your chosen application (e.g. Excel, LibreOffice Spreadsheet, or Numbers) as you expect. If the results do not appear as you expect them to, you should change the questions by choosing a different question type and/or changing the possible responses. Remember, once a survey has started, it is not possible to "pause" it. Check everything carefully before asking people to do the survey.

Conduct the survey

Have you checked your survey? It is now time to contact the target population and ask them politely to complete your survey.

Personal Reflection:

1. What did you learn in this lesson?
2. How would you assess your own performance as a student?
3. Were your communication efforts successful?
4. What aspects of your own performance do you want to improve?
5. What can you use from this lesson to help you achieve your study goals?
6. Do you have any questions for the teacher about this unit or about Communication 2?

Lesson 5 - Collate data and display as charts

Learning aims:

- Understand how to collate data using spreadsheets
- Understand how to display data effectively using charts

This lesson describes how to collate data (データを収集・整理する) and how to represent the data effectively in charts.

Collating data

Once a survey has been conducted, there is usually a lot of data, either in physical or digital form. The task now is to collect the data, organise it and put it into forms that are easy for people to understand. This process is called collating.

It is possible to collate data by hand, but it is not recommended, because it takes a lot of time and effort. It is much easier to do it using a computer application called a spreadsheet. Commonly used spreadsheet programs include LibreOffice, Microsoft's Excel and Apple's Numbers. There are also some online applications such as in Google Drive however they do not have as many features.

If a survey was paper-based, the answers will probably have to be entered into a computer manually. For surveys conducted online, data is usually available as a spreadsheet program-specific file or a CSV file (comma separated variable コンマ区切り).

Why is collating data necessary? As you will see, the raw data is usually a collection of responses from individual people. It is more useful not to see what responses individual people made, but how many people chose each response. Collating data allows this.

The following are images of what collating the raw data should look like for different question types using LibreOffice.

Nominal data (名義尺度)

The following screenshot collates the data from the question "Which is your favourite Internet browser? (choose one only)". Note that there is a category in the collated data for Mosaic, even though it was not chosen. In addition, below the collated data is a sum of responses, to make sure that all of the responses were counted. In order to get the numbers in Column E, the function ‘countif’ was used.

	Raw Data		Collated Data	
	Question: Which is your favourite Internet browser (choose one only)			
	Name	**Response**	**Response**	**Count**
	Person 1	Safari	Safari	4
	Person 2	Chrome	Firefox	3
	Person 3	Safari	Chrome	2
	Person 4	Safari	Explorer	1
	Person 5	Firefox	Mosaic	0
	Person 6	Chrome		
	Person 7	Explorer	Total	10
	Person 8	Firefox		
	Person 9	Safari		
	Person 10	Firefox		

The following image is for the question "Which Internet browsers did you use in the last week? (choose multiple OK)". The order of the responses is not important, so the function 'countif' was applied to the block B20 to E29. Note that the total of responses (23) does not equal the number of people (10) because multiple responses were possible.

	Raw Data					Collated Data	
	Question: Which Internet browsers did You use in the last week? (multiple)						
	Name	**Responses**				**Response**	**Count**
	Person 1	Safari	Firefox			Safari	8
	Person 2	Chrome	Safari			Firefox	8
	Person 3	Safari	Explorer	Firefox		Chrome	3
	Person 4	Safari	Firefox			Explorer	4
	Person 5	Firefox	Safari			Mosaic	0
	Person 6	Chrome	Firefox				
	Person 7	Explorer	Safari			Total	23
	Person 8	Firefox					
	Person 9	Safari	Explorer	Firefox			
	Person 10	Firefox	Explorer	Chrome	Safari		

Ordinal data (順序尺度)

The following image is for the question "Which are the three main ways you come to FUN? Rank them 1 = Most common way, and 3 = less common way". Note that the three responses are still in separate columns after collation. Also, the total for each column is still the number of people who responded (10 people).

	Raw Data				Collated Data			
	Question: What are the 3 main ways you get to FUN?							
	Name	**Most common**	**Next most common**	**Third most common**	**Response**	**Most common**	**Next most common**	**Third most common**
	Person 1	Bicycle	Hakodate bus	Walk	Bicycle	4	3	2
	Person 2	Hakodate bus	Bicycle	Other bus	Hakodate bus	4	4	2
	Person 3	Walk	Hakodate bus	Bicycle	Other bus	1	0	3
	Person 4	Bicycle	Walk	Hakodate bus	Helicopter	0	0	0
	Person 5	Other bus	Hakodate bus	Car	Walk	1	3	2
	Person 6	Hakodate bus	Bicycle	Other bus	Car	0	0	1
	Person 7	Bicycle	Walk	Hakodate bus				
	Person 8	Hakodate bus	Bicycle	Walk	Total	10	10	10
	Person 9	Hakodate bus	Walk	Bicycle				
	Person 10	Bicycle	Hakodate bus	Other bus				

The following image is for the question "Indicate your opinion of shio ramen". Note that the raw data includes a code number for each response, where 4 = Delicious, 3 = Good, 2 = Bad and 1 = Very bad. This is converted to the correct response as part of the collation process.

	A	B	C	D	E	F	G
1	**Raw Data**				**Collated Data**		
2							
3							
4							
5	**Name**	**Question: Indicate your opinion of shio ramen**			**Response**		**Number of people**
6	Person 1	1			Very bad	1	**3**
7	Person 2	1			Bad	2	**3**
8	Person 3	3			Good	3	**1**
9	Person 4	4			Delicious	4	**3**
10	Person 5	2					
11	Person 6	1					
12	Person 7	2			**Total**		**10**
13	Person 8	4					
14	Person 9	4					
15	Person 10	2					

In the previous explanations, the results from each survey question are those from the survey sample as a whole. If you are interested in finding out more detail, you can include some demographic data.

The simple example below uses the data from two questions: Question 1: "Which are you? (Male/Female)" and Question 2: "Indicate your opinion of shio ramen". The function ‘countif’ was used in the spreadsheet to count the responses to Question 2 based on the responses to Question 1. This kind of collation can be done with various combinations of questions and some interesting information can be obtained.

	A	B	C	D	E	F	G	H
1	**Raw Data**				**Collated Data**			
2								
3								
4		**Question 1**	**Question 2**					
5	**Name**	**Which are you?**	**Indicate your opinion of shio ramen**		**Response**		**Male**	**Female**
6	Person 1	Female	1		Extremely bad	1	1	5
7	Person 2	Female	1		Bad	2	2	3
8	Person 3	Male	3		Good	3	3	2
9	Person 4	Male	4		Delicious	4	5	1
10	Person 5	Male	2					
11	Person 6	Male	1					
12	Person 7	Female	2		**Total**		**11**	**11**
13	Person 8	Female	4					
14	Person 9	Male	4					
15	Person 10	Female	2					
16	Person 11	Male	3					
17	Person 12	Female	1					
18	Person 13	Female	3					
19	Person 14	Female	3					
20	Person 15	Male	2					
21	Person 16	Male	4					
22	Person 17	Male	4					
23	Person 18	Male	4					
24	Person 19	Female	1					
25	Person 20	Female	2					
26	Person 21	Male	3					
27	Person 22	Female	1					

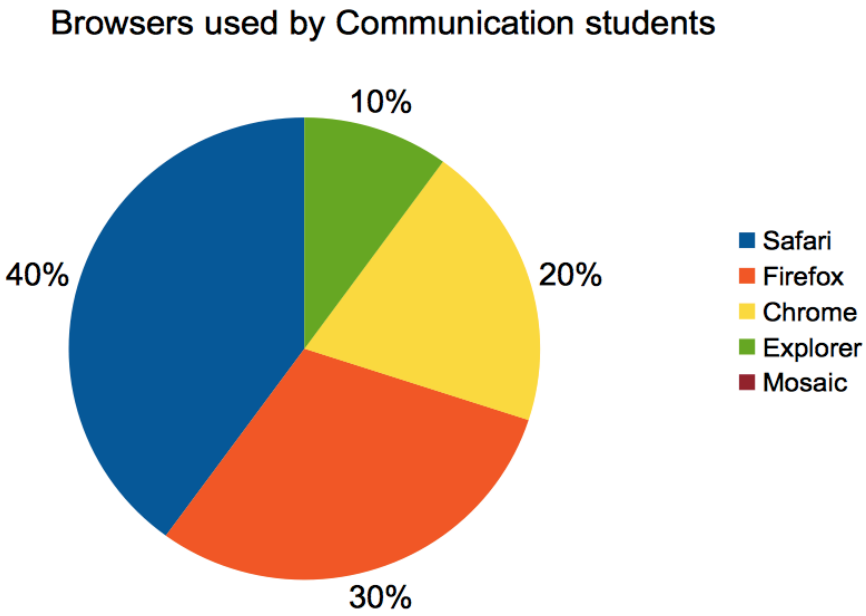
Task 2.6.1

Collate some survey data. Your teacher will give you a spreadsheet file that contains some data from a survey. Collate the data into tables that can then be made into charts.

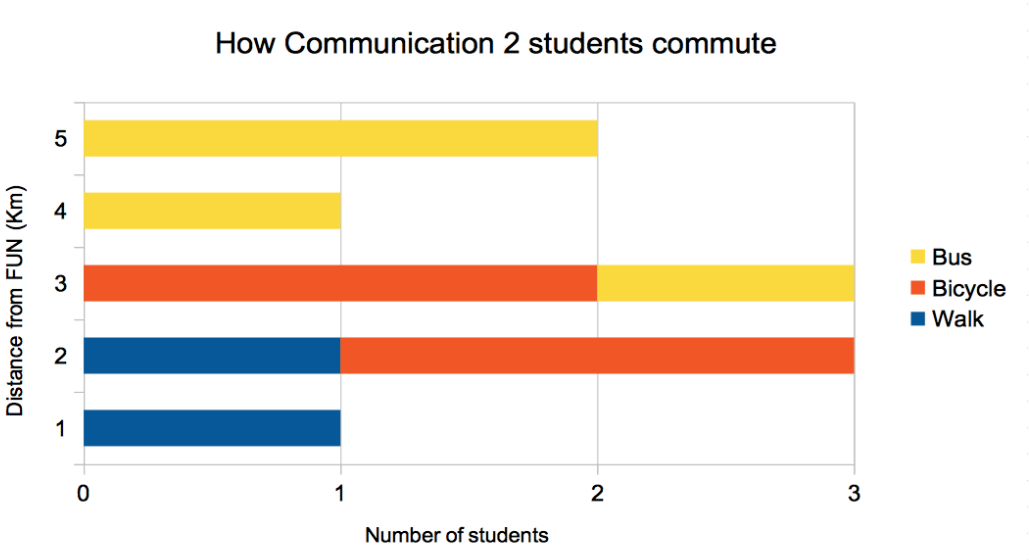
Charts and graphs

Although the tables above can be used to display the information gained from the survey, in most cases the same information can be understood more easily by using a chart. Here are three commonly used charts or graphs.

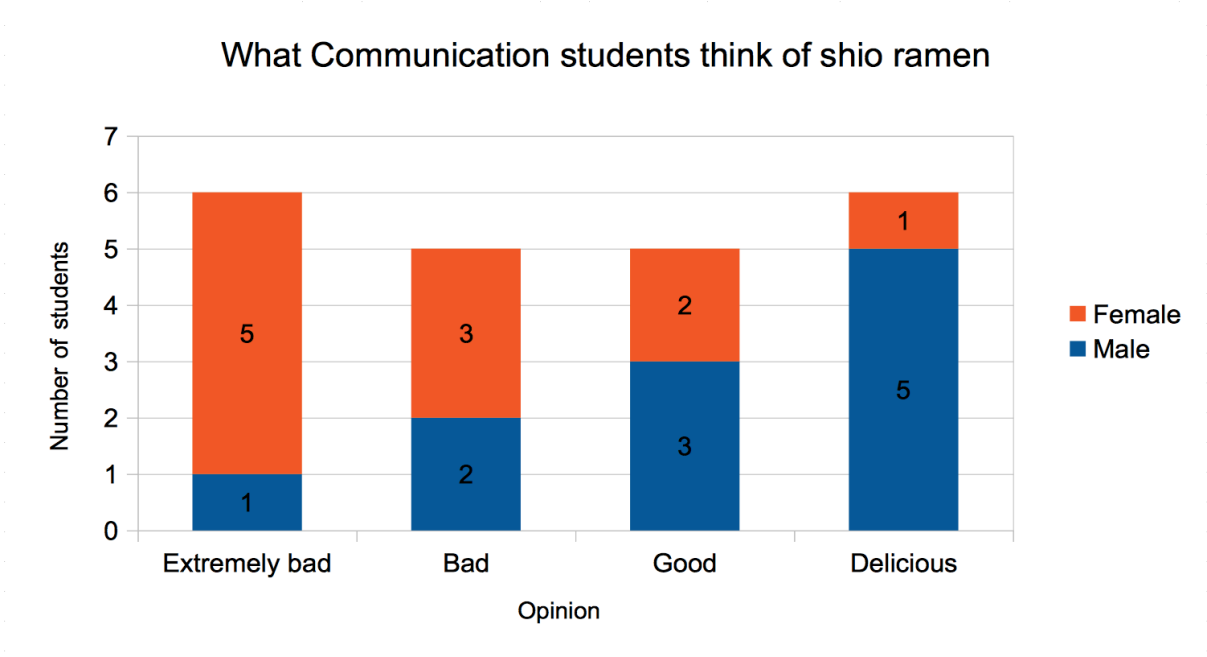
Pie charts



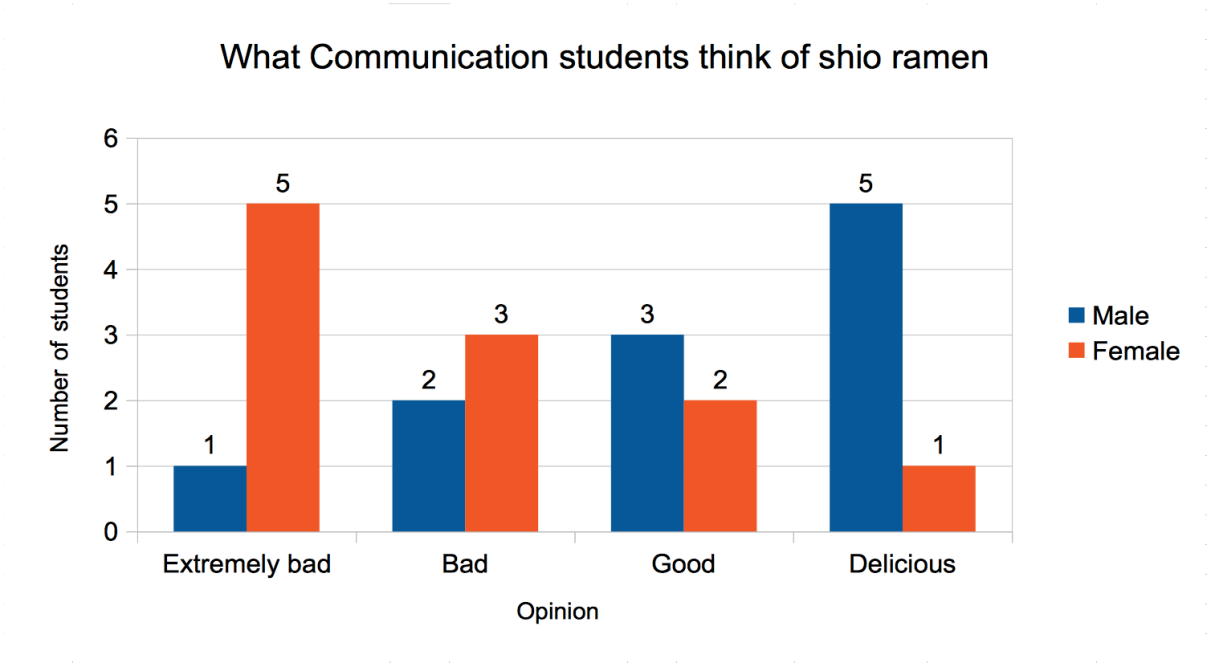
Horizontal bar charts



Vertical bar charts



Below is the same chart with a slightly different format:



Task 2.6.2

Use the data you collated in Task 2.6.1 to make the four charts above. Pay attention to details - labels and headings must be easy to read!

Personal Reflection:

1. What did you learn in this lesson?
2. How would you assess your own performance as a student?
3. Were your communication efforts successful?
4. What aspects of your own performance do you want to improve?
5. What can you use from this lesson to help you achieve your study goals?
6. Do you have any questions for the teacher about this unit or about Communication 2?

Lesson 6 - Describe the survey

Learning aims:

- Learn how to describe the survey and the data it produced.
- Use the survey data to answer the research question.

Answer the research question

Surveys are conducted for a reason; to find out something about a specific group of people. After conducting the survey, collating the data and representing it clearly in charts, the next step is to extract some meaning from the data. In other words, answer the research question.

Task 2.6.1

Write your research question below. While looking at the data from your survey, answer your research question. What other conclusions can you make about the survey population based on the data?

Your research question:

_____

Answer (This will be your Thesis Statement):

_____

How does the survey data support the answer?

1.

_____

2.

_____

3.

_____

You should now be able to clearly explain how your data supports your answer.

Task 2.6.2

Identify the parts of a short essay that describes the results of a survey.

The following (incomplete) essay is about students' study habits. The research question was: “How do Communication 2 students spend their free time?”

The parts of an essay describing survey results:

- Background information
- Comments / opinions / interpretation about the results
- Evidence (examples and explanations)
- Overview
- Restating of the thesis statement
- Summary of the main points
- Survey explanation
- Thesis Statement
- Title
- Topic sentences
- Transitions

Students' Self-Study time

There are only twenty-four hours in a day, and most people find it hard to do all the things they need to do in this time. In particular, students are very busy. They have lectures, club activities, homework, part-time work and other activities that fill up their day. Group Y did some research into how Communication 2 students study in their own time. We will explain the findings of this research. We will argue that Communication 2 students do not spend enough time self-studying.

In December 2017, we carried out an online questionnaire in which we asked X questions about students' daily activities in order to find out about how much they study. Thirty-five students in classes E and F completed the questionnaire. This was seventy-eight percent of the total number of students in these two classes.

We asked students how much time they spent on various activities, both in a weekday and on weekends. As can be seen in the figure below, X% of students spend on average just X hours per day self-studying. Compare this with the amount of time they spend playing computer games. More than X% of the students spend X hours playing PC games.

[Figure – a chart goes here]

Not only do students spend very little time during the week self-studying, they also spend less time self-studying during the weekend than any other activity. The graph illustrates that only X% of the students do any kind of studying (homework and self-study) during the weekend. An astonishing X students (X%) spend less than 30 minutes studying during the weekend. ...

To conclude, it is clear that Communication 2 students need to spend more time in self-motivated study. The findings of our survey demonstrate that only X students (X%) spend more than X hours self-studying per day. ..... This is a serious problem. However, it is not the fault of the students. Students do not spend enough time self-studying because .....

Task 2.6.3

Write, in English, the OUTLINE of your essay describing your survey and the results. Include things such as:

- Background information
- The number of people in the survey population
- The research question
- The thesis statement
- When the survey was conducted
- Where/how the survey was conducted
- Who conducted the survey
- Who the survey population was (the survey target)

Personal Reflection:

1. What did you learn in this lesson?
2. How would you assess your own performance as a student?
3. Were your communication efforts successful?
4. What aspects of your own performance do you want to improve?
5. What can you use from this lesson to help you achieve your study goals?
6. Do you have any questions for the teacher about this unit or about Communication 2?