

Te whai hua - kia ora!



Questionnaire Design

SORTED THEMES

LEVEL

CREDITS

AS91263 (version 3)

Mathematics and Statistics

Design a questionnaire Te waihanga i te uiui pāngarau

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Nau mai haere mai!

Welcome to the Questionnaire Design module.

Please read through the Student Guide for an overview of the module and assessment before starting this Student Booklet and your questionnaire design.





Topic One:

The purpose and audience of questionnaires

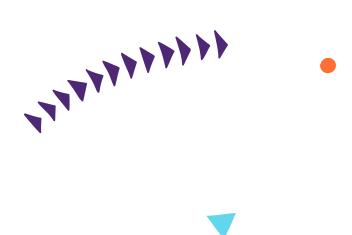
Learning outcome for Topic One



Understand data collection through questionnaire design

Success criteria

- I can give at least two examples of the types of information people can gather using a questionnaire
- I can explain at least two strengths of questionnaires as a research tool.



This topic focuses on understanding why questionnaires are a useful tool for gathering data.

Imagine that your school is thinking about a change that will impact on the whole school community, for example, making changes to the school timetable, introducing a new uniform, or implementing a new approach to teaching and learning. Who should the school involve in that decision? Why? And how can the school find out what different groups of people think about the proposed change?

To find out what people think about the proposed change, the school needs to gather data. There are two main types of data: quantitative and qualitative.





Quantitative data is data that involves numbers, for example, things that you can count or measure. Questions that gather quantitative data often start with sentence starters such as how many, how much, or how often. One advantage of quantitative data is that it is easy to analyse.

Qualitative data describes qualities or characteristics; for example, gender, cultural identity, or opinions. Qualitative data can be hard to analyse in a precise way, but it's an important and rich part of research.

Complete Topic 1 Activity 1 in the Student Practice Booklet

Ways to gather data

There are several ways to gather data about people's thoughts, feelings, and opinions.

For example:

The school might set up **focus groups**, inviting small groups of people to discuss an idea.

Another option is **one-to-one interviews**, which involves asking people a series of questions face-to-face. These methods are useful for gathering in-depth information about what people think or feel about an idea. However, they can also be very time consuming and, as a result, the number of people invited to contribute ideas tends to be small.

Questionnaires (a set of written questions) are a useful way to gather data from large groups of people.

They can provide statistical information about people's behaviours and circumstances, and provide ways for people to share their beliefs, attitudes, and opinions; although usually with less depth than focus groups and one-to-one interviews.







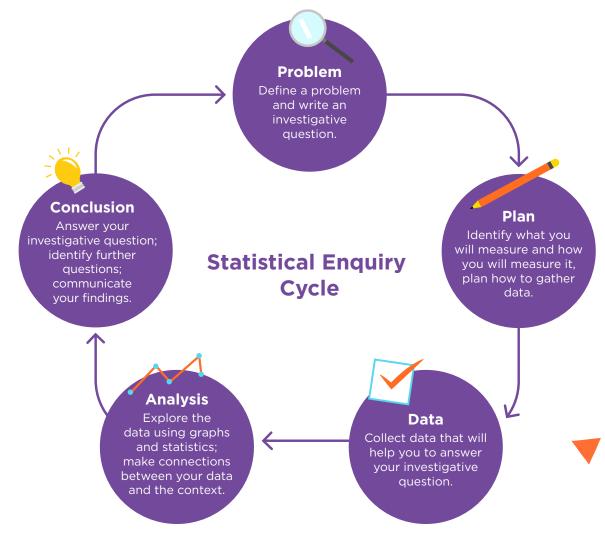
Questionnaires - getting started

Coming up with a set of questions sounds simple right? But designing a questionnaire takes a lot of thought, time, and testing. If you don't ask the right questions in the right way, you may not get the information you need. More than that, poorly designed questions can make people feel offended, annoyed, or distrustful.

Survey or questionnaire - what's the difference?

In everyday use, there's not much difference between a questionnaire and a survey. People use both terms to describe a set of written questions. But when it comes to research, there is a difference: a questionnaire is a **set of questions**, while a survey is a wider process of sending out a questionnaire, collecting responses, and analysing the responses to reach a conclusion.

In other words, a survey is an example of the PPDAC statistical enquiry process in action:



Assessment tip:



In your assessment, you'll mainly be focusing on the first two parts of the process (problem and plan), although you will be collecting some data to test your questionnaire and doing a short analysis to check that the data your questionnaire gathers can be analysed.

Complete Topic 1 Activities 2-6 in the Student Practice Booklet

Establishing the purpose and audience of a questionnaire

The **purpose** of a questionnaire is to gather information about a particular context so that you can answer an investigative question or questions. The audience is the person or group(s) who want to use the information your questionnaire gathers.



Questionnaires are used by individuals, organisations, iwi, businesses, and community groups to gather statistical information that help to inform their decision**making**. Councils and the government use questionnaires to help plan changes to education, health, housing and transport services.

Assessment tip: 🧖



In your assessment, you need to be very clear about why you are gathering information, who will use it, and why it is useful. It's possible that at the moment your main motivation for creating a questionnaire is just to get credits. But you'll find the process of designing a questionnaire much more interesting and meaningful if you can link it to something you care about or are genuinely interested in.



You need to be able to answer each of these questions:

- What do you want to find out?
- Why is the data you are gathering useful? (For example, how might it inform a decision or provide feedback on a situation.)
- **How** can the data be analysed?
- Who do you need to give the questionnaire to to make sure you get the information that your audience needs? (You'll be learning more about this last question in Topic Two.)

To get Excellence, you need to make connections to the purpose of your questionnaire throughout your report, including how changes you have made to your questionnaire help it to achieve its purpose. You also need to show that you have carried out research that relates to the purpose of the questionnaire.

You might decide to refine the purpose of your questionnaire as you work your way through the questionnaire design process, for example, if you discover that there are specific information needs of the survey and the groups who will use the data.

It may take you a few days to identify an audience and develop a purpose for your questionnaire. Checkpoint One includes a brainstorming activity that you can use to start coming up with ideas.

Once you have chosen a context for your questionnaire, the next step is to define your research goals (the specific information you want to gather).



Assessment tip: 👻



When you're creating a questionnaire on behalf of an individual or a group, it's important that you talk to them first to find out what types of information would be useful for them. This will help you to clarify the specific information needs of the survey and of the groups who will use the data you gather.

Here is an example:

Metiria is a year 12 student who wants to research young people's attitudes and behaviours related to planning for the future. Her audience is the Commission for Financial Capability (CFFC).







Who is CFFC?

CFFC is a government organisation that works to improve the financial capability of New Zealanders at all stages of life. They believe that most New Zealanders can make smart decisions about money if they have the right tools and encouragement. Their overarching vision is that all New Zealanders can retire with confidence.

Metiria asks her contact at the CFFC what types of information they are looking for. The CFFC is interested in understanding the financial choices young people make and the factors that shape these decisions.

How will the data be used?

The CFFC knows that factors such as an ageing population and an ever changing world can present challenges that will affect young people both once they start working and into their retirement. They want to develop tools that will equip young people to make smart decisions about money. This is because improved financial capability gives young people more choices and the opportunity to achieve better social and health outcomes for themselves and their family and whānau, making it easier for them to actively participate in economic life. To make these tools useful and relevant for young people, the CFFC wants to gather data on what factors influence their attitudes towards money and what their current money behaviours are.

Based on this information, Metiria decides on three research goals:



Complete Topic 1 Activity 7
in the Student Practice Booklet

Before moving on to Topic Two, check that you understand:

- What a questionnaire is and why people use them
- The strengths and weaknesses of questionnaires as a research tool.

Topic Two: Defining the target and sample populations

Learning outcomes for Topic Two

- ✓ Understand target and sample populations through questionnaire design
- ✓ Understand sampling and non-sampling errors through questionnaire design.

Success criteria

- I can explain the difference between a census and a sample
- I can identify the target population and sample population of a questionnaire
- I can explain the difference between sampling and non-sampling errors.



Remember that a key purpose of a questionnaire is to gather information that is useful for making decisions.

This means that it's important to think about which individuals or groups your audience need to hear from. This group of people is called the target population.

Assessment tip: 🤵



Throughout your questionnaire design process, it's important that everything you do has a clear link to the purpose and audience of your questionnaire. For example, you need to be able to explain how your target population matches the purpose of your questionnaire and the needs of your audience.

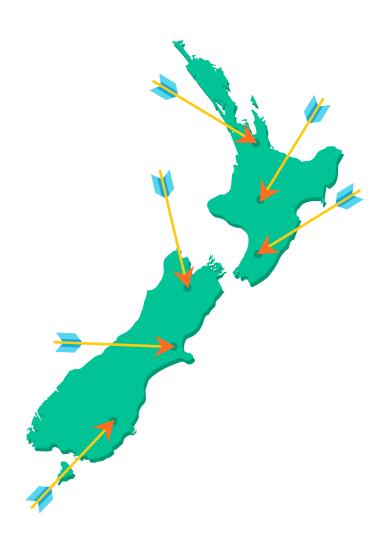
Defining the target population

The target population is the entire group that you would like to get information from and it's important to be very specific about who this is.

For example: The target population for Metiria's study is:

"Year 12 and 13 students in Aotearoa New Zealand in 2021".

This relates to the purpose and audience of Metiria's questionnaire because many of these students will be thinking about what they want to do when they finish school. Finding out about the attitudes and behaviours of this target audience will help the CFFC design tools to support young people as they transition from school into work or tertiary study.



This target population is focused on school year level not age; the study is only exploring schools in Aotearoa New Zealand: the focus is a snapshot of a particular year.

In an ideal world, Metiria would gather information from everyone in the target population. This is called a census.

Gathering information from everyone in your target population would make the data you gather very reliable (trustworthy). However, in real life this is seldom possible because:

- It may not be possible to contact everyone in the target population, for example, if you are sharing the questionnaire electronically, people who don't have access to the internet won't be able to participate
- Inviting everyone in the target population is often time-consuming and expensive.

Using a sample population

Because of the challenges of doing a census most people doing a survey use a group from the target population. This group is called the **sample** population.

Listing your sampling frame

A **sampling frame** is a list of the people that you will take your sample from. Ideally, the sampling frame will be a list of everyone in your target population. For example, if your target population is students at your school, the sampling frame would be a list of all the students at the school.

Assessment tip: 🍿



Sometimes there will be people on a sampling frame who are not in your target population. When you create your questionnaire, it's useful to have a **screening question** at the start to check that the person filling it meets your criteria. If not, you can save them and yourself time by letting them know that they don't need to complete the questionnaire.





Ideally, the people in the sample will be similar to the population that they come from. For example, if you surveyed a sample of the students at your school about a timetable change, you would need to make sure that your sample includes students from all year levels, students who live far away from school, and students who have outside-of-school commitments that might affect their ability to start school early in the morning.



Statistical errors

In everyday use, the word "error" means that a mistake has been made. In statistics, the word error has a more specific meaning.

A **statistical error** is the difference between the value you get from a data collection process and the true value for a population.

If the error is small, the data you have gathered accurately represents the population. If the error is large, the data you have collected is not very accurate.

No one likes errors, but they are an accepted part of the survey process.

Next are some examples of statistical errors that relate to surveys.



There are some interesting real life problems that have come from using a sample that doesn't resemble the target population. For example, when voice recognition software was first developed, the developers were all male and no one thought to test the technology on women. As a result, the software didn't always recognise female voices.

Sampling error

A sampling error is the error that happens when you use a sample rather than doing a census. Because a sample is only a part of the population, we can never guarantee that the information that a questionnaire gathers is a perfect match for the population; if we take a different sample, we will probably get a different result. Using a large sample and making sure that everyone has an equal chance of being in the survey can help to reduce sampling error.

Non-sampling errors

Non-sampling error is the error that comes from factors in the data collection process other than doing a sample. Even if you do a census, this doesn't mean that your gathered data will be 100 percent reliable. For example, not everyone will want to fill in or complete a questionnaire – they might choose not to take part or might only complete some of it. If the people who choose not to complete the questionnaire have a characteristic in common, this can lead to bias.

There are lots of different types of non-sampling errors.

Sampling bias is a statistical error that relates to the way that a sample is selected from the target population. For a sample to be unbiased, everyone in the target population needs to have an equal chance of being selected for the sample.

Response bias is when respondents don't answer questions accurately or truthfully. Here are some examples of factors that can lead to response bias.

Some people may have barriers that make it difficult for them to participate or to understand a question, for example, if they don't speak English

People aren't always honest when they complete a questionnaire because they don't want to look bad

People might interpret a question or answer differently to the way you intended.

Assessment tip:

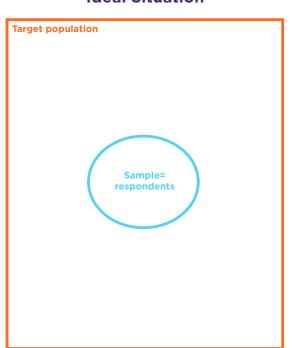


One of the requirements for achievement with Excellence is to "integrate your statistical and contextual knowledge". This means making connections between statistical concepts and your questionnaire. One way to do this is to discuss sampling and non-sampling errors and how these might relate to the purpose or design of your questionnaire.

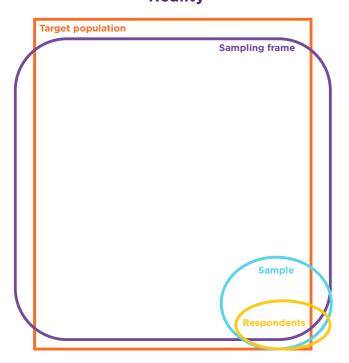
The diagram below shows how challenging it can be to gather accurate data. The ideal situation would be to have a sampling frame that includes everyone in the target population. The sample is the group of people that you select to be part of your survey. The respondents are the people who complete and return the survey.

In real life, it can be hard or impossible to find a sampling frame that is a perfect match for the target population. The sampling frame might miss some people out or include people who are not in the target population. Once you've selected a sample, you might find that not everyone in your sample chooses to complete and return your questionnaire.

Ideal Situation



Reality



Complete Topic 2 Activities 1-5
in the Student Practice Booklet



Now it's time to work towards completing Checkpoint one: Purpose, audience, and target population.

To meet the requirements of this checkpoint, you need to:

- identify the context of your investigation and the research objectives of your questionnaire
- explain what information the questionnaire will provide
- explain the audience of your questionnaire
- define your target population.

Complete Topic 2 Activity 6
in the Student Practice Booklet

Before moving on to Topic Three, check that you understand:

- What a target population is and how to define one
- The difference between a census and a sample
- What a sampling frame is
- What a sampling error is

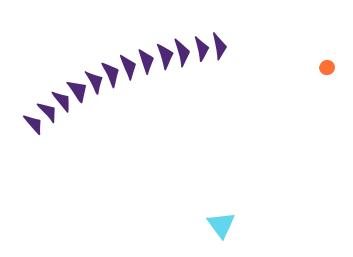
Topic Three: Ethical considerations

Learning outcome for Topic Three

✓ Understand the ethics of surveys through questionnaire design

Success criteria

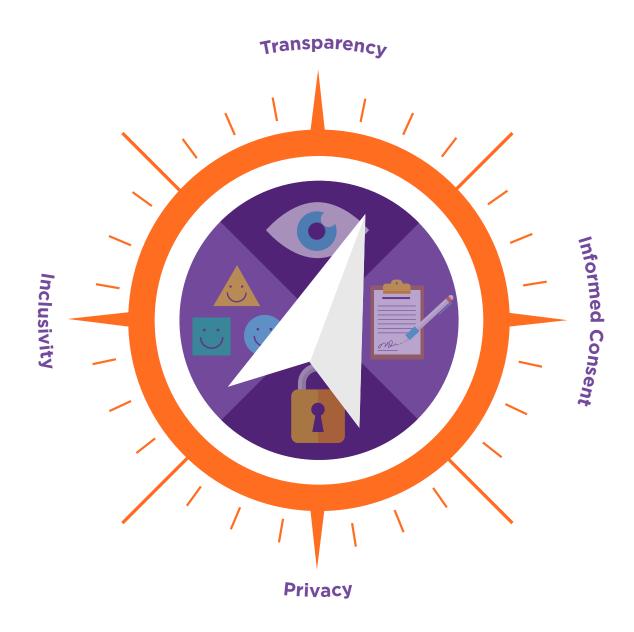
- I can explain why privacy, confidentiality, and anonymity are important
- I can identify techniques I can use to meet ethical standards.



The focus for this topic is understanding the importance of meeting ethical questionnaire standards.

Ethics involves working in ways that protect people's rights and dignity. Ethical standards are guidelines that help you to act in ways that are fair, kind, and respectful.

We're going to focus on four key aspects of ethical surveys: transparency, informed consent, privacy, and inclusivity.





Transparency

The people who complete your questionnaire have a legal right to control who has access to their information and what is done with it.

When you ask someone to complete a questionnaire it's important that you tell them:

- Who you are, for example, your name, year level, and contact details.
 One of the reasons for providing your contact details is so that participants can contact you to request their data if they want
- The purpose and audience of your questionnaire (why you're doing the survey and who you are collecting data from)
- Whether their responses are anonymous or identifiable and whether the data is confidential
- That they have a right to request that their data is deleted or removed from your survey.

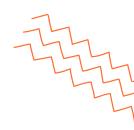


Informed consent

Once people know about the purpose of the questionnaire, they need to show that they agree to be part of your research.

You can meet this requirement by using a simple phrase such as:

"By completing this questionnaire, you are indicating your consent to participate in this research."





Privacy

Privacy is the right to keep your personal information secret. Protecting people's privacy involves:

- not requiring them to answer personal questions
- securely storing and protecting their data
- keeping their identity secret.



Dr Carla Houkamau:

Protecting our member's privacy is a priority for us. We take great precautions to secure all the information people provide for us. All personal details are encrypted and stored separately from questionnaire data.

Asking personal questions

For this assessment, it's important not to ask personal questions that might invade people's privacy. For example, in your questionnaire, it's not appropriate to ask questions about people's mental health, their well-being, sexuality, or drug use. This is to protect both you and your participants. If you ask personal questions you might:

- make the person filling in the questionnaire feel uncomfortable, upset, or unsafe
- find out sensitive information without being able to provide professional support.

Another issue is that these types of questions may mean someone is no longer willing to be part of your survey. It can be hard to get a good response rate to any survey, but writing a questionnaire that is easy and safe to complete can help.

If you're not sure about a question you want to ask, check with your teacher.

Dr Carla Houkamau:

We know that responding to questions that ask about personal matters might cause discomfort for some people. However, for our particular study, it is important to ask questions that are personal.

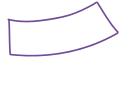
Some people may think personal questions are irrelevant or perhaps an invasion of people's privacy. A person's point of view will be influenced by many things such as their life experiences, background or challenges they may face from day-to-day. All the factors we ask about (age, gender, health, personality and relationships) help to create a picture of a person's lifestyle and personal preferences. These things are a major factor in determining a person's values and priorities - as well as their economic choices. If, at any time, people don't want to answer any of the questions they do not have to. What they do and do not respond to is totally up to them.

Confidentiality

Confidentiality includes not sharing information about someone with another person. In the context of a questionnaire, this means that when you share information gathered through your questionnaire, you should avoid using names or anything that can be used to identify the people who completed it, or anything that links people with their responses. One way to do this is to make their responses anonymous (unnamed). If their data is anonymous, even you as the researcher won't know whose responses you are reading when you look at a completed questionnaire.

Ways to respect people's privacy

- Only gather information that relates to your purpose; if you can't explain why some of the information in your questionnaire is important or useful, take it out
- Let people skip questions if they want to and make it clear that they can do this
- Let people know who will see the information that they give you, and whether their responses are anonymous
- Let people know that filling in the questionnaire is optional.





Dr Carla Houkamau:

Only I, Professor Chris Sibley and trusted research assistants working on the MIFAS in secure conditions have access to participants' contact details. Participants' contact details are used solely for the purposes of contacting them to continue their participation each year and to provide them with information and feedback about research findings from the MIFAS.

Complete Topic 3 Activity 1
in the Student Practice Booklet



Inclusivity

Inclusivity involves making sure that no-one feels excluded (left out or denied access) by your questionnaire. A key area of consideration is how you ask about people's gender.

Remember that any question you ask needs to match the purpose of your questionnaire – if you ask questions about gender there needs to be a clear reason for doing so.

If you do ask about gender, you need to include more options than male and female so that you don't exclude people who are gender diverse. It's also important to make questions about gender (and any other personal information) optional so that people can choose not to answer them. Here is an example:

Are you:		
	Female	
	Male	
	Gender diverse	
	Prefer not to say	



Assessment tip:



In your assessment, you can explain why you didn't include certain questions. Linking this to an explanation of ethical standards is one way to "integrate contextual and statistical knowledge" into your report, which is a requirement for excellence.

Complete Topic 3 Activities 2-3 in the Student Practice Booklet

Before moving on to Topic Four, check that you understand:

- Why questionnaires need to meet ethical standards
- What information you need to give people about your questionnaire before they fill it in
- How to meet the ethical standards of transparency, informed consent, privacy and inclusivity



Topic Four: Types of questions

Learning outcome for Topic Four

✓ Understand the advantages and disadvantages of different types of questions through questionnaire design

Success criteria

- I can identify whether a question is closed or open
- I can give two advantages and two disadvantages of closed and open questions.



In this topic we explore some different types of questions that you can use in your questionnaire.

Using a variety of questions can make filling in your questionnaire more interesting and enjoyable. This can increase the likelihood that your respondent will complete it, which could reduce the non-sampling error.

There are two main categories of questions: closed and open. Let's take a look at closed questions first.

Assessment tip:



In your questionnaire, you should aim to have at least three types of questions.

To gain a Merit grade or higher, you need to explain decisions you have made in the design process. This includes explaining the type of questions you have used. Whichever question type you use, remember that all of the questions you ask need to have a clear link to the purpose and audience of your questionnaire.

Closed questions

Closed questions are questions that can be answered with a single word or a short phrase. In questionnaires, closed questions are often followed by a limited number of response options, for example, yes/no or multiple choice answers.

Advantages of closed questions

Closed questions are often quick and easy to answer. This can make it more likely that respondents complete the questionnaire, reducing non-sampling errors.

Responses to closed questions are easy to analyse and display.

Disadvantages of closed questions

It can be frustrating for respondents if the answer they want to give is not offered.

Respondents who don't have an opinion might just select a response at random.

Closed questions can reduce complex ideas down to overly simple responses.

Closed questions are usually easy and quick to answer. The data they gather is also easy to analyse because there are a limited number of responses.

The types of closed questions explored in this topic are:

- yes/no questions
- multiple choice questions
- rating scales
- Likert scales.



Advantages

be a useful screening question. In the example, if you have further questions about more specific types of savings you can instruct people who tick "No" to skip them and go to a subsequent numbered question.

Example

Do you have any savings?

Yes

No

Yes/no questions

A Yes/no question is useful when these are the only two options for a question.

Disadvantages

Yes/no questions can come across as a bit blunt.

Yes/no questions don't allow people to explain their response or provide alternative ...

Troubleshooting

Limit your use of Yes/no questions to screening questions.

Consider including a third option such as "I'm not sure" or "prefer not to say" so that you don't force people to answer the question.

Disadvantages:

As the designer, you're in control of the response options and you might not provide all the necessary options. This can lead to bias or participants might choose randomly if the answer they want isn't there, which can reduce the accuracy of responses.

Advantages:

Multiple choice questions are easy to answer and to analyse.

Example

Do you use any of the following financial services or have any of these types of investment?

- lwi-managed investments
 - KiwiSaver
- Other retirement savings
- Shares
- Personal savings
- A home loan/ mortgage
- Home/contents insurance
- Other (please state):

Multiple choice questions

Multiple choice questions allow participants to select one or more responses from a list that you provide.

Troubleshooting:

Include an "other" option and a comment field that lets people add their own option.

Use a pilot survey to check whether you need to add more options (you'll be learning about pilot surveys in ...

Topic Eight).

Advantages:

Easy to use and analyse.

Easy to answer.

Rating scales

Rating scale questions
provide a scale of options,
for example, rating
something from 1 to 10. The
respondent can choose a
number that matches
their response.

<u>Disadvantages:</u>

Without clear instructions, people might interpret the scale incorrectly.

People may not have an opinion or the question might not apply to them.

Troubleshooting:

Make sure you explain what the scale means.

Allow participants to indicate if they don't have an opinion or skip the question.

Example

How well has school prepared you to make good money choices?



Advantages:

Most people will be familiar with Likert scales and will understand how to respond to them.

They're quick to fill in.

Likert scales provide quantitative data that is easy to analyse.

Using a scale means that people can express a range of responses

. (instead of just "agree" or ...

"disagree").

Example

How much do you agree with the following statement:

KiwiSaver should be compulsory once you have turned 18.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
O	O	O	O	\circ

Likert scales

(Pronounced: Lick-urt)

Likert scales involve giving respondents statements and asking them to rate how much they agree or disagree with them.

Disadvantages:

Likert scales don't provide ways for people to explain their ideas or opinions in depth.

People will interpret the interval between points on the scale differently.

People sometimes avoid choosing extreme answers, so there may be non-sampling errors.

Forced-choice questions might force people to indicate agreement or ... disagreement that they ... don't genuinely feel. ...

Troubleshooting:

Make sure that the scale is balanced (for example, from very unlikely to very likely).

Use the same scale throughout your survey to avoid confusion. For example, if you decide to use an even-pointed scale (the forced-choice method), use this for all the Likert scale questions in your questionnaire.

Likert Scales continued on next page

Likert scales are a useful way to measure people's opinions or attitudes towards something in a way that can be quantified (analysed using numbers). A Likert scale is usually "symmetrical" which means it has equal numbers of positive and negative items, with a neutral value in the middle.

A format of a typical five-level Likert scale could be:

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
O	O	O	O	O

You can also use an even-pointed scale. This is sometimes called a forced-choice method because it removes the option of a neutral response.

A format of this type of Likert scale could be:

Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
O	O	O	O	O	O

You can read more about Likert scales on Wikipedia.

Open questions

Open questions are questions that respondents can answer in an unlimited number of ways. They are a useful way to gather information on opinions, beliefs, and feelings. Open questions often begin with words such as: why, how, or describe.

Open questions often require an answer longer than one or two words, especially if they require respondents to think or reflect.



For this reason, they are more commonly used as part of a focus group interview or a one-to-one interview with oral rather than written responses. In these settings the researcher can ask further questions to make sure that they understand what the person is saying.

Examples of open questions include:



Here are two ways to write open-questions that can be quite quick to answer:

Word associations

Give the respondents some key words and ask them to write down the first word that comes to mind when they read them, for example:

Wealth Debt Retirement

Sentence completions

Ask the respondents to complete a sentence, for example:

When I think about leaving school, I feel...

Advantages of open questions

Disadvantages of open questions

Allow for any response.

Can provide qualitative data.

An open question might introduce ideas that you haven't considered.

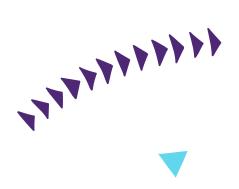
Open questions provide more opportunities for in-depth opinions, explanations, and feelings than closed questions.

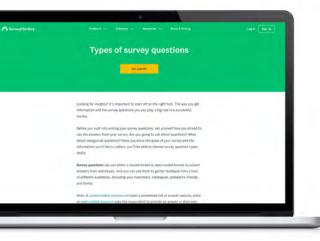
Open questions can be more time consuming for the respondents and require more thought.

Responses to open-ended questions can be harder to analyse objectively.

Complete Topic 4 Activities 1-3
in the Student Practice Booklet

For more information on types of questions see: Survey Monkey Types of survey questions





Before moving on to Topic Five, check that you understand:

- The difference between closed and open questions
- The advantages and disadvantages of different question types.



Topic Five:

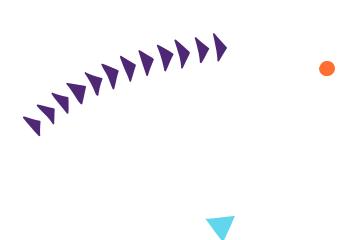
The importance of good question design

Learning outcome for Topic Five

✓ Understand the value of good questionnaire question design

Success criteria

- I can identify flaws in questions
- I can explain ways that questions can be improved.



In this topic we explore what makes a good question.

The quality of the questions you ask will determine the quality and usefulness of the data you gather.

Deciding what to ask

All of the questions you ask need to be based on the purpose of your questionnaire and the information needs of your audience. To check this, you need a clear and precise purpose statement.

In Checkpoint one, you developed a set of research goals that relate to your context. Your next step is to write draft questions related to each goal.

For every question, you should be able to explain:

- how the question relates to the purpose of the questionnaire
- what data the questionnaire will gather
- how you can analyse or display the data you gather.

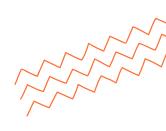
Other considerations include:

- Whether respondents will be willing and able to answer the question?
- How can I make it as easy as possible for the respondents to give accurate data?



Two key considerations are:

- What will you ask?
- **How** will you ask?



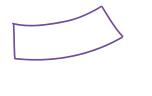
Deciding how to ask questions

Your questions need to be clearly understood by the people filling in your questionnaire. This will reduce misunderstandings and make your questionnaire easier to complete.



Watch this short Statistics Learning Centre video in which **Dr Nic** summarises how to write good survey questions.

Complete Topic 5 Activity 1
in the Student Practice Booklet







Dr Carla Houkamau:

Survey items need to be written a certain way in order to make sure we get valid responses.

Some people get frustrated because they cannot see their answers in the list of options provided. Developing a compact list of responses is the hardest part of writing a survey.

Using clear language

It's important that the people filling in your questionnaire can understand the questions they are being asked and that it's easy for them to answer the questions.

Use everyday language

Write your questions in a simple and straightforward way. Avoid complex language or technical terms that people might not understand.



Flawed question:

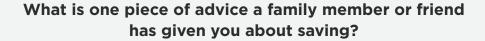


How does your financial identity influence your economic decisions?

Issue:

The concept of "financial identity" is complex and may not be widely understood. For young people "economic decisions" could be replaced by questions about how they "spend, save, share, and grow" their money.

Revised question:



Avoid double negatives

Double negatives occur when two negative words are used in the same sentence. Double negatives have to be read carefully to be understood correctly and can be confusing. If your respondent misinterprets the question, you will have a non-sampling error.



Flawed question:



Do you disagree that people shouldn't have to save for retirement?

Issue:

The double negative in this question makes it hard to understand.

Revised question:

Do you think saving for retirement should be compulsory?

Focus on one idea at a time

Avoid double or triple questions. If you put more than one idea in a question, it can be hard to know how to answer it.



Flawed question:

>	Do you save and invest your money?	
	Yes No	

Issue:

If someone saves their money but doesn't invest it, they may not know how to answer this question.

Revised questions:

Do yo	u have any	savings?		
Yes	No	Prefer not to say		
Do you have any investments?				
Yes	No	Prefer not to say		

Be realistic

Make sure that the questions you ask can be accurately answered. For example, avoid asking people to remember too far back.



Flawed question:



How much money did you spend on snack food last month?

Issue:

It's hard for people to accurately remember how much money they spent on snack food over a whole month.

Revised questions:

Over the past week, approximately how much money did you spend on snack food?

Keep questions neutral and bias free

When it comes to designing questions, it's important that your questions are not biased – that they don't show your preferences or opinions. People need to be free to give their own ideas. Avoid questions that make assumptions.



Flawed question:

\times	Approximately ho	w much of yo	ur weekly income	do you save	each week?	
	none	a bit	about half	most	all	

Issue:

This question assumes that the respondent has a weekly income. They might tick "none" to signal that they don't have an income (and therefore don't save any of it) but this is not what the question is asking. This is an example of a non-sampling error.

Revised questions:

	Do you have a weekly income?
V	Yes No
·	If you answered yes , continue to question 2. If you answered no , skip question 2 and go to question 3 .
	Provide complete response options
	Make sure that you have provided a complete set of options for each question.
	Flawed question:
\	Where do you get financial advice from?
	Family Friends School The internet

Issue:

The list of answer options doesn't cover all possible options, for example, students might get financial advice from financial experts, apps, podcasts, banks, or tv.

Revised questions:

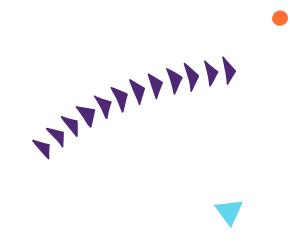
Provide an "other" category that gives people an option if their situation isn't listed.



In Topic Eight you'll learn about the importance of doing a pilot survey, which involves testing your questionnaire on a small group of people and getting their feedback on it. This is a useful way to check whether the response options you have provided are suitable. If lots of people choose "other", you may need to add some more options.

For more information on how to write good questions, see the <u>StatsNZ</u> <u>resource A Guide to Good Survey</u> <u>design</u>, pages 38 to 47.





Complete Topic 5 Activity 2
in the Student Practice Booklet

Before moving on to Topic Six, check that you understand:

- The importance of aligning your questions to your purpose
- Ways to write clear, straightforward questions



Topic Six: Structuring your questionnaire

Learning Outcome for Topic Six

✓ Understand the importance of structure in questionnaire design

Success criteria

- I can create a draft of my questionnaire
- I can explain choices I have made about the structure of my questionnaire.



It's nearly time for you to start putting together the first draft of your questionnaire.

Before you do, here are some guidelines on how to structure your questionnaire.

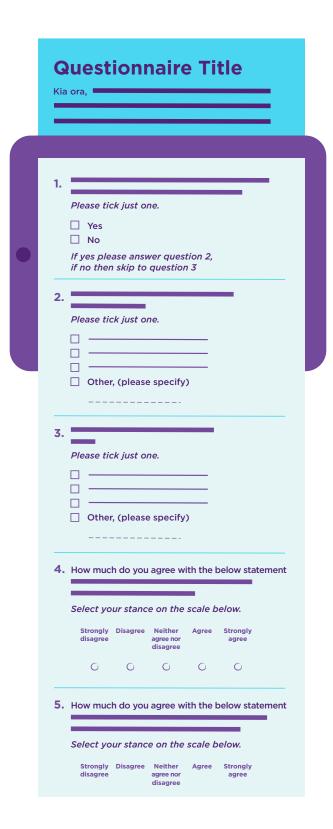
Give your questionnaire a title

Give your questionnaire a short and meaningful title that helps your participants know what the purpose of your questionnaire is.

Questionnaires with titles are usually seen as more credible than questionnaires that don't have a title.

Include an introduction

Explain who you are and why you are doing the study. Let the participants know how their data will be stored, used, and whether or not their responses will be anonymous.



Keep the questionnaire short

If your questionnaire is short people are more likely to complete it. This reduces the non-sampling error of non-completion and allows you to have more confidence in your results.

Assessment tip: 🧖



If your questionnaire seems to be too long, read each question and ask, "How does this information relate to my purpose?" If there's a strong link keep it. If there's not a clear reason to include the question, get rid of it. Make a note in your log book of your decision and explain why.

Provide instructions

Write clear and concise instructions on how to complete the questionnaire. Use short sentences and basic vocabulary.

Order the questions carefully

To increase the response rate, you want to make the process of filling in the questionnaire as easy and as enjoyable as possible.

5	Select your stance on the scale below.
	Strongly Disagree Neither Agree Strongly disagree agree nor agree disagree
1 F N	2 3 4 5 6 7 8 9 10
. 1	How much do you agree with the below statemen
3	Select your stance on the scale below.
	Strongly Disagree Neither Agree Strongly disagree agree nor agree disagree
9.	
	Please tick just one.
	Other, (please specify)
10	
	Please tick just one.
	Other, (please specify)
44	
11.	
	Other, (please specify)
	Do you have any comments or suggestions abouthow we could improve this study?
	Thank you





Here are some tips to help you choose the order of your questions:

- Begin with some questions that are easy to answer and interesting. If the first questions you ask are complicated or boring, people may choose not to fill in the rest of the questionnaire
- Use screening questions towards the start of your questionnaire to check that the person filling it in is part of your target population. If they're not, let them know that they don't need to complete the rest of the questionnaire
- Put the most important questions in the first half of the questionnaire so that if someone doesn't complete it, you will still have some useful information
- Provide variety in the type of questions used
- Group the questions into categories this will improve the flow from one question to the next
- Unless you are using them to screen for your target population, put the demographic questions at the end (demographic questions are questions that help you to understand the identity of the respondent, for example, what year level they are in, their age, gender, or family size).



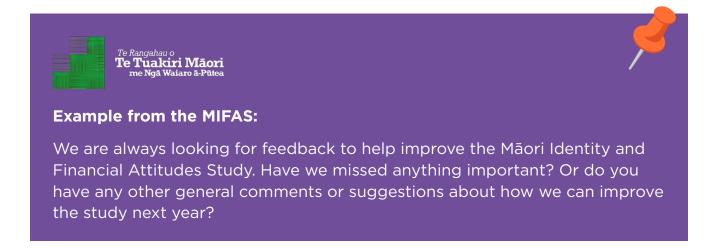
Check your formatting

Take care when formatting your questionnaire. For example, make sure you use spacing well. In the example that follows, a respondent might tick the wrong box:

monthly	weekly	daily

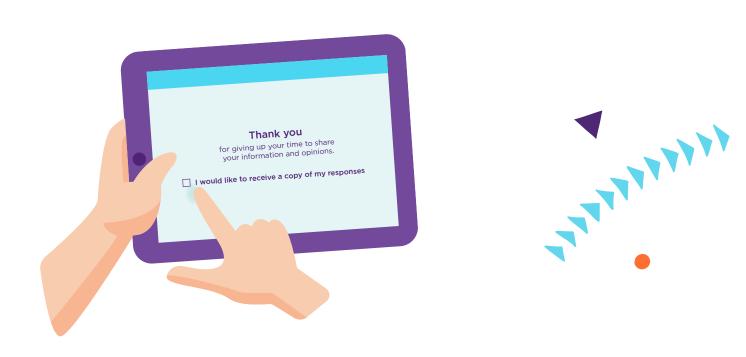
Provide an opportunity for feedback

Asking respondents for feedback on the questionnaire provides an opportunity for them to let you know if they had any difficulties filling it in or whether there is anything else they would like to let you know. This will make you aware of potential gaps or shortcomings in your questionnaire and might open up some future paths of investigation.



Say thanks!

Include a short thank you to your respondents for giving up their time to share their information and opinions with you.





Now it's time to work towards completing **Checkpoint two: First draft.**

To meet the requirements of this checkpoint, you need to:

- provide a draft set of questions
- use different question types
- explain how the questions you have asked to relate to your purpose
- explain why you have chosen particular types of questions.

Complete Topic 6 Activity 1
in the Student Practice Booklet

Before moving on to Topic Seven, check that you understand:			
	Key components to include in your questionnaire		
	How to structure your questionnaire.		





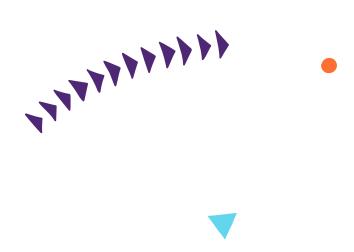
Topic Seven: Doing a desk review

Learning outcome for Topic Seven

✓ Understand the purpose of a desk review through questionnaire design

Success criteria

- I can conduct a desk review of my questionnaire and/or ask someone else to do a desk review
- I can make changes to my questionnaire based on a desk review
- I can explain changes I have made based on the desk review.

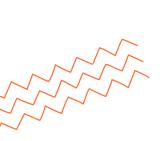


Now that you've created the first draft of your questionnaire, it's time to give it a "desk review".

A desk review involves carefully reading through the draft questionnaire checking for things such as:

- ✓ **Target population** have you screened for your target population?
- ✓ Wording are the questions clear and easy to follow?
- ✓ **Spelling and grammar** are there any spelling or grammar errors? (If this isn't one of your strengths, ask someone to check this for you.)
- ✓ **Format** is the font easy to read? Is the numbering correct?
- ✓ Clarity have you used everyday language?
- ✓ Tone is the language you have used friendly and polite?
- ✓ **Instructions** are there instructions for each set of questions?
- ✓ Categories are similar questions grouped together?
- ✓ **Flow** does the order of questions make sense? Do the questions link together?
- ✓ **Length** are there too many questions?
- ✓ **Purpose** will the questions help to answer your research objectives?

You can do the desk review yourself or you can ask someone else to do it for you. Make sure your reviewers know what the purpose and audience of your questionnaire are.





If you ask another student to review it for you, it's helpful if they know something about questionnaire design so that they can give you in-depth feedback. If you ask a friend to review it, encourage them to be critical and to mention even small things that could be improved.

If you are designing your questionnaire for a specific client, it's useful to ask them for feedback on the draft questionnaire. That way, they can let you know whether it will give them the information they need. Their suggestions can both improve your questionnaire and give them more confidence in the results.

Any time you make changes to your questionnaire, you should do a desk review - it's easy for mistakes to slip in or for instructions to be left out.

Assessment tip: 🧖



Remember that to get a merit grade you need to explain decisions that you make in the design process. This includes explaining changes to questions following the desk review.





Now it's time to work towards completing

Checkpoint three: Desk review and Checkpoint
four: Second draft.

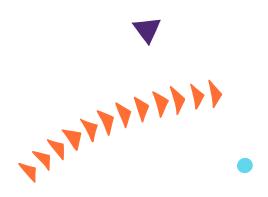
To meet the requirements of this checkpoint, you need to:

- provide evidence of your own desk review
- provide evidence of someone else's review of your questionnaire
- identify what you need to change in your questionnaire based on the desk review
- revise your questionnaire
- explain the changes you have made.

Complete Topic 7 Activity 1
in the Student Practice Booklet

Before moving on to Topic Eight, check that you understand:

What a desk check review involves and why they are important





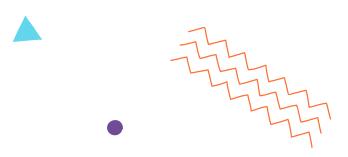
Topic Eight: Doing a pilot survey

Learning outcome for Topic Eight

✓ Understand the purpose of a pilot survey through questionnaire design

Success criteria

- I can conduct a pilot survey of my questionnaire
- I can gather feedback on my questionnaire from pilot survey participants
- I can make changes to my questionnaire based on the pilot survey
- I can explain changes I have made based on the pilot survey.



The next step in the questionnaire design process is to do a pilot survey

- this means giving the questionnaire to a small sample from the target population to see whether it will work in real life. It also involves collecting and processing the data, for example, checking that the results can be analysed.

Doing a trial run will help you to identify any issues with the questionnaire.

Why is it important to use people from the target population in the pilot survey?

Although it's only done on a small scale, a pilot survey should be as similar as possible to the actual survey. This will show you:

- whether people in your target population can accurately complete the questionnaire
- whether the questionnaire will help you to gather information that you can analyse and answers your questions.



Why doing a pilot survey is important

As the questionnaire designer, you know what you want to find out and what your questions mean, but someone who is seeing it for the first time might interpret your questions in ways that you don't expect. Testing your questionnaire on real people is the only way to find out how well people understand what you are asking, and whether the questionnaire will give you the information that you need.



Example from the MIFAS:

We spent about six months researching the content of the survey and drafting it. We also piloted the survey and had it peer reviewed. We also submitted the survey for ethical review and removed several questions that we deemed less important and perhaps somewhat controversial.





Approaches to pilot surveys



Your first step is to organise a small group of people from your target population who are willing to be part of your pilot study. Explain that you are asking them to complete the questionnaire as part of a pilot survey to see whether the questionnaire will help you to achieve your research goals. Encourage them to pay attention to how easy or hard it is to complete the questionnaire and to mark any areas that they think could be improved.

Let them know that they can ask you if any of the questions are unclear. Once the questionnaire has been sent out, this won't be an option, so it's important to find out whether there are any problems through the pilot survey.



It's useful to time the participants to get an idea of how long it takes to complete the questionnaire, but make sure the respondent knows that they can take as much time as they need.

Remember that the focus is on faults in the questionnaire – if your respondent found it hard to follow or complete, they're not the problem!

If possible, have the respondent complete the questionnaire in front of you, taking notes while they do so.





2

If it looks like they are finding a question hard to answer, stop and ask them why – it could be that the wording of the question is unclear or perhaps the answer options are not complete. You should also ask them questions about the process once they have finished filling the questionnaire in.

If the participants have answered, "does not apply" or "don't know", ask them why. You may like to probe a little deeper by asking them what they understand certain words or concepts to mean.

3

If you can't be present while the pilot survey respondents are filling in the questionnaire, you could give them a checklist to complete afterwards that asks them if they had any problems completing the questionnaire and any suggestions for changes (for example, an alternative answer option for a question).

Once you've completed a pilot survey, you can make final changes to your questionnaire. You may need to complete another desk review to check that you haven't introduced any new errors (for example, spelling or numbering mistakes).



Here are some questions that you can use to help you reflect on the findings of your pilot survey. The list of questions is also on page ** of your workbook.

Reflections:

Did people understand what the questions were asking?

Did you get any unexpected answers?

Is the questionnaire measuring what you want it to measure?

Were there many "I don't know" or "Does not apply" responses? If so, does the question need to be changed? Do you need to add some more response options?

Will the information gathered give you what you need for the purpose of the questionnaire?

What was the response rate? If it was low, is there a way to improve this?



Now it's time to work towards completing

Checkpoint five: Pilot survey and Checkpoint six:

Final questionnaire.

To meet the requirements of this checkpoint, you need to:

- conduct a pilot survey using your draft questionnaire
- provide the responses to your pilot survey
- analyse your questionnaire based on the pilot survey responses
- explain what you need to do to refine your questionnaire
- make and explain changes to your questionnaire
- do a desk to make sure the changes haven't introduced any new errors
- provide a final copy of your questionnaire.

Complete Topic 8 Activity 1
in the Student Practice Booklet

Before moving on to Topic Nine, check that you understand:

- What a pilot survey involves and why they are important
- Approaches to doing a pilot survey



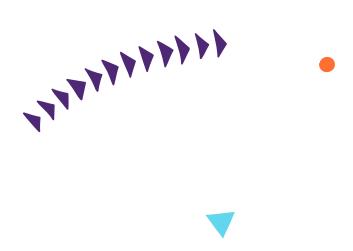
Topic Nine: Reflecting on the process

Learning outcome for Topic Nine:

✓ Understand how to evaluate your questionnaire and the process you used to develop it

Success criteria

- I can evaluate the effectiveness of my final questionnaire in terms of its purpose
- I can evaluate the process I used to develop my questionnaire.









You've nearly completed the questionnaire design process.

Assessment tip:



In real life, the next step would be to select a random sample from your target population, ask them to complete the questionnaire, and then analyse the results to reach a conclusion. However, these steps aren't required for this internal assessment, so your final step is to reflect on your final questionnaire and on the questionnaire design process.



Now it's time to work towards completing Checkpoint seven: Reflecting on your questionnaire design process.

Below are some questions you can use to help you reflect on your questionnaire design process. Read all of the questions then choose at least three to answer in the evaluation section of your report.



Complete Topic 9 Activity 1 in the Student Practice Booklet

Possible reflective questions:

Which aspects of your questionnaire design are likely to reduce nonsampling errors? How would this help the questionnaire to fulfil its purpose?

What are three things you have learned about questionnaire design? What would you do differently next time?

How well does your questionnaire match its purpose? Were there any gaps?

How important was the desk review and/or pilot survey in terms of ensuring that your final questionnaire fulfils its purpose?

How easy would it be to analyse the data your questionnaire would gather? Did you have to make any compromises with the questions you asked in order to make analysis easier?

What other avenues of enquiry related to your research goals could you explore?

What advice would you give to another student doing this assessment standard?

What connections can you make between your research, the purpose of your questionnaire, and its final design?