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Ask the right questions

How to...

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Evidence for Excellence in Education

This *How to guide* provides an introduction to developing a self-completed questionnaire survey. It is intended for senior leaders, teachers and other school staff who are interested in carrying out research using questionnaires.

What is a questionnaire survey?

As discussed in greater depth in 'How to... Run qualitative and quantitative research: From definitions through to analysis' (www.nfer.ac.uk/publications/ RESM03), the terms 'survey' and 'questionnaire' are often used interchangeably. Figure 1 below provides a definition of each.

Figure 1 Definitions

A **questionnaire** is a set of questions that you ask respondents

A **survey** is a systematic way of collecting information from individuals or groups

Surveys can include questionnaires among other methods e.g. face-to-face interviews or observations.



Why do a questionnaire survey?

Questionnaire surveys offer a systematic way of collecting information from individuals and groups. They are the main method used in quantitative research. They provide an efficient way of collecting views and information from a wide range and large number of people about a topic in broad terms. Questionnaire surveys collect hard, factual data that is analysed and presented using numbers (often percentages). They can help ensure researcher bias is kept to a minimum, compared with qualitative methods, and the findings can often be generalised to a specific group (or 'population').

Questionnaire surveys can be useful within schools as they offer a relatively quick and easy way of collecting information from a whole group, such as a class, a year group/s, staff or parents/carers.

Ethical considerations

As with any research, ethics need to be considered throughout the project, from planning to completion. When undertaking research within your own school, staff should perhaps be even more mindful of ethics to ensure that the research:

- will not cause harm or distress to any participants
- abides by legal frameworks.

Notes

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'How to' Guides

Further information about ethics and data security can be found on the 'Research in Schools' web pages (www.nfer.ac.uk/schools/research-in-schools/ethicsand-data-security.cfm).

Some important ethical considerations for undertaking questionnaire surveys within schools, are outlined below.

- Check whether your school has a research governance or ethics policy. If so, you must follow it.
- Ensure you get senior leader support for your questionnaire survey before commencing your research. This may mean that they want to review the questionnaire before administration.
- Ensure that questionnaire surveys are the most appropriate method for your research topic. For example, it may be more appropriate to ask about highly sensitive topics¹ through face-to-face interviewing rather than using a questionnaire survey.
- You must comply with legal frameworks, such as the Data Protection Act (1998) which states that all participants must be informed of the purpose of the research and what will be done with the data, e.g. how it will be stored, how it will be reported on and when it will be deleted.
- All potential participants must give consent to be involved in the research. This can be active (opt-in) or passive (opt-out) consent.

- All participants have the right to withdraw from the survey at *any time*, even where proxy consent has been given by a parent/carer, teacher or headteacher or where they start the survey but choose not to complete it.
- Have a plan for dealing with potential disclosures made during the survey. You will need to be familiar with your school's disclosure and child protection policies (including who the designated staff member is).
- Ensure you have a plan and the resource to collect, collate and store your survey data securely; you must store all data securely by password protecting electronic files or locking away paper-based data.

Questionnaire surveys do not usually ask for the name of the participant in order to make it anonymous. In general it is only advisable to ask for a participant to provide their name if you need to be able to track their responses later or match it to other data, but you need to be aware that this could affect how they fill in the questions. A participant might not answer in the same way as if they knew their responses would be anonymous. If you ask participants to give their name you need to explain to them why you are asking for their name and whether their answers will be anonymised before the data is analysed and reported.

Carrying out research within your own environment creates increased potential for participants to be identifiable, even if you do not ask for their names. Depending on how you analyse the data and split the data into subgroups, you may end up with very few respondents in each group therefore increasing their chances of being identifiable. Ensure you consider these issues when designing your survey questionnaire.

> When exploring sensitive topics through a survey, or other methods, it is good practice to provide details of a suitable helpline website for further support (e.g. Childline).

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Steps to developing a questionnaire survey

There are several steps to developing a questionnaire survey. By this time you should already have decided on your sample² (intended group of respondents).

Step 1 How will you administer your survey?

Questionnaires can be paper-based; online; telephone or face to face (as discussed in the 'How to... run qualitative and quantitative research guide' www.nfer.ac.uk/publications/RESM03). This guide focuses on paper-based and online surveys – the two most common ways of administering a survey. These usually enable participants to complete the survey at their convenience, unless time has been set aside within the school day to ask learners or staff to complete the survey, for example.

There are a number of advantages and disadvantages to paper-based and online surveys. A number of online survey software options are available, these include NFER's own School Surveys (www.nfer.ac.uk/pps) and Survey Monkey among others. Some advantages and disadvantages of paper-based or online surveys are outlined in Figure 2 opposite.

Figure 2 Advantages and disadvantages of paper or online surveys

| Paper based survey | Online survey | |
|--|--|--|
| Advantages May be better for some participant groups (e.g. parents/carers of young learners) Does not require internet access. | Advantages Low administration costs Automated data collection Offers time savings | |
| Disadvantages Postage costs Takes time to administer and get questionnaires returned Data collection costs | Disadvantages Requires participant to have internet access Researcher may need email address for participant | |

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See 'How to... Run qualitative and quantitative research' guide www.nfer.ac.uk/publications/ RESM03 for further information on sampling.

Step 2 Plan the content

You need to consider what you need to know to answer your overall research question. For example, your research question may be:

How can we more effectively engage learners in the school council?

You will need to break your survey into several key sections, areas or 'themes'. These themes are likely to form the basis for your analysis. Once you have agreed your themes, you need to develop questions for each section to ensure you are exploring all the key issues or topics you want to investigate. For example, your themes (or research objectives) may include:

- learner current involvement in school council
- learner views on effectiveness of current practice
- how can learner engagement in the school council be improved
- learner desire to be more involved in school council activities.

When planning the content, you will need to consider what questions you need to ask to support your analysis. For example, do you need to know the year group or gender of learners? If you have this information already and can match individual questionnaire responses to this contextual information, you do not need to ask it. Only ask for information you need to know and will use in your analysis. Once you have planned the overall content, you can start your question development.

Step 3 Developing your questions

Questions are generally categorised into two groups – open questions or closed questions. A closed question provides the respondent with a choice of response options which have been pre-determined by the research. It is good practice to have a maximum of seven response options for a closed question. If you have a long list, you may need to consider asking more than one question. See Appendix A for a list of response option examples.

An open question provides respondents with the opportunity to answer the question in any way they want, using their own words. Choosing open or closed questions will determine the analysis you can do. Closed questions are quicker to analyse than open questions because open questions need to be coded. Coding is a way of applying themes and sub-themes to the data so you can organise and compare different bits of data (see 'How to...Run qualitative and quantitative research' guide www.nfer.ac.uk/publications/RESM03 for further information on coding).

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When developing your questions, consider if you need to develop these from scratch or if you have baseline data (i.e. data you have already collected and wish to collect again in order to compare progress across years) that you need to ask about again in order to measure change, for example.

When developing new questions, it is a good idea to get your draft questions written first. You will need to revisit these to refine them later. Looking at your list of draft questions, consider the following:

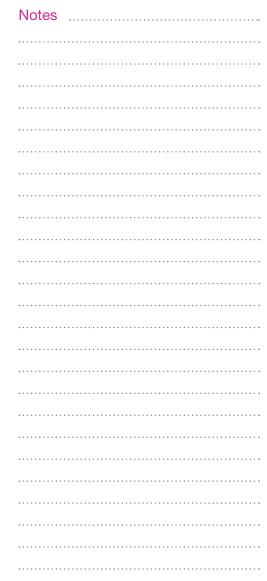
- Do they answer your overall research question and research objective/s?
- Is each question essential to ask?

- How can each question be refined or improved?
- Will the question enable you to do the analysis you have planned?

There are several types of closed questions, each of which is discussed in further detail below. The main question types are:

- single response
- series of single response
- multiple response
- quantity response
- ranges.





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Single response questions

Single responses offer a restricted number of pre-determined responses. The respondent selects **one response option only**. For example:

| Are you: | | | |
|---------------|----------|--|--|
| (Please selec | t one) | | |
| A boy | A girl 🗌 | | |

Commonly used single response questions form a **list** or a **scale**. A list comprises a range of options which do not necessarily have a direct relationship to each other, whereas a scale provides responses on a continuum.

Example of a list

| Which lesson do you enjoy the most? (Please select one) | | |
|--|---|--|
| Maths | | |
| English | | |
| Science | | |
| PE | | |
| Other | | |
| Please specify | / | |

You may not want to list all possible response options or have the space to do so. It may be better to list the most common or relevant responses or only those you are interested in. You can include an 'other' response option which allows respondents to give their own answer instead (see example). Bear in mind that 'other' response options will need to be coded which will have an impact on your time and budget but they may provide you with more useful data.

Example of a scale

| To what extent do you enjoy maths? (Please select one) | | |
|---|--|--|
| A great deal | | |
| A fair amount | | |
| A little | | |
| Not very much | | |
| Not at all | | |
| When developing a scale question, ensure there is a balance between positive and negative responses. You also need to consider whether to provide a neutral | | |

response option in the middle.

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It is not always necessary to provide a neutral option; in fact you may want to 'force' respondents to provide an answer one way or the other by omitting a neutral response option. This will depend on your question and whether respondents may get frustrated if there is not a response option that fits the answer they want to give (and therefore they may not complete the question or questionnaire at all).

It is also possible to include a 'not sure' or 'don't know' response option. It is best practice to only do this for factual questions (i.e. where the respondent genuinely does not know the answer to the question).

How would you rate the quality of the school's library?

(Please select one)



A series of single response questions

A series of single responses is a **list of questions each with one response**. These can be a list and/or a scale. For example:

How would you rate the quality of the school's: (please select one box on each row)

| | Very poor | Poor | Fair | Good | Very good | Not sure |
|----------|-----------|------|------|------|-----------|----------|
| Library | | | | | | |
| IT suite | | | | | | |
| Canteen | | | | | | |

These types of questions often allow you to collect more detailed data and are often used for collecting information on attitudes (i.e. opinions on a topic).



Multiple response questions

Multiple response questions can be used where **more than one response** can be given. For example:

| How do you usually get to and from school? (Please select all that apply) | | |
|--|--|--|
| Walk | | |
| Bike | | |
| Bus | | |
| Car or taxi | | |

A multiple response question is useful for exploring what activities a respondent undertakes (e.g. what sports do learners like to participate in?); whether they are aware of different things (e.g. do learners know where to access pastoral support?) or would like to give their preference on something (e.g. how parents would like to receive information from school).

Quantity response questions

Quantity questions are useful for knowing **how much** o how many times something occurs. For example,

| How old are you? | (Please | enter | your | age |
|-------------------|---------|-------|------|-----|
| in the box below) | | | | |

or

How many pieces of fruit or vegetables do you eat each day? (Please enter a number in the box below)

or

How much pocket money do you get each week? (Please enter the amount in the box below)

These types of questions can be problematic as respondents do not always follow the instructions. It may therefore be preferable to provide a range of responses (see below). This also makes analysis easier as data does not need to be coded or inputted into a computer system ready for collation.

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Range questions

Range questions can be used if you want respondents to indicate which **category** they are part of. This could be age ranges, year groups or length of service, for example. When using this type of question make sure none of the categories overlap.

| Please select your age bracket? (Please select one only) | |
|---|--|
| 18 to 23 | |
| 24 to 30 | |
| 31 to 40 | |
| 41 to 50 | |
| Over 50 | |



Open questions

Open questions ask respondents to **write their own answer** to your question. As mentioned above, open ended responses need to be coded which can impact on the time and resource allocated to your research. An example of an open ended question is:

What do you enjoy most about school? (Please write your answer in the box below)

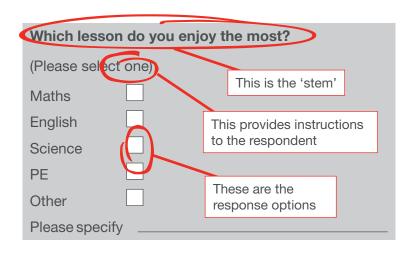
Open ended questions can be as 'open' or structured as you like. They can provide some useful insights into new areas or provide further context. It is not possible to generalise from an open ended question because they are spontaneous and unprompted, unlike closed questions, and you will also get a more diverse range of responses. Many respondents like open ended guestions as it gives them the chance to have their say. Others however find them off-putting because writing or typing a response is not as quick to complete as ticking boxes. To help overcome this, you can focus your open ended question by asking respondents to write their 'single most important' issue or the 'three things they enjoy the most', for example. This may help prevent very long answers and may be something you need to bear in mind if your survey software has a word or character limit.

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Components of a question

There are a number of components to a question. It can be useful to know the technical terms for the different elements. Figure 3 below outlines the different elements.

Figure 3 Components of a question



Language

When developing questions, you need to ensure your intended respondents will be able to understand your questions. The types of questions you would ask for a Year 11 learner is very different from the way you would ask a question on the same topic for a Year 5 learner. You may also want to consider using images for response options for younger children, for example providing the option of a smiling face or a frowning face as well as, or instead of words. There are some key things to consider, as presented in figure 4 below.

Figure 4 Language considerations

- Be clear and unambiguous.
 Is a word/s open to interpretation?
 Is the language age appropriate? Will the learner be able to read and comprehend the question?
 Is the language appropriate for respondents with low-literacy levels or English as an additional language?
 Avoid technical language or jargon.
- 6 Do not use acronyms. Make sure they are presented in full, even where they may seem obvious.

Other considerations

When developing a questionnaire there are things to consider, which include:

- Make sure you only ask one question at a time •
 - _ For example, 'Do you like the food and drink served in the canteen?' It would be best to ask about food in one question and drink in another.
- Do not ask leading guestions
 - For example, 'The school has recently started to _ email parents about their children's progress because it is cheaper than sending out letters. Which do you prefer?'

| Letters | L |
|---------------|---|
| Email | |
| No preference | |

It would be best to ask parents how they would like to receive feedback on their child's progress. For example:

How do you prefer to receive feedback on your child's progress?

| Letters | |
|------------------------|--|
| Email | |
| Text messages | |
| Meeting with a teacher | |
| No preference | |

| Do | o not use double negatives |
|----|--|
| _ | For example, 'Do you think the school should not |
| | open on a Saturday?' |

| Agree | |
|----------|--|
| Disagroo | |

Disagree

It is not clear if the respondent is agreeing or disagreeing with the statement or whether the school should open on a Saturday.

Instead, you could ask:

Do you think the school should open on a Saturday?

| Yes | |
|----------|--|
| No | |
| Not sure | |

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- Do not make assumptions about respondents' attitudes or behaviours
 - For example, 'How many times have you exercised this week?'

| Once or twice | |
|-------------------|--|
| Three days | |
| Four days or more | |

Instead you could ask:

How many times have you exercised this week?

| Not at all | |
|-------------------|--|
| Once or twice | |
| Three days | |
| Four days or more | |

or,

Have you exercised this week?

| Yes | |
|-----|--|
| No | |

If yes, how many times?

Once or twice

Three days

Four days or more

Step 4 Structure of your questionnaire

The structure of your questionnaire is incredibly important. It needs to have a logical structure and flow from the participants' perspective. Using sub-headings and splitting your survey into sections can help create a coherent questionnaire. It is best to start with easier to answer (or broad) questions and then move to the more detailed questions.

You need to provide useful and clear instructions to your respondents. As noted above, you need to provide instructions for each question but also between questions. For example, does the respondent need to answer all questions, or only some:

Within the past week have you eaten in the school canteen? (Please select one box)

Yes No

If yes, please go to question 2. If no, please go to question 5.

This is known as '**routing**'. If you develop an online survey, you generally do not need to provide instructions for routing as you set this up when designing your survey in the software. This ensures only relevant questions are displayed to each respondent. This is not possible with paper-based surveys, where clear instructions are essential.

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You need to ensure your questionnaire does not take too long to complete. **Timing** is very important if you want to get a good response rate (i.e. enough people completing and returning your questionnaire). It is good practice to develop a questionnaire that does not look too long and therefore off-putting. Even if you have very few questions, it may take some learners a long time to read the questions and provide an answer (especially if they are young). Ensuring your questionnaire can be carried out within a single lesson period is a good rule of thumb to follow. With parents/carers, older learners and staff, develop a questionnaire that takes a maximum of 20 – 30 minutes to complete.

Testing (or 'piloting') your questionnaire with people who are similar to your intended respondents can help you to refine and develop your questionnaire. Taking the example question about the school council above, you could ask school council members to test the questionnaire for you. It will enable you to check whether the questions make sense; that they are interpreted as intended; that you have not missed any obvious response options; that the questionnaire has a good structure and flow and does not take too long to complete.

For further information about involving young people in research, see NFER's Developing young researcher website (www.nfer.ac.uk/schools/developing-youngresearchers). For more ideas on topics to research, visit www.nfer.ac.uk/ris

Sharing your research

It is good practice with any research to share your findings with your participants and stakeholders. It should be relatively easy to provide feedback to survey respondents within the school community, but ensure you do not inadvertently identify any individuals in your reporting. When presenting your survey findings, it is a good idea to state how the research will inform future planning or make a difference within the school. This will help encourage participants to engage in future surveys or research because they can see how their views have contributed to school developments or decisions.

Research ideas

The list of topics to explore in a questionnaire survey is endless. Here are some possible research questions³:

- Is bullying a problem within this school?
- What are learners' views on their GCSE option choices?
- How can the sixth form common room better meet learner's needs?
- How do parents/carers like to receive information from school?
- What, if anything, are staff's training needs?
- In what ways can governors get more involved in day-to-day school life?

Other useful resources

We hope that this short quide to developing a questionnaire survey has whetted your appetite for carrying out your own research. NFER has published a series of 'How to' guides for practitioners who want to carry out their own research, helping you put your ideas into practice. NFER have research books and training days available as well as free guidance on topics to research and methods of research. Why not get recognition for your achievements in research in your school, college or early years setting by applying for the NFER **Research Mark? Visit** www.nfer.ac.uk/ris for more information.

For more ideas on topics to research, visit www.nfer.ac.uk/ris

Appendix A: Different types of response options

A list of possible response options are presented below. Five, four and three point scales are presented, along with dichotomous responses (i.e. two opposing response options). This is not an exhaustive list. You must ensure your response options are fit for purpose and relate to your question stem.

Five point scale examples

| Strongly agree | Agree | Neither agree or disagree | Disagree | Strongly disagree |
|--------------------|------------------|------------------------------------|--------------------|----------------------|
| Always | Very often | Sometimes | Rarely | Never |
| Very important | Quite important | Fairly important | Slightly important | Not at all important |
| Very good | Good | Fair | Poor | Very poor |
| Excellent | Above average | Average | Below average | Extremely poor |
| Definitely | Probably | Possibly | Probably not | Definitely not |
| Much more | More | About the same | Less | A lot less |
| Much better | Somewhat better | Stayed the same | Somewhat worse | Much worse |
| Very satisfied | Satisfied | Neither satisfied nor dissatisfied | Dissatisfied | Very dissatisfied |
| Very often | Regularly | Sometimes | Rarely | Never |
| Very useful | Quite useful | Somewhat useful | Not very useful | Not at all useful |
| A great deal | A fair amount | A little | Not very much | Not at all |
| Very difficult | Difficult | Mixed views | Easy | Very easy |
| Very confident | Fairly confident | Mixed views | Not very confident | Not at all confident |
| Very well informed | Well informed | Mixed views | Not well informed | Not at all informed |

Four point scale examples

| Most of the time | Some of the time | Hardly ever | Seldom |
|----------------------------|------------------------------|--|---------------------------|
| Strongly agree | Agree | Disagree | Strongly disagree |
| Definitely | Probably | Probably not | Definitely not |
| Very clear | Quite clear | Not very clear | Very unclear |
| Exceeded expectations | Met expectations | Nearly met expectations | Did not meet expectations |
| Definitely will | Probably will | Probably will not | Definitely will not |
| Most days (5 days or more) | Some days (less than 5 days) | Not very often (less than once a week) | Never |
| Very important | Quite important | Not very important | Not at all important |
| Most of the time | Some of the time | Not very often | Never |

Three point scale examples

| More | About right | Less |
|----------------|----------------------------|----------------------|
| Too much | About right | Too little |
| Too strict | About right | Not strict enough |
| Extremely | Moderately | Not at all |
| Agree | Neither agree not disagree | Disagree |
| Often | Sometimes | Never |
| Good | Fair | Poor |
| Very important | Quite important | Not at all important |
| Yes | Not sure/Don't know | No |
| | | |

Dichotomous scales

| Yes | No |
|-------|----------|
| True | False |
| Fair | Unfair |
| Agree | Disagree |



The NFER 'How to' guides are a quick and easy way to digest different aspects of research.

Written by NFER researchers, these guides will help practitioners run research projects in education. From definitions and benefits, through to potential pitfalls, they will ensure the research is based on professional guidance.



© 2014 National Foundation for Educational Research

ISBN 978-1-910008-03-4

How to cite this publication: National Foundation for Educational Research (2014). *How to... Develop a questionnaire survey: Ask the right questions* (How to Guides). Slough: NFER.

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