Surveys are one of the most efficient ways to collect large amounts of quantitative and text-based data, and they are the primary method used to collect student feedback. This guide summarizes the most common types of survey questions, as well as best practices related to their creation and use.

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Likert-Scaled Questions

A Likert-scaled question is one in which the answer options follow a scale or continuum with anchor points at each end.

Benefit: These questions allow us to measure both positive and negative responses, as well as their intensity.

Data Type: Likert-scale data is quantitative interval data, and we can perform arithmetic functions on it.

Number of Response Options:
- In general, a Likert-scaled question should have between 3 and 11 answer options.
- Unless your project requires respondents to choose a positive or negative side, use an odd-numbered scale with a middle neutral answer option.
- Only use an even-numbered scale that excludes a neutral option in cases where you are confident that every respondent can have a positive or negative opinion.
- A 5-point scale is the most popular choice, as it includes adequate direction and intensity of responses along with a neutral midpoint.
- If using a scale with 7 or more answer options, consider only defining the anchors and midpoint, and leave the interpretation of the other answer options up to the respondent.

Other Types of Answer Options:
- Neutral: include if some respondents may not have a positive or negative opinion.
- Not Applicable: include if some questions do not apply to all respondents.
- Don't Know: include if some respondents have yet to form an opinion on the topic.
- Prefer Not to Answer: include if the question topic is sensitive.

Types of Scales:
- Bipolar: answer options range from the most negative response to the most positive response, with a zero or neutral response in the middle.
  - Agreement scale (how strongly you agree or disagree with something)
  - Quality scale (rate the quality of something)
  - Satisfaction scale (how satisfied you are with something)
- Unipolar: answer options range from the zero or "no" point and move positive.
  - Degree/Extent scale (to what degree/to what extent do you…)

     ○ Importance scale (how important something is to you)

     ○ Likelihood scale (how likely you are to do something)

Best Practices:

- Keep the size and direction of the scale consistent throughout the survey.
- Do not compare results from questions whose scales are different sizes, as the comparison will not be meaningful.
- It is highly recommended to organize your scale negative-to-positive, with the least desirable response on the left and the most desirable response on the right.
- For reverse-scaled questions (where the least & most desirable responses are on the opposite end compared to the other questions), reword or recode the question to mirror the same scale as the others, or separate it from the others.
- Some questions will not have an obvious desirable or undesirable answer - in these cases, use a negative-to-positive scale and leave its interpretation up to the respondent.

Categorical Questions (Single-Select)

Categorical questions ask the respondent to choose a single answer option that best fits them or their situation.

Benefit: Categorical questions are very useful for collecting demographic information, or other data that falls into categories.

Data Type: Although categorical data is typically coded numerically, it is qualitative data and can be nominal or ordinal. We cannot perform arithmetic functions on this data.

Best Practices:

- Some variables are naturally categorical, while other variables' categories are constructed from a numeric metric to make them easier to answer and analyze.
- In general, create answer options such that no more 20-25% of the survey population fits into a single category to make grouping analyses worthwhile.
- Never overlap answer options.
- Answer options must be exhaustive. If you are unsure that you have included all possible answer options, include an "Other" option with a text box for respondents to fill in their own answer.
- If the list of answers options is particularly long, organize it in a logical manner or split the question into two or more questions.

Multiple Response Questions (Select Many)

Multiple response questions allow the respondent to select more than one answer option.

Benefit: Multiple response questions allow the respondent to choose all the answers that are applicable to them –they are essentially saying "Yes" or "No" to each answer option.

Drawback: These questions do not measure the intensity of responses, and non-response bias makes it impossible for us to know if a respondent has truly said "No" to every answer option or just skipped the question.

Data Type: Multiple response data is numerically coded qualitative data, and we cannot perform arithmetic functions on it. The only analysis we can do on this data is count the number of responses for each answer option and use that information to disaggregate other data.

Best Practices:
- It is best to limit use of multiple response questions and instead change them to categorical or Likert-scaled questions whenever possible to avoid these drawbacks.
- If the intensity of the answers does not matter to your project, use a categorical question that asks respondents to choose their predominant selection, or use a multiple response question.
- If intensity of the answers does matter, use a Likert-scaled question for each answer option.

Ranking Questions

Ranking questions ask the respondent to put a list of items in order.

Benefit: Ranking questions allow us to see the order in which respondents would put the items.

Drawback: These questions do not measure the intensity of a respondent's preferences, and they can be tricky to write and understand, especially if the list of answer options is long.

Data Type: Ranking data is qualitative data, and thus we cannot perform arithmetic functions on it. It can be nominal or ordinal depending on the nature of the question.

Best Practices:
- It is best to use ranking questions when the intensity of the answers does not matter to your project, and you are only interested in a rank.
- In cases where the intensity of the answers does matter, it is best to use a Likert-scaled question for each item in the list.

Numeric Questions

Ranking questions ask the respondent to answer with a number.

Benefit: Numeric questions offer a high level of precision in their answers.

Drawback: These questions are challenging because respondents are required to re-answer the question if they submit an answer that does not fit within the given constraints for responses.

Data Type: Numeric data is quantitative ratio data, and we can perform arithmetic functions on it. However, this type of data cannot be used in grouping analysis.

Best Practices:
- When using numeric questions, you should include data checks and constraints such as a minimum or maximum value that can be entered.
- If you do not need the precision of numeric data, consider changing to a categorical question so it is easier for respondents to answer, and the data can be used in grouping analysis.

Open-Ended Text Questions

Open-ended text questions allow the respondent to answer the question in their own words.

Benefit: Responses to these questions can help explain respondents' answers to other questions.

Drawback: Text responses are often very difficult and time-consuming to analyze.

Data Type: Text data is qualitative data, and we cannot perform arithmetic functions on it.

Best Practices:
- It is best to limit the use of these questions, as answering them is time-consuming for respondents.
- If using this question type, make sure your questions are specific and direct.
- Whenever possible, consider reframing the question as a categorical one that lists the most common answer options and includes an "Other" option with a text box for further explanation.
- It is good practice to include one open-ended question in every survey to allow the respondent to speak their mind or voice a complaint: "Is there anything else we need to know?"