

SURVEY RESEARCH AS METHOD OF DATA COLLECTION, NOT A RESEARCH DESIGN: IMPLICATIONS FOR EDUCATIONAL RESEARCH

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Abstract

The methodological status of survey research has generated considerable debate in educational and social science research. While many researchers and textbooks classify survey research as a research design, others argue that it is fundamentally a method of data collection that can be integrated into various research designs. This position paper argues that survey research should be viewed primarily as a method of data collection rather than a research design. A research design provides the overall blueprint that guides a study from the formulation of research questions to data analysis and interpretation, whereas survey research merely specifies a systematic approach for obtaining data from a defined population or sample. Drawing upon methodological literature, conceptual analysis, and relevant theoretical perspectives, the paper demonstrates that surveys can be employed within descriptive, correlational, explanatory, experimental, quasi-experimental, mixed methods, and evaluation research designs. Hence, treating survey research as an independent research design creates conceptual ambiguity and methodological inconsistencies. Therefore, the hallmarks of survey methodology are to gather data. The paper concludes that survey research should be regarded as a versatile data collection method that complements, rather than replaces, research designs. This position contributes to methodological clarity, enhances research quality, and promotes consistency in research methodology teaching and practice, particularly within educational research.

Keywords: Survey research, research design, data collection methods, methodology, educational research, social science research

Introduction

Methodology constitutes the foundation upon which scientific inquiry is built. The validity, reliability, and credibility of research findings depend largely on the appropriateness of the methodological decisions adopted by researchers. Among the recurring methodological debates in educational and social science research is whether survey research should be regarded as a research design or merely a method of data collection. Dillman et al (2024) noted that the distinction appears subtle but has significant implications for research planning, implementation, interpretation, and methodological instruction.

Numerous textbooks such as Creswell and Creswell (2023) and Check and Schutt (2012) describe survey research as a descriptive research design because surveys are frequently employed to describe characteristics, attitudes, behaviours, and opinions of populations. Conversely, several methodologists contend that surveys simply represent procedures for collecting standardized information from respondents through questionnaires or structured interviews and, therefore, should not be elevated to the status of an independent research design (Babbie, 2020)

A research design serves as the comprehensive framework that specifies how evidence will be collected, analyzed, and interpreted to answer research questions (Sunday & Etuk, 2024). Survey procedures, on the other hand, merely provide one avenue for obtaining empirical evidence. Researchers conducting experimental, correlational, longitudinal, evaluation, or mixed-methods studies frequently employ questionnaires and interviews, hallmarks of survey methodology are to gather data. This demonstrates that surveys transcend individual research designs (Sunday, Obambon & Beshel, 2025).

Therefore, survey research refers to a particular type of research design where the primary method of data collection is by survey. In this study design, surveys are used as a tool by researchers to gain a greater understanding about individual or group perspectives relative to a particular concept or topic of interest. According to Ndiyo (2016), a survey is a scientific experiment conducted on a large on a defined population to determine some desirable characteristics of a designated population. According to Sunday (2025), a survey could be undertaken for explanation, description or discoveries and interpretation of some phenomena in the population. This is a partial coverage of the population under investigation. By taking sample, we are able to say, with a high probability of not being in error what the characteristics of the population are provided certain rules are observed, such as;

- a) The sample is of reasonable size. In general, the larger the sample, the more we can rely on our results as being a true cross section of the population.
- b) Sample is taken at random

Survey research can be undertaken for a variety of reasons, but a common theme with surveys is that they are an easily accessible way for respondents to share or demonstrate their knowledge or perspectives about a particular topic. This kind of approach according to Sunday, Obambon and Udemba (2023) in turn can allow for researchers to gain a better understanding about different populations or groups of people, help identify any problems or concerns respondents have, and/or lead to the identification or development of solutions based on identified issues. Surveys are also a good way to gauge general trends or perspectives about a topic within a particular population before conducting more in-depth research.

This paper argues that survey research should be conceptualized as a data collection method rather than a research design. The paper presents conceptual clarifications, theoretical justifications, empirical illustrations, and methodological implications supporting this position.

CONCEPTUAL REVIEW

Concept of Survey research

Survey research refers to the systematic use of survey techniques for gathering quantitative or qualitative information from a representative population or sample. According to Creswell and Creswell (2023), survey research involves collecting quantitative or qualitative data using questionnaires or interviews to generalize findings from a sample to a population. However, the defining characteristic of survey research is not the overall research structure but rather the mechanism through which information is obtained from respondents (Fowler, 2014; Babbie, 2020; Sunday, 2025)

Concept of research design

Research design refers to the overall strategy or blueprint that integrates the components of a study into a coherent plan for answering research questions while minimizing bias. Kerlinger and Lee (2000) define research design as the plan, structure, and strategy of investigation conceived to obtain answers to research questions and control variance. Saunders, Lewis, and Thornhill (2023) as well as Sunday and Neji (2025) in an explanation of dichotomise variables described research design as the logical framework that specifies how research objectives will be achieved through appropriate methodological procedures. Research designs include:

1. Experimental design
2. Quasi-experimental design
3. Descriptive design
4. Correlational design
5. Longitudinal design
6. Cross-sectional design
7. Case study
8. Phenomenology
9. Grounded theory
10. Mixed methods design
11. Evaluation design

Concept of data collection method

Data collection methods are systematic procedures used for obtaining empirical evidence required to answer research questions. Examples include:

- a) Questionnaires
- b) Interviews
- c) Observations
- d) Focus group discussions
- e) Document analysis
- f) Tests and measurements
- g) Surveys
- h) Digital data extraction

Unlike research designs, data collection methods do not specify the logical arrangement of variables or the analytical strategy (Dillman, Smyth & Christian, 2024).

Survey research methods

Survey research designs can be broadly classified as being either quantitative or qualitative. A quantitative survey design is typically administered during large-scale research and primarily relies on using closed questions to obtain information that can be analysed relatively quickly, such as multiple-choice or dichotomous response answers (Sax, 2006; Sunday et al, 2023; Obambon et al, 2026). The data obtained in a quantitative survey is numerical in nature and is usually analysed using statistics. Quantitative designs and data allow for researchers to obtain a general snapshot of trends in your population of interest.

In contrast, a qualitative survey design is typically administered during smaller-scale research. Qualitative surveys tend to rely on open-ended questions in an interview format to provide participants with the opportunity to explain or elaborate on answers or concepts which are more difficult to quantify, such as attitudes or thoughts. Data collected in qualitative contexts is analysed and reported in the language of the respondents, such as in quote format. Qualitative designs and data allow for more in-depth analyses of motivations underlying responses (Anyanwu, 1994).

Under the quantitative and qualitative umbrellas, several designs and methods can be applied to survey research. However, an important factor that needs to be considered when choosing the design and associated method for your survey is time. You will firstly need to consider over what time frame you wish to conduct your survey. A longitudinal survey study involves examining survey responses over a certain timeframe to investigate whether there is any change in your variables of interest. In such a design, your survey needs to be administered at least twice – once at the start and at the end of the timeframe. You may also opt to administer it in the middle of the timeframe as well. In contrast, a cross-sectional survey study involves assessing survey responses at a specific point in time to ascertain what is relevant/topical at that point. In a cross-sectional survey study, the survey is administered only once.

Obikeze (2006), stated that within longitudinal and cross-sectional designs, several methods of survey administration can be used. However, time is important here as well, because some methods are easier and faster to administer than others; particularly when also combined with longitudinal or cross-sectional designs. Electronic methods, such as online questionnaires, are becoming increasingly popular methods of survey administration because they are easily accessible by a larger number of people, and are generally quicker to administer because the participant completes it on their own. Phone or face-to-face interviews can also be quick to administer depending on how many questions you have; however, these have a tendency to take longer because they involve a second person (the researcher), and also take more time to analyse because you will need to

transcribe all answers before analysis. Surveys are primary research tools that provide data as part of your overall research strategies. Survey research is critical to getting the answers you need to make informed decisions about everything from product development to marketing campaigns. Understanding more about survey research will help you create effective surveys that yield valuable primary research data.

Why survey research is better viewed as a data collection method

Several methodological arguments support the position that survey research is fundamentally a data collection method.

1. Survey does not determine research logic

Research design determines how variables relate and how evidence answers research questions.

Surveys merely obtain respondents' information.

2. Surveys can be used across multiple research designs

Researchers use questionnaires in:

- Experimental studies
- Correlational studies
- Evaluation research
- Longitudinal studies
- Mixed-methods research
- Cross-sectional investigations

Thus, surveys are not exclusive to one research design.

3. Survey is comparable to other data collection methods

Methodologically, surveys function similarly to:

- a. Observation
- b. Interview

- c. Focus groups
- d. Tests
- e. Documentary analysis

Each serves as a means of obtaining information.

4. Research designs exist without surveys

Numerous studies rely solely on:

- i. Laboratory experiments
- ii. Clinical observations
- iii. Secondary datasets
- iv. Ethnographic observations

These remain valid research designs despite the absence of surveys.

5. Surveys do not specify data analysis

Research designs determine whether researchers employ:

- ✓ Regression
- ✓ Structural Equation Modeling
- ✓ ANOVA
- ✓ Thematic analysis
- ✓ Content analysis

Survey procedures do not prescribe analytical techniques.

Theoretical Perspectives

1. Positivist Theory

Positivism maintains that knowledge should be derived from objective observation and measurable evidence. Surveys operationalize positivist assumptions by collecting standardized empirical information from respondents. However, positivism concerns epistemological assumptions rather than research design itself.

Thus, surveys become tools through which positivist inquiry gathers measurable data.

2. Measurement Theory

Measurement Theory emphasizes the accurate quantification of latent constructs through valid and reliable instruments.

Questionnaires—the principal survey instrument—are designed according to measurement principles involving reliability, validity, scaling, and psychometric quality.

This theory supports the notion that surveys primarily facilitate measurement rather than define research design.

Steps to conduct a survey

Conducting a survey and collecting data is relatively straightforward, but it does require some careful planning and design to ensure it results in reliable data.

Step 1: Identify your research goals.

Step 2: Define your target audience.

Step 3: Come up with preliminary questions.

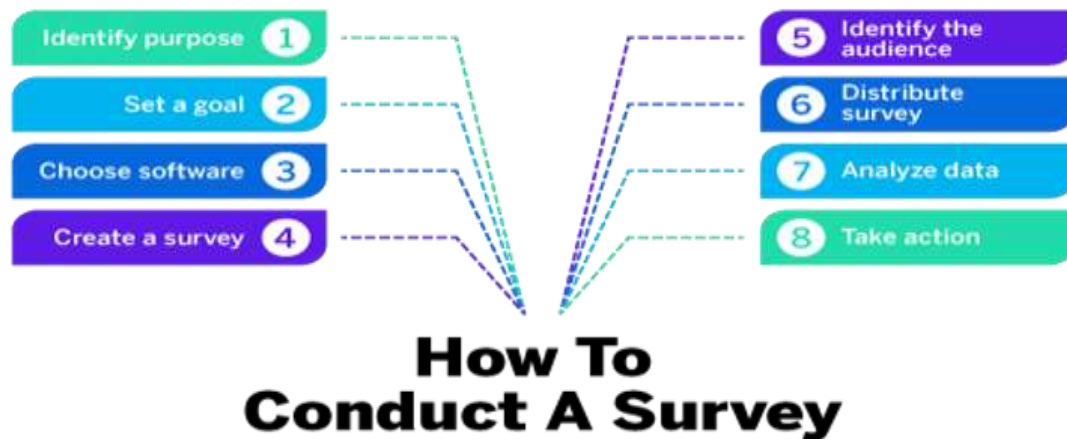
Step 4: Design your questionnaire.

Step 5: Distribute your survey.

Step 6: Organize survey responses.

Step 7: Analyze and present survey results.

Step 8: Take action.



Step 1: Identify your research goal

Every successful survey has a purpose. You'll need to identify yours to get started. This will serve as the basis of the entire survey campaign. In order to identify your research goal, you'll need to consider the insights your business needs most. Consider the following questions to ask yourself and your team:

1. Do you need to steer an advertising campaign?
2. Do you need to form a marketing strategy?
3. Are you trying to find out why you are losing customers?
4. Do you want to know if your policies are effective?
5. Are you figuring out what to do in the current market?
6. Do you need to discover your own employees' sentiment about your workplace?
7. Would you like to cut back your customer attrition rate?

The kinds of questions you need to ask yourself and your company's different departments are limitless. It is suggested that forming a survey that relates to your most pressing needs, or setting up a proactive survey study, that is, a survey campaign designed before you go through with something, such as designing a new feature or ad. Understanding your survey's main goal both improves its quality and reduces the time you'll spend on executing your research.

In case you struggle to pinpoint your exact goal, write down a list of all the questions and issues your market research campaign needs and prioritize the most important ones. In addition, ask yourself and your team questions to better understand your own standing in regards to market research, your existing tools, campaigns and more. These are your peripheral questions, which will help you determine your key research goal.

Step 2: Define your survey audience

Identifying your [survey target audience](#) is key to any successful market research campaign. After all, it is the audience that you seek to study, to learn how its members tick, their habits, sentiments, etc. The wrong survey audience will invalidate your study, as it will be irrelevant to your business or study.

Step 3: Come up with Preliminary Questions

Now that you've carefully selected a main survey goal and theme, along with having identified who to survey and how many to include in your sampling size, it is time to get to the heart of your survey: the questionnaire — or at least the beginning of it. To do this, you'll need to consider the main goal and sub-goals of your survey campaign. As such, write down the most pressing questions you have. We suggest coming up with a list of 10 questions. Note that not ALL of them need to be in your survey, in fact, we suggest keeping your questionnaire short. Even users of a game who've come across your survey and decided to take it for in-game [survey incentives](#) will hesitate to take a lengthy survey.

As such, your preliminary 10 (or more) questions are just that: preliminary. Not all of them will make it to your questionnaire, as they are meant for brainstorming ideas. As you create these questions, heed the following tips:

1. Create questions based on the survey campaign you're going to use. For example, if you're going to run a longitudinal study, you'll need to create questions that span through various time periods. Or, for a cross-sectional study, you'll need to create questions for just one survey and thus have one primary focus of the study.
2. Do any of your questions appear too similar to one another? If so, consider merging them or removing a few.
3. Decide whether certain questions need follow-up questions. For example, if you ask a question in which a certain answer requires more information, consider using follow-up

questions. That is where [advanced skip logic](#) becomes handy, as it routes respondents to relevant follow-up questions. This creates paths in your survey and allows you to understand your respondents and the subject of the original question at a deeper level. This can also be relevant to the first point, as you can use similar questions as potential follow-up questions.

4. Do your questions pertain to certain customer segments or personas? If so, refer to your customer segmentation and personas list. You may need to break your survey into two or more, depending on how many customer segments it can be used for.

You can also add [multiple audiences](#) in one survey. Show your preliminary set of questions to your team/colleagues for their feedback and suggestions. Here, you can get into the nitty-gritty of what is most important for your study by way of other relevant opinions that will help shape it.

Step 4: Design your questionnaire

Next, we're going to move on to designing the questionnaire itself. This will largely depend on the survey platform you use. As aforementioned, you'll need to use a strong market research SaaS platform that offers a variety of features and services to form a robust survey campaign. Make sure your survey platform allows you to build the questions you need at ease and speed. It's key to note that the quality of a questionnaire is where the majority of surveys fall short. Experiments suggest that sensitive or vague opinion [questions](#) increase the potential of error by up to 30%. Put simply, your survey is as good as your questionnaire is. Make sure your questions are clear and don't contain jargon or uncommon abbreviations. This is key to shaping the survey experience. A poor example of a survey question: Do you think VR is going to take off in the next 5 years?

A better example of a survey question: Do you think virtual reality (VR) is going to take off in the next 5 years? In some instances, a poor question is one that yields scant information. In this case, it is key to follow it up with another, or create it so that it doesn't require additional questions to begin with. In this case, a yes or no question constitutes a poor example, whereas an open-ended question is the better example.

A poor example: Do you agree that this is a great movie? A better example: What do you think of this movie? Take some time to learn [how to write clear, unbiased, and effective survey questions](#) to get the best results out of your research.

Step 5: Distribute Your Survey

There are several ways to [distribute a survey](#). These include legacy distribution methods and modern ones. While it may not appear to be very important, choosing how your survey is

distributed is as important as choosing who you want to survey. This is because survey distribution accounts for many aspects of your study.

For example, an online survey platform that continues iterating until it receives all required responses works faster than do interviews that a market research firm conducts. The environment of the survey is critical to its exposure by your target market, as Point 2 states. This is because different demographics spend time online (and in the real world) differently. Let's continue with the example of surveying Gen Z iPhone users. Suppose you moderate a local school Facebook group and decide to post your survey there. Even if you get a large number of responses, the results may not accurately affect this demographic. This is because in this case, you don't pick survey participants randomly, instead, you survey only those who joined the local school Facebook group that you conveniently happen to moderate. This is called [convenience sampling](#), since the majority of survey participants unintentionally live in one area. The survey didn't account for Gen Z users from other areas with different average household incomes.

To ensure you get the most accurate survey results, use a survey platform that can help you reach your targeted demographics more precisely and at speed. In short, avoid convenience sampling. Instead, opt for organic sampling, which gathers survey respondents by distributing your survey to the places they spend their time organically. On the Pollfish online survey platform, we use [organic sampling](#) in the form of RDE sampling, or Random Device Engagement sampling.

RDE sampling is a kind of organic sampling in which polling relies on advertising networks, or other portals on digital devices, to engage random people where they naturally spend time. This can occur on gaming and mobile apps. This is the opposite of a [research panel](#), which is a research method that pre-recruits and prescreens a group of research participants who have opted in to take part as the studied subjects of a market research campaign. Lastly, before we provide a few examples of survey distribution methods, it is also critical to be strategic about when to send your survey. For this, we recommend reading our quick guide on the [best time to send a survey](#).

Here are a few common ways to distribute your surveys:

- Email. You can distribute your survey by email, especially if you have access to an established email list. The two main drawbacks of email surveys are that it's harder to set specific target audience parameters and email response rates are generally low.
- Social media: if you survey people via social media channels, beware that sometimes social media groups attract people with shared interests that may not represent the opinion of your target audience or the general public.

- Online survey platforms: survey platforms such as Pollfish allow you to hyper-target specific audiences, control the number of participants, distribute the survey in different ways, reach all quotas, easily organize your survey results and more.
- Survey panels: A [survey panel](#) is a consistent group of survey participants, who have pre-recruited and pre-screened, who opt into a survey study. Researchers would return to the same people to run surveys or host interviews repeatedly over time.
- Syndicated research: Syndicated research refers to research conducted by a market research firm, oftentimes independently. It is published and sold by a market research firm, which is usually industry-specific and funded by several companies within a particular industry. The firm and its partner companies own the data that the firm collects. Other companies in their particular industry may purchase the data. Besides these prominent survey channels, there are other survey solutions you can use; make sure to select the one most pertinent to your market research needs.

Step 6: Organize survey responses

After you've gathered your responses, you'll need to organize the data before starting your analysis. As with the prior steps, this will largely depend on your survey tool, which also dictates your survey distribution, audience targeting and creation.

Here are the steps to prepare your data for analysis:

- Clean. Sometimes people fill out the survey twice by mistake. Although Pollfish survey technology prevents duplicate responses altogether, if you're conducting a survey on your own, or via syndicated research, make sure to clean duplicates and "funny" answers before you proceed to organize your data.
- Organize. Group survey answers that are similar to each other and try finding patterns that allow you to structure your data.
- Visualize. Try finding ways of visualizing survey responses using graphs, charts and images. [Visualized survey data](#) is easier to analyze and refer to, especially if you want to share survey results with other people.

Step 7. Analyze and present survey results

The data you collected during your survey can be presented and analyzed in many different ways, so make sure to go back to the survey goal that we covered in Step 1. Analyzing survey results and

writing a report often go hand in hand, so it's a good practice to go back and forth between the two until you fully narrow down your findings.

Step 8: Take Action

In this step, you're going to consult the information you've gathered and analyzed in Steps 6 and 7. You'll need to create a document of your findings, one that exists outside your dashboard and is central to your survey analysis. This document should cover central findings, along with key granular ones. It should also answer some of the key concerns you had in Step 1, along with the questions designed for your respondents themselves. Do your results and analysis answer all the inquiries and curiosities you had about the topic at hand? If so, it is time to take action. If not, then you should create another survey, one that focuses on the things that are left unanswered, or anything you need more information on. Sometimes, the latter is most common, with survey campaigns lacking clarity, therefore lacking completion. However, not to worry, just create another survey. If you have the contact information of your respondents, just send them a follow-up survey. If not, send your new survey as you had originally done (Kelly & Onyeka, 1992).

We recommend using an online survey provider that offers the [random device engagement](#) method, which, as aforementioned, is a kind of organic sampling that uses digital properties to query respondents where they visit organically. If, however, you have all the insights you need, it is time to take data-informed action. There are many ways to take action on any given topic. The following list enumerates various ways to act on your survey data and analysis:

1. The establishment of something (ad campaigns, marketing strategy, pricing, a slogan, etc)
2. Changing something already in existence (ads, videos, promotions, pricing, etc)
3. Scrapping aspects of an ad, marketing, sales or any other business campaign or activity
4. Terminating an action or campaign entirely
5. The formation of slightly different approaches based on different market segments

All in all, after you've followed these steps, you will be much closer to your original goal, whether it is solely to have invaluable customer/subject data, or to use that data to make immediate or long-term decisions. Therein lies the power of surveys, they grant you the knowledge you can use for a host of decision-making.

How to measure concepts with survey questions

While surveys are a great way to obtain data, that data on its own is useless unless it can be analyzed and developed into actionable insights. The easiest, and most effective way to measure survey results, is to use a dedicated research tool that puts all of your survey results into one place (Spegel, 1992). When it comes to survey measurement, there are four measurement types to be aware of that will determine how you treat your different survey results:

Nominal scale

With a nominal scale, you can only keep track of how many respondents chose each option from a question, and which response generated the most selections. An example of this would be simply asking a responder to choose a product or brand from a list. You could find out which brand was chosen the most but have no insight as to why.

Ordinal scale

Ordinal scales are used to judge an order of preference. They do provide some level of quantitative value because you're asking responders to choose a preference of one option over another.

Ratio scale

Ratio scales can be used to judge the order and difference between responses. For example, asking respondents how much they spend on their weekly shopping on average.

Interval scale

In an interval scale, values are lined up in order with a meaningful difference between the two values — for example, measuring temperature or measuring a credit score between one value and another (Joshua, 2008).

Contribution to knowledge

This position paper contributes to methodological scholarship by:

1. Clarifying the conceptual distinction between research design and data collection methods.
2. Demonstrating that surveys function across multiple research designs.
3. Providing a unified methodological framework for educational researchers.
4. Reducing confusion among postgraduate students regarding methodology.

5. Supporting improved research methodology instruction in universities.
6. Promoting consistency in thesis writing and journal publications.
7. Encouraging researchers to justify research designs independently of data collection techniques.

Implications for educational research

Educational researchers should:

- i. Clearly distinguish research design from data collection methods.
- ii. Justify research designs independently.
- iii. Describe surveys under instrumentation or data collection procedures.
- iv. Avoid referring to questionnaires as research designs.
- v. Align methodological descriptions with internationally accepted research standards.

Conclusion

Survey research remains one of the most widely employed approaches for obtaining empirical evidence in educational and social science investigations. Nevertheless, conceptual analysis indicates that surveys primarily constitute methods of data collection rather than independent research designs. Whereas research design provides the comprehensive framework guiding the investigation, surveys merely specify how information is obtained from respondents. Because survey procedures can be incorporated into experimental, correlational, descriptive, longitudinal, evaluation, and mixed-methods studies, they should be regarded as flexible instruments within broader methodological frameworks. Adopting this perspective enhances methodological clarity, improves research quality, and strengthens the rigor of educational research.

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