



Learning Outcomes

At the end of this unit students will be able to:

- digital tools to conduct research to collect market insights for an entrepreneurial solution.
- Identifying Problems and Creating Solutions.
- pitch a business idea



Introduction

What is research?

Research is a systematic process of inquiry aimed at discovering, interpreting, or revising facts, theories, or applications. It involves identifying a specific question or problem, gathering data or information, analyzing that data, and drawing conclusions based on the findings. Research can be conducted in various fields, including science, social science, humanities, and more.

8.1 Qualitative vs. Quantitative Research | Differences, Examples & Methods

When collecting and analyzing data, quantitative research deals with numbers and statistics, while qualitative research deals with words and meanings. Both are important for gaining different kinds of knowledge.

Quantitative research

- Quantitative research is expressed in numbers and graphs. It is used to test or confirm theories and assumptions. This type of research can be used to establish generalizable facts about a topic.
- Common quantitative methods include experiments, observations recorded as numbers, and surveys with closed-ended questions.
- Quantitative research is at risk for research biases including information bias, omitted variable bias, sampling bias, or selection bias.

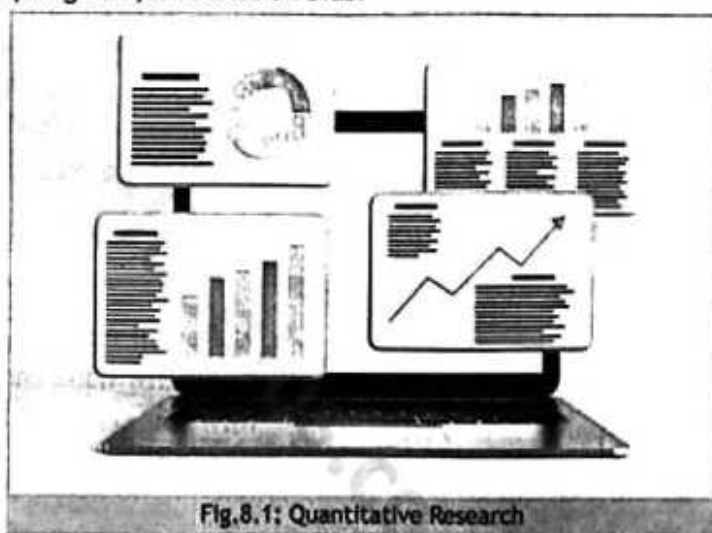


Fig.8.1: Quantitative Research

Qualitative research

- Qualitative research is expressed in words. It is used to understand concepts, thoughts or experiences. This type of research enables you to gather in-depth insights on topics that are not well understood.
- Common qualitative methods include interviews with open-ended questions, observations

described in words, and literature reviews that explore concepts and theories.



Fig.8.2: Qualitative Research

8.2 The differences between quantitative and qualitative research

Quantitative and qualitative research use different research methods to collect and analyze data, and they allow you to answer different kinds of research questions.

Data collection methods

Quantitative and qualitative data can be collected using various methods. It is important to use a data collection method that will help answer your research question(s).

Many data collection methods can be either qualitative or quantitative. For example, in surveys, observational studies or case studies, your data can be represented as numbers (e.g., using rating scales or counting frequencies) or as words (e.g., with open-ended questions or descriptions of what you observe).

However, some methods are more commonly used in one type or the other.

Quantitative data collection methods

- Surveys: List of closed or multiple choice questions that is distributed to a sample (online, in person, or over the phone).
- Experiments: Situation in which different types of variables are controlled and manipulated to establish cause-and-effect relationships.
- Observations: Observing subjects in a natural environment where variables can't be controlled.

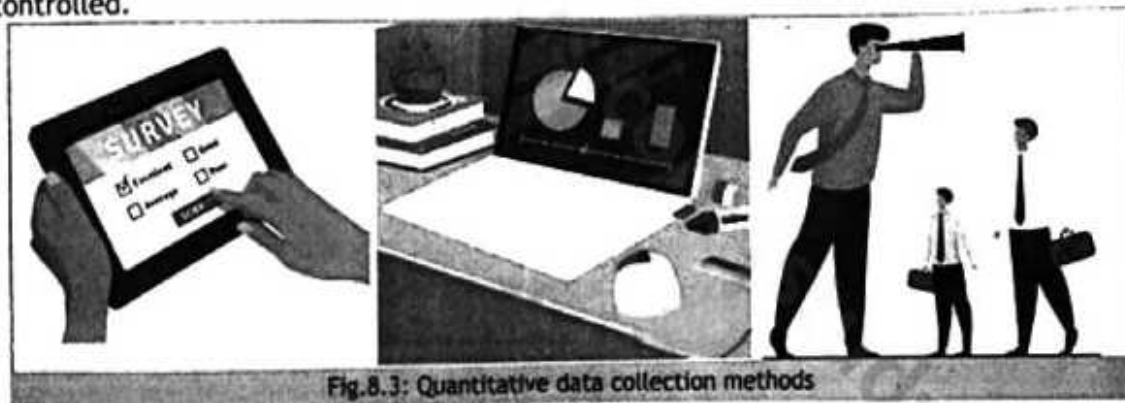


Fig.8.3: Quantitative data collection methods

Qualitative data collection methods

- Interviews: Asking open-ended questions verbally to respondents.
- Focus groups: Discussion among a group of people about a topic to gather opinions that can be used for further research.
- Ethnography: Participating in a community or organization for an extended period of time to closely observe culture and behavior.
- Literature review: Survey of published works by other authors.

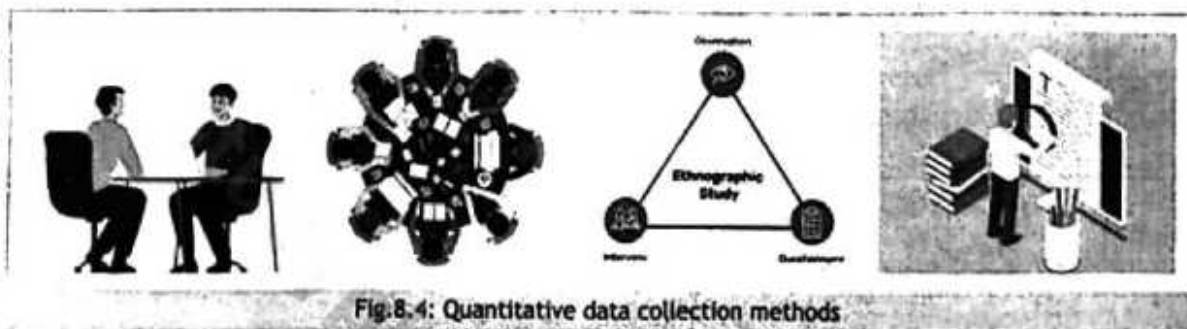


Fig.8.4: Qualitative data collection methods

When to use qualitative vs. quantitative research

A rule of thumb for deciding whether to use qualitative or quantitative data is:

- Use quantitative research if you want to confirm or test something (a theory or hypothesis)
- Use qualitative research if you want to understand something (concepts, thoughts, experiences)

For most research topics you can choose a qualitative, quantitative or mixed methods approach. Which type you choose depends on, among other things, whether you're taking an inductive vs. deductive research approach; your research question(s); whether you're doing experimental, correlational, or descriptive research; and practical considerations such as time, money, availability of data, and access to respondents.

Research question How satisfied are students with their studies?

Quantitative research approach

You survey 300 students at your university and ask them questions such as: "on a scale from 1-5, how satisfied are you with your professors?"

You can perform statistical analysis on the data and draw conclusions such as: "on average students rated their professors 4.4".



Fig.8.5: Students in university

Qualitative research approach

You conduct in-depth interviews with 15 students and ask them open-ended questions such as: "How satisfied are you with your studies?", "What is the most positive aspect of your study program?" and "What can be done to improve the study program?"

Based on the answers you get you can ask follow-up questions to clarify things. You transcribe all interviews using transcription software and try to find commonalities and patterns.

Mixed methods approach

You conduct interviews to find out how satisfied students are with their studies. Through open-ended questions you learn things you never thought about before and gain new insights. Later, you use a survey to test these insights on a larger scale.

It's also possible to start with a survey to find out the overall trends, followed by interviews to better understand the reasons behind the trends.

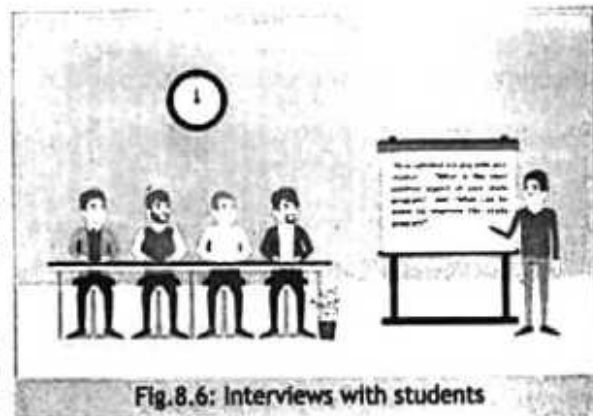


Fig.8.6: Interviews with students

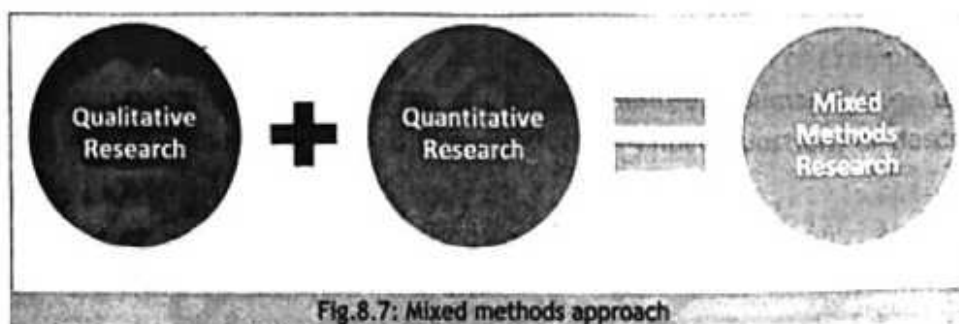


Fig.8.7: Mixed methods approach

How to analyze qualitative and quantitative data

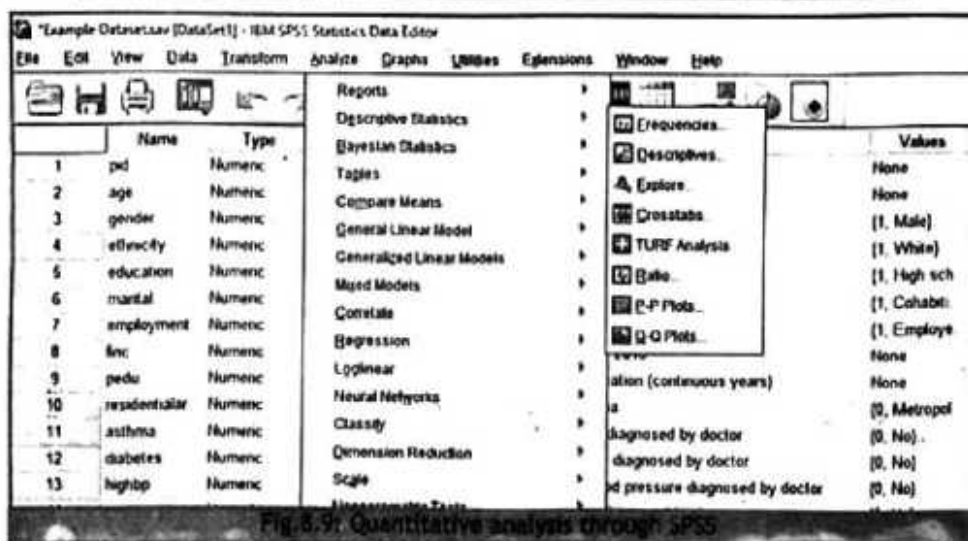
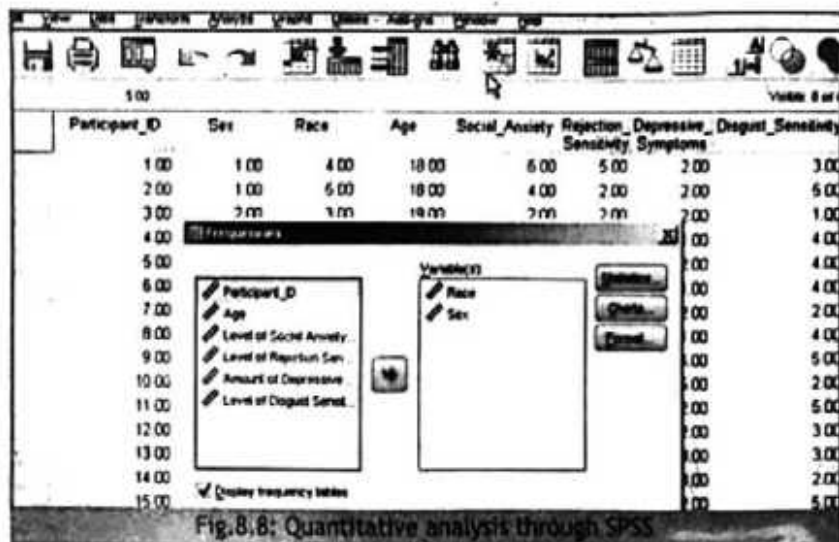
Qualitative data (soft data) or quantitative data (hard data) by itself can't prove or demonstrate anything, but has to be analyzed to show its meaning in relation to the research questions. The method of analysis differs for each type of data.

Analyzing quantitative data

Quantitative data is based on numbers. Simple math or more advanced statistical analysis is used to discover commonalities or patterns in the data. The results are often reported in graphs and tables.

Applications such as Excel, SPSS, or R can be used to calculate things like:

- Average scores (means)
- The number of times a particular answer was given
- The correlation or causation between two or more variables
- The reliability and validity of the results



Analyzing qualitative data

Qualitative data is more difficult to analyze than quantitative data. It consists of text, images or videos instead of numbers.

Some common approaches to analyzing qualitative data include:

- Qualitative content analysis: Tracking the occurrence, position and meaning of words or phrases
- Thematic analysis: Closely examining the data to identify the main themes and patterns
- Discourse analysis: Studying how communication works in social contexts

How do I decide which method to use?

The research methods you use depend on the type of data you need to answer your research question.

- If you want to measure something or test a hypothesis, use quantitative methods. If you want to explore ideas, thoughts and meanings, use qualitative methods.

- If you want to analyze a large amount of readily available data, use secondary data. If you want data specific to your purposes with control over how it is generated, collect primary data.
- If you want to establish cause and effect relationships between variables, use experimental methods. If you want to understand the characteristics of research subject, use descriptive methods.

8.3 Questionnaire Design | Methods, Question Types & Examples

A **questionnaire** is a list of questions or items used to gather data from respondents about their attitudes, experiences, or opinions. Questionnaires can be used to collect quantitative and/or qualitative information.

Questionnaires are commonly used in market research as well as in the social and health sciences. For example, a company may ask for feedback about a recent customer service experience, or psychology researchers may investigate health risk perceptions using questionnaires.



Questionnaires vs. Surveys

A **survey** is a research method where you collect and analyze data from a group of people.

A **questionnaire** is a specific tool or instrument for collecting the data.

Designing a questionnaire means creating valid and reliable questions that address your research objectives, placing them in a useful order, and selecting an appropriate method for administration.

But designing a questionnaire is only one component of survey research. Survey research also involves defining the population you're interested in, choosing an appropriate sampling method, administering questionnaires, data cleansing and analysis, and interpretation.

	Survey	Questionnaire
Individual questions	✓	✓
Used for gathering data	✓	✗
Analyzes responses	✓	✗
Provides insights about an individual	✓	✓
Provides insights about a group of people	✓	✗

Fig. 8.11: Questionnaires vs. Surveys

Sampling is important in survey research because you'll often aim to generalize your results to the population. Gather data from a sample that represents the range of views in the population for externally valid results. There will always be some differences between the population and the sample, but minimizing these will help you avoid several types of research bias, including sampling bias, ascertainment bias, and undercoverage bias.

Questionnaire methods

Questionnaires can be self-administered or researcher-administered. Self-administered questionnaires are more common because they are easy to implement and inexpensive, but researcher-administered questionnaires allow deeper insights.

Self-administered questionnaires

Self-administered questionnaires can be delivered online or in paper-and-pen formats, in person or through mail. All questions are standardized so that all respondents receive the same questions with identical wording.

Self-administered questionnaires can be:

- cost-effective
- easy to administer for small and large groups
- anonymous and suitable for sensitive topics
- self-paced

But they may also be:

- unsuitable for people with limited literacy or verbal skills
- susceptible to a nonresponse bias (most people invited may not complete the questionnaire)
- biased towards people who volunteer because impersonal survey requests often go ignored.

Researcher-administered questionnaires

Researcher-administered questionnaires are interviews that take place by phone, in-person, or online between researchers and respondents.

Researcher-administered questionnaires can:

- help you ensure the respondents are representative of your target audience
- allow clarifications of ambiguous or unclear questions and answers
- have high response rates because it's harder to refuse an interview when personal attention is given to respondents

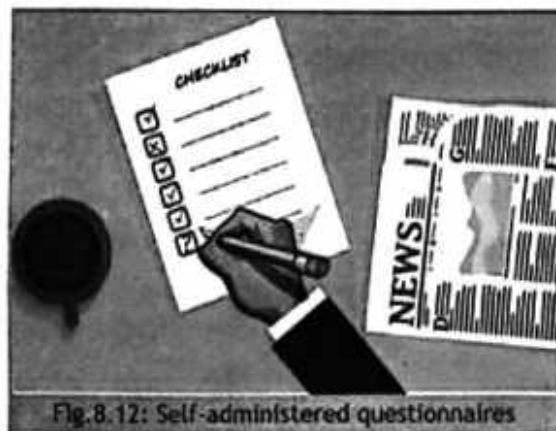


Fig.8.12: Self-administered questionnaires

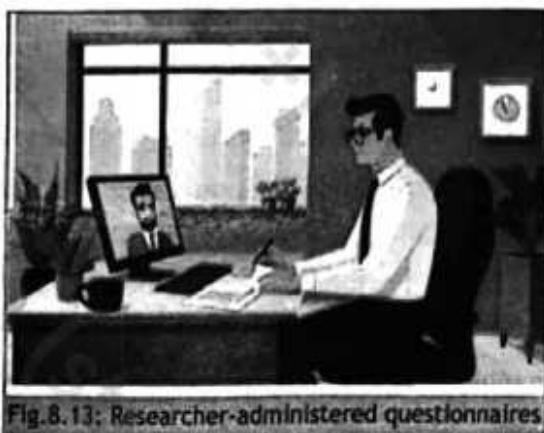


Fig.8.13: Researcher-administered questionnaires

But researcher-administered questionnaires can be limiting in terms of resources. They are:

- costly and time-consuming to perform
- more difficult to analyze if you have qualitative responses
- likely to contain experimenter bias or demand characteristics
- likely to encourage social desirability bias in responses because of a lack of anonymity

Open-ended vs. closed-ended questions

Your questionnaire can include open-ended or closed-ended questions or a combination of both.

Using closed-ended questions limits your responses, while open-ended questions enable a broad range of answers. You'll need to balance these considerations with your available time and resources.

Closed-ended questions

Closed-ended, or restricted-choice, questions offer respondents a fixed set of choices to select from. Closed-ended questions are best for collecting data on categorical or quantitative variables.

Categorical variables can be nominal or ordinal. Quantitative variables can be interval or ratio. Understanding the type of variable and level of measurement means you can perform appropriate statistical analyses for generalizable results.

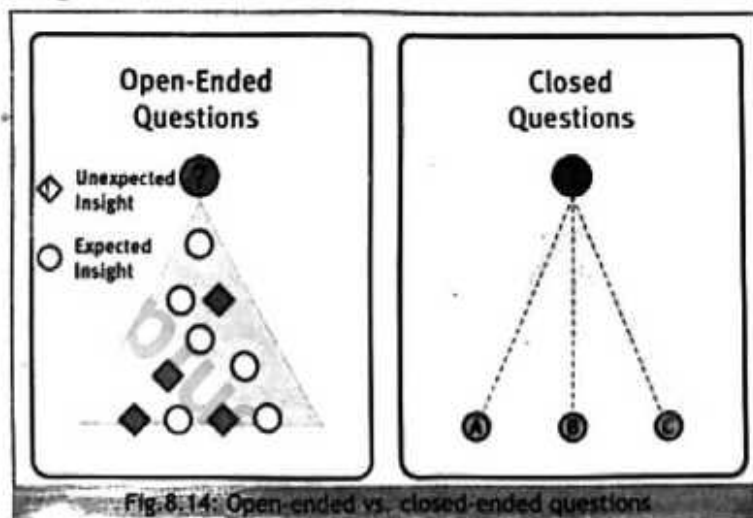


Fig. 8.14: Open-ended vs. closed-ended questions

Examples of closed-ended questions for different variables

Nominal variables include categories that can't be ranked, such as race or ethnicity. This includes binary or dichotomous categories.

It's best to include categories that cover all possible answers and are mutually exclusive. There should be no overlap between response items.

In binary or dichotomous questions, you'll give respondents only two options to choose from.

Example: Nominal variables What is your race?

- a) White b) African c) American d) Asian

Are you satisfied with the current work-from-home policies?

a) Yes

b) No

Ordinal variables include categories that can be ranked. Consider how wide or narrow a range

you'll include in your response items, and their relevance to your respondents.

Example: Ordinal variables What is your age?

a) 16-35

b) 36-60

c) 61-75

d) 76 or older

Likert scale questions collect ordinal data using rating scales with 5 or 7 points.

Example: Likert-type questions How satisfied or dissatisfied are you with your online shopping experience today?

a) Very dissatisfied

b) Somewhat dissatisfied

c) Somewhat satisfied

d) Very satisfied

When you have four or more Likert-type questions, you can treat the composite data as quantitative data on an interval scale. Intelligence tests, psychological scales, and personality inventories use multiple Likert-type questions to collect interval data.

Pros and cons of closed-ended questions

Well-designed closed-ended questions are easy to understand and can be answered quickly. However, you might still miss important answers that are relevant to respondents. An incomplete set of response items may force some respondents to pick the closest alternative to their true answer. These types of questions may also miss out on valuable detail.

To solve these problems, you can make questions partially closed-ended, and include an open-ended option where respondents can fill in their own answer.

Open-ended questions

Open-ended, or long-form, questions allow respondents to give answers in their own words. Because there are no restrictions on their choices, respondents can answer in ways that researchers may not have otherwise considered. For example, respondents may want to answer "multiracial" for the question on race rather than selecting from a restricted list.

Example: Open-ended questions

»» How do you feel about open science?

»» How would you describe your personality?

»» In your opinion, what is the biggest obstacle for productivity in remote work?

Open-ended questions have a few disadvantages.

They require more time and effort from respondents, which may deter them from completing the questionnaire.



Activity 1

Discuss in Class different types of variables which we deal in our daily life.

For researchers, understanding and summarizing responses to these questions can take a lot of time and resources. You'll need to develop a systematic coding scheme to categorize answers, and you may also need to involve other researchers in data analysis for high reliability.

Open-Ended Questions	Closed Questions
● Open the conversation: gets people talking ● Uncover unexpected stories and insights ● Facilitate exploration of a topic ● Used heavily in interviews and qualitative usability tests	● Close or limit the scope of the conversation ● Uncover details or provide clarification ● Support quantification of responses ● Used heavily in surveys and quantitative research

Fig.8.15: Open-ended and closed-ended questions

Question wording

Question wording can influence your respondents' answers, especially if the language is unclear, ambiguous, or biased. Good questions need to be understood by all respondents in the same way (reliable) and measure exactly what you're interested in (valid).

Use clear language

You should design questions with your target audience in mind. Consider their familiarity with your questionnaire topics and language and tailor your questions to them.

For readability and clarity, avoid jargon or overly complex language. Don't use double negatives because they can be harder to understand.

Use balanced framing

Respondents often answer in different ways depending on the question framing. Positive frames are interpreted as more neutral than negative frames and may encourage more socially desirable answers.

Example: Positive vs negative frames

Positive frame	Negative frame
Should protests of pandemic-related restrictions be allowed?	Should protests of pandemic-related restrictions be forbidden?

Use a mix of both positive and negative frames to avoid research bias, and ensure that your question wording is balanced wherever possible.



Fig.8.16: Use clear language

Unbalanced questions focus on only one side of an argument. Respondents may be less likely to oppose the question if it is framed in a particular direction. It's best practice to provide a counter argument within the question as well.

Example: Unbalanced vs balanced frames

Unbalanced	Balanced
Do you favor...?	Do you favor or oppose...?
Do you agree that...?	Do you agree or disagree that...?

Avoid leading questions

Leading questions guide respondents towards answering in specific ways, even if that's not how they truly feel, by explicitly or implicitly providing them with extra information.

It's best to keep your questions short and specific to your topic of interest.

Example: Leading questions

- » Experts agree that a well-balanced diet provides sufficient vitamins and minerals, and multivitamins and supplements are not necessary or effective. Do you agree or disagree that multivitamins are helpful for balanced nutrition?

8.4 What is Market Validation?

Market validation is the process of determining if there's a need for your product in your target market. Validating your business idea can enable you to reasonably predict whether people will buy your product or service, and whether your business will be profitable.

It's important to validate your idea early in the entrepreneurial process to ensure you don't waste time and resources creating a product that isn't a good fit. Securing market validation can also instill confidence among investors, crowdfunding, and banks that are considering funding your startup.

By going through the process of validating your business idea, you can gain a deeper understanding of how your product does or doesn't meet your target customers' pain points. The insights you gain can help you create an offering that not only addresses your market segment's needs, but earns you your first paying customers.

Here are five steps to determine the market validity of your venture.



Fig. 8.17: Market Validation

5 Steps To Determine Market Validation

1. Write Down Goals, Assumptions, and Hypotheses

Writing down the goals of your business is the first step in market validation. The process of articulating your vision can illuminate any assumptions you have and provide an end goal.

Ask yourself:

- What's the value of my product?
- Who's the target audience, and what assumptions have I made about them?
- What differentiates my product from existing ones?
- What hypotheses do I have about my product, pricing, and business model?

Answering these questions can help you communicate the value and differentiating factors of your product, and illuminate assumptions and hypotheses you've made that are yet to be tested and verified.



Fig. 8.18: Goals, Assumptions, and Hypotheses

2. Assess Market Size and Share

Before moving forward with your venture, estimate the size of your target market and the share of it you could potentially capture. By doing so, you can gauge your business's potential and justify its launch.

In the online course *Entrepreneurship Essentials*, Harvard Business School Professor William Sahlman uses mattress retailer Casper to illustrate this idea. In 2014, Casper's founders assessed the market size for their product by comparing its differentiating factors against the larger market. For Casper, these differentiating factors included its online business model, 100-day return window, and the viscoelastic foam material used in its mattresses.

Based on statistics for the mattress market at the time—including units sold per year, the percentage of the market owned by foam mattresses, and the number of mattress retailers that were e-commerce brands—Casper's founders narrowed down which segments they should target, and determined they could own a few percentage points of the total mattress market share.



Fig. 8.19: Market Size and Share

3. Research Search Volume of Related Terms

Another way to gauge the market validity of your business idea is to research the monthly search volume of terms related to your product or mission. When consumers need a product or service, they often use a search engine to see what the market has to offer.

If there's not a lot of search volume surrounding your product, use terms that express customer intent. For instance, if you design a mattress made from a new, extra supportive material, you could look up how many people search for "best mattress for lower back pain sufferers."

This type of search volume for a longer, specific query isn't negligible. In fact, it can be used to bolster your hypothesis that there's a need for your product.

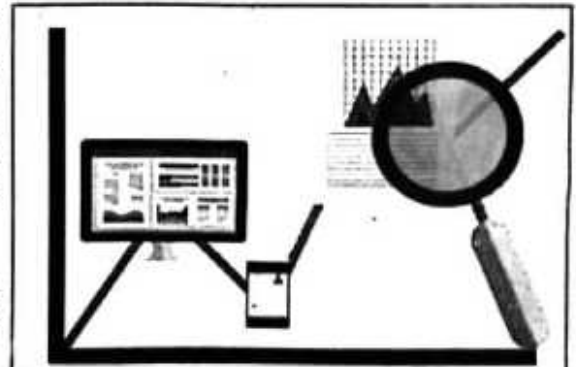


Fig. 8.20: Research Search Volume of Related Terms

4. Conduct Customer Validation Interviews

Conducting interviews with your target market segment can be an effective way to learn about your product's potential. This initiative might include hiring a market research company to conduct focus groups, sending out an online survey, or simply requesting a conversation with someone.

Ask potential customers about their motivations, preferences, needs, and the products they currently use. Circle back to the list you created in the first step of the market validation process, and frame any assumptions or hypotheses you made as questions to your interviewees. Be open to the feedback you receive and record it for future use.



Fig. 8.21: Conduct Customer Validation Interviews

The feedback may reflect that your product doesn't have strong market validity, in which case, you can use it to improve your offering and repeat the market validation process.

5. Test Your Product or Service

Once you've determined there's space for your product in the market, ensure you're putting the most useful, intuitive version of it into the world. You can achieve this through alpha and beta testing.

- Alpha testing is when internal employees test a product in a staged setting. The purpose of alpha testing is to eliminate any bugs, issues, or

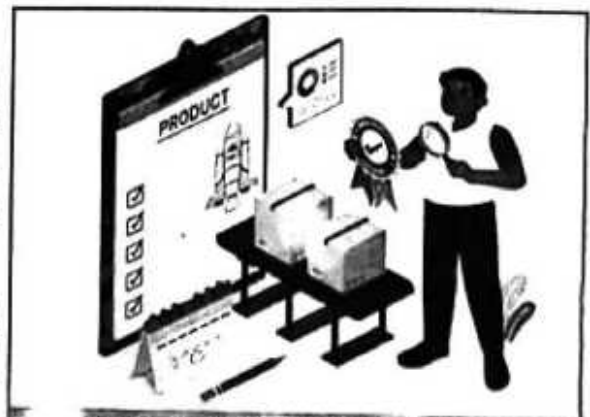


Fig. 8.22: Test Your Product or Service

idiosyncrasies in the product before it's available to outside users.

- Beta testing is when a product is tested by a limited group of real, external users who are specifically told to identify problems. In the case of a software or app, beta testing might be open to the public with a notice letting users know the version they're testing is unfinished.

Testing your product with real users can prove invaluable when assessing market validity. If there's a need in the market, but your product is faulty, complex, or difficult to use, customers may opt for a competitor's offering. The feedback you get from beta testers can help you better leverage and meet customer needs.

8.5 How to Use Research to Create Customer Profiles

Businesses often use a combination of quantitative and qualitative research, such as data analysis, surveys, and customer interviews, to create and continuously update their ideal customer profile.

Customer profiling is an essential aspect of serving customers. But what is customer profiling?

As a small business owner, understanding customers' specific demographics, tendencies, and pain

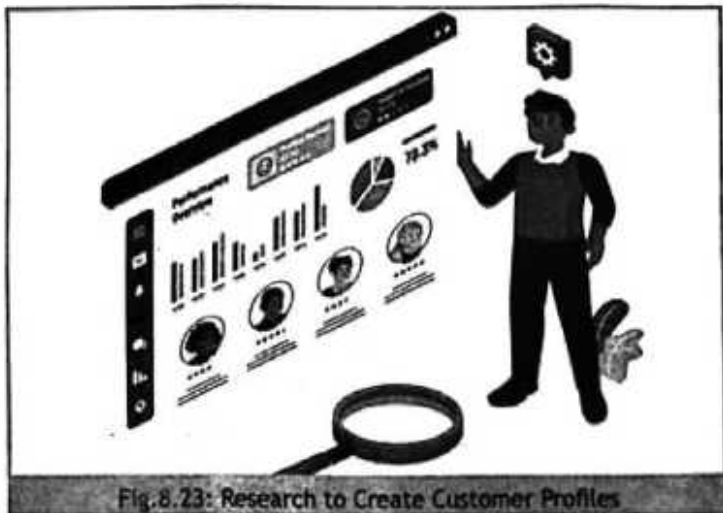


Fig. 8.23: Research to Create Customer Profiles

points is indispensable in meeting their needs. Defining your ideal customer entails gathering and analyzing data about your customers' characteristics, behaviors, attributes, and needs. This information is used to create profiles representing your customer segments.

Products/Services Used

This section of the customer profile template describes which of your services your customers rely on and how they use them. You can also include other products or services customers use with your service.

If your product can be integrated with another service and customers are successfully meshing your service with another, add that to this section. This will help you better market to other companies or individuals later.

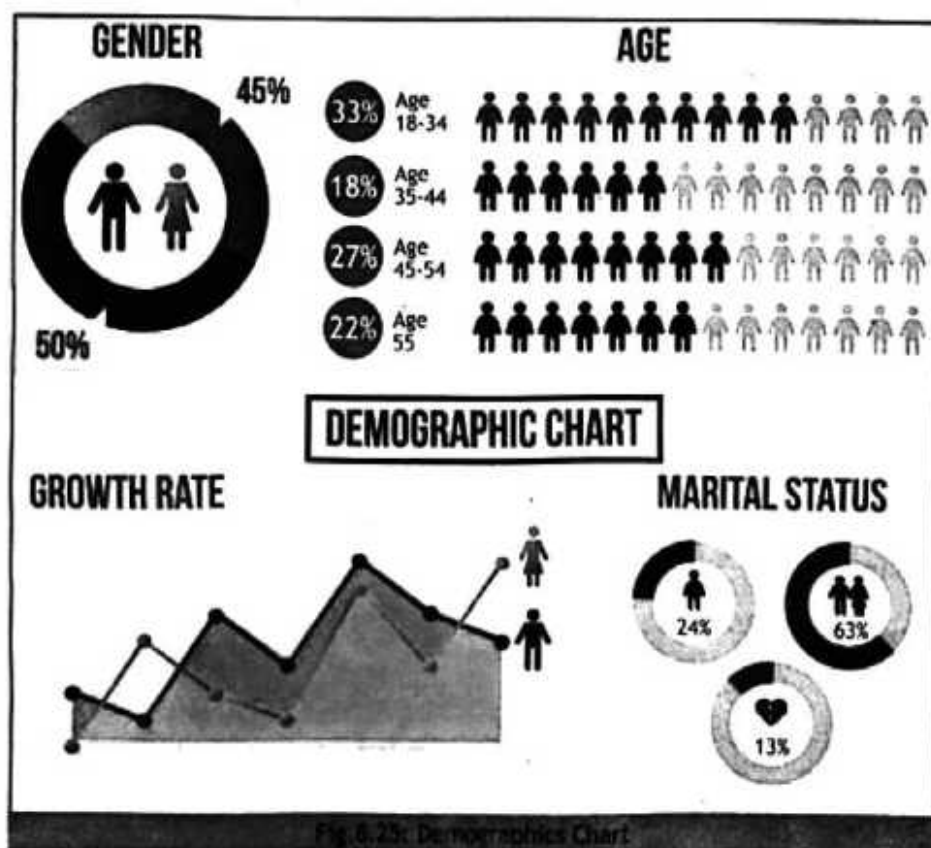


Fig. 8.24: Customer Products/Services Used

Demographics

Your customers' demographics are an essential piece of your customer profile, include your customer's career, industry, location, and gender identity.

For Example, if I run a music backline rental company, and my customers range from High Schools to Weddings to Touring Bands. I've found that outlining the demographics of each customer segment helps me better anticipate their needs.



Customer Benefits

Your customer profile should also include a list of benefits customers receive by using your product or service. How does your product or service provide value to your customers?

Think about how your product or service adds value for your customers and describe it in this section. The best way to answer this question is to ask your customer base. Compile and compare their answers and add a summary here.

Customer Profiling Benefits

Creating customer profiles is crucial for taking your business to the next level. 66% of customers expect companies to understand their needs; customer profiling helps you do that.

It helps all departments become more efficient.

The benefits of customer profiling are impactful across your entire company. Each department in your company will use your customer profiles differently, but they will improve the bottom line.

- **Marketing:** Understanding the client is vital to creating engaging advertisements or emails for potential prospects and current clients. Marketers use customer profiles to customize messaging to most effectively speak to customer needs.

➤ **Sales:** With a customer profile in hand, your sales team will be able to highlight customer pain points and help better sell your product or service as the solution to their problems. Your sales team may even use the customer profile to find ways to create connections with current and future clients.

➤ **Support:** The customer profile contains all the necessary information your customer service team will need to assist clients in need. It can act as a record of queries, complaints, and previously tried solutions. This will help save time for your customer service team and keep everyone involved from becoming frustrated.



Fig. 8.26: Customer Profiling Benefits

It allows you to identify better-fit prospects.

By knowing who benefits from your products the most, your organization can find better prospects and increase close rates.

It lowers customer acquisition cost.

Customer acquisition cost (CAC) is the money you spend on marketing and sales campaigns to attract a single customer. Implementing customer profiling allows you to focus your efforts on people who are more likely to become customers, which brings customer acquisition costs down in the long run.



Activity 2

Design a Media Marketing Campaign for a Product and Calculate its Customer Acquisition Cost (CAC)



Fig. 8.27: Lowers Customer Acquisition Cost

It empowers you to serve customers better.

Knowing your customers is critical to serving them better. I found this accurate, having worked on the Support Team at HubSpot at the beginning of my career. We always kept detailed notes on each customer, including the issues they had in the past and their needs/goals. Armed with this information, I was much better equipped to meet customers where they were and guide them to success.

You can predict issues before they arise, provide



Fig. 8.28: It empowers you to serve customers better

practical self-help resources, and better align with their needs if they reach out to your service team.

It reduces customer churn.

Customer churn refers to losing customers. We can all agree we want to keep that number as low as possible!

By creating strong customer profiles from the start, you can attract and serve customers who actually want to use your product or service — reducing customer churn in both the short and long term.

Now that you know the benefits of customer profiling, which data should you gather for your customer profiles?

Let's take a look.



Demographic

Demographic data are the concrete characteristics of a customer and can be used to understand consumer behavior, albeit broadly.

Demographics include the following traits (and more):

- Age.
- Sex.
- Job title.
- Income.
- Education level.
- Family status.

For example, my music backline rental business is technically B2B, and my customer demographics are segmented by Events such as Weddings/Bar Mitzvahs/Graduations, Music Festivals, and Touring Artists who can't travel or fly with all their gear. Each type of customer has different needs, and understanding customer segments helps me anticipate and meet them.

Psychographic

Demographics alone aren't enough to understand how, when, and why people make purchasing decisions, and that's where psychographics come in.

These factors relate to the attitudes and psychological makeup of a customer and may include: Lifestyle, Goal, Pains, Habits, Values, Interests etc.

Behavioral

While psychographics relate to psychological attributes, behavioral segments look at how that's manifested in action.

You may consider segmenting by:

Engagement, Readiness to buy, Purchasing history, Product usage, Satisfaction, Loyalty or account age, Attention required etc.

Segments based on behavioral traits are some of the most valuable in customer support. It can help service teams find insights about customer interaction and how these trends manifest into recurring revenue and satisfaction rates.

And once those things are measured, they can be improved.

Geographic

Geographical factors are relevant when location affects how customers interact with a brand or receive their products.

Here are popular ways to segment based on geography:

City, Area, Region, Country etc.

Gaining insights based on geography can help your organization think through logistics, support implementation, and marketing.

The relevance of Geographical data varies depending on the type of business you run. In my experience running a music backline rental company, geographic data is hugely relevant because I can only serve customers within a certain radius of where my gear is located.

However, if you run a software business or sell products online, geographical data has a different level of relevance. Regardless, knowing where your customers are is helpful in understanding more about them and their needs.

Once you have this data, you can profile customers based on specific types or “segments.”

Segments help you unearth trends in satisfaction, churn, and lifetime value that help you understand more about your ideal customer profiles.

8.6 Business Pitching: Identifying Problems and Creating Solutions

Introduction:

In today's fast-paced and competitive business environment, the ability to effectively pitch a business idea is crucial. Whether you are an aspiring entrepreneur seeking investment or a professional aiming to present a project to stakeholders, mastering the art of the pitch is essential. This document outlines a standard for students to learn how to identify problems and create and present business solutions, focusing on understanding the components of a successful business pitch and elevator pitch, and distinguishing between a business plan and a pitch document.

For example, “Hello, I’m Omaira, the founder of FinGrow, a startup dedicated to enhancing financial literacy through engaging seminars and webinars.” This sets the stage and gives a quick

insight into who you are and what your business is about, establishing a connection with your audience from the outset.

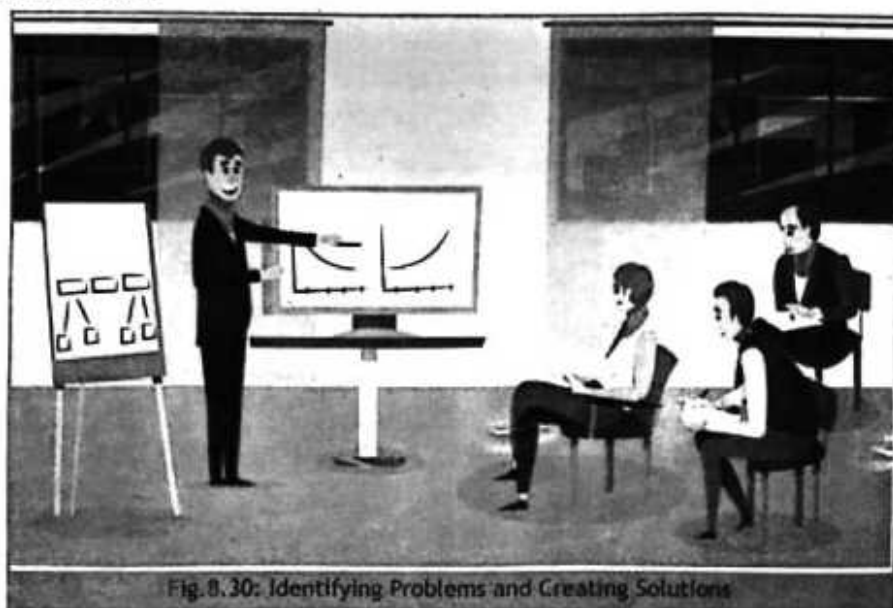


Fig. 8.30: Identifying Problems and Creating Solutions

Components of a Successful Business Pitch:

A successful business pitch conveys the value of your idea clearly and concisely, capturing the interest of investors or stakeholders. Key components include:

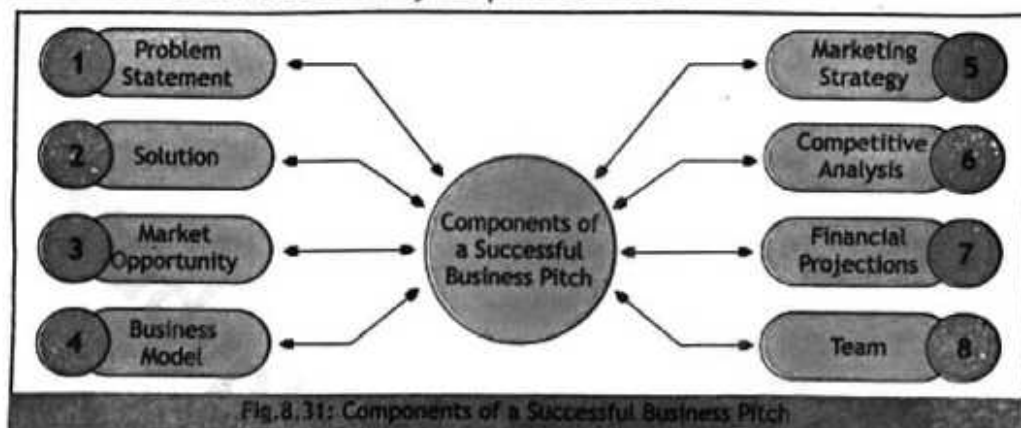


Fig. 8.31: Components of a Successful Business Pitch

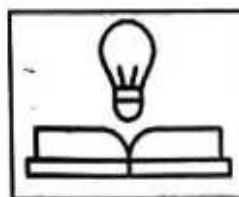
- **Problem Statement:** Clearly define the problem your business aims to solve. This helps your audience understand the relevance of your business.
- **Solution:** Describe your product or service and how it solves the problem. This is your chance to showcase your innovation.
- **Market Opportunity:** Explain the market size and potential for growth. This shows investors the business potential.
- **Business Model:** Explain how your business will make money. Describe how your business makes money. This is crucial for demonstrating sustainability.

- **Marketing Strategy:** Outline how you plan to attract and retain customers. This shows your approach to growth.
- **Competitive Analysis:** Identify your competitors and explain what makes your business unique. This highlights your competitive advantage.
- **Financial Projections:** Provide an overview of your expected revenue, expenses, and profitability. This gives a financial forecast.
- **Team:** Introduce key team members and their qualifications. This builds credibility and trust.

Components of a Successful Elevator Pitch:

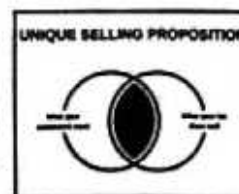
An elevator pitch is a brief, persuasive speech that you use to spark interest in your idea.

- **Hook:** Start with an attention-grabbing statement or question to pique interest. For example, "Did you know that 3 out of 5 adults struggle with managing their finances?" A compelling hook immediately engages your audience and sets the tone for the rest of your pitch, making them want to hear more.



- **Brief Introduction:** Introduce yourself and your business in a concise manner. This quick introduction provides context and lets your audience know who you are and what you represent without taking too much time.

- **Unique Selling Proposition:** Highlight what makes your business unique compared to others. For example, "Unlike other financial education programs, we provide interactive, live sessions with personalized coaching." Emphasizing your unique selling points helps differentiate your business and make it memorable.



- **Call to Action:** End with a clear request or next step to guide your audience. For example, "We're looking for partners to help us expand our reach. Can we schedule a meeting to discuss this further?" A direct call to action provides a clear path forward, making it easier for your audience to respond positively to your pitch.

Difference Between a Business Plan and a Pitch Document

While both a business plan and a pitch document aim to convey the viability of a business, they serve different purposes:

Business Plan: A comprehensive document that details the business strategy, market analysis, financial projections, and operational plan. It is typically lengthy and used for internal planning and detailed investor reviews.

Pitch Document: A concise presentation, often in slide format, designed to quickly convey the

key aspects of the business to potential investors or stakeholders. It is shorter, more visual, and focuses on high-impact information.

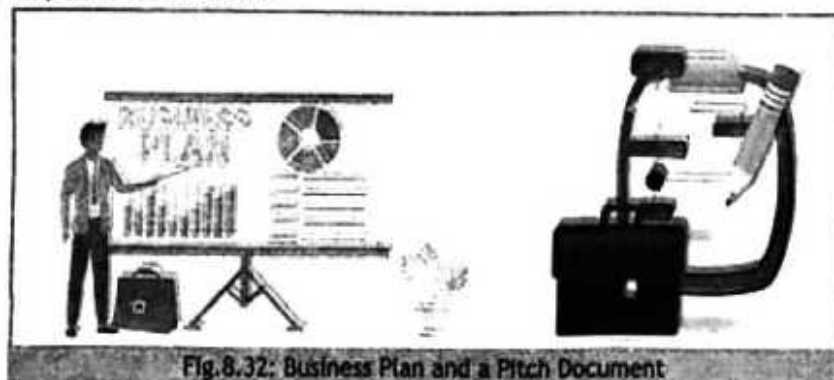


Fig.8.32: Business Plan and a Pitch Document

Effective Communication Skills to Articulate a Business Idea

- **Clarity:** Communicate your ideas clearly and concisely to avoid misunderstandings. This is especially important when discussing complex topics, as it makes your ideas accessible to everyone.
- **Confidence:** Speak with confidence to convey credibility and persuade your audience. Confidence can be contagious and help build trust with your audience.
- **Engagement:** Keep your audience engaged with compelling stories and examples. Engaging your audience helps maintain their attention and makes your message more impactful.
- **Active Listening:** Listen to feedback and questions from your audience to address their concerns. Active listening helps build rapport and can provide valuable insights for improving your pitch.
- **Body Language:** Use positive body language to reinforce your message and convey confidence. Non-verbal cues are a powerful part of communication and can significantly influence how your message is received.
- **Adaptability:** Be prepared to adjust your pitch based on your audience's reactions. Being adaptable shows that you are attentive and capable of responding to different situations effectively.
- **Storytelling:** Use storytelling to make your pitch more relatable and memorable. Stories are a powerful way to illustrate your points and make your message more engaging and impactful.

Difference Between a Business Plan and a Pitch Document

- **Purpose:** A business plan is a comprehensive document that outlines the details of your business, including goals, strategies, and financial projections. In contrast, a pitch document is a concise and persuasive presentation designed to attract interest and secure a meeting or investment.
- **Length:** Business plans are typically 20-40 pages long, with detailed sections on various aspects of the business. Pitch documents, on the other hand, are usually 10-15 slides or 2-3 pages, focusing on the most critical points.

-
- **Detail:** Business plans include detailed market research, financial projections, and comprehensive strategies. Pitch documents provide a high-level overview, emphasizing the unique value proposition and key financial metrics.
 - **Audience:** Business plans are intended for investors, lenders, and internal stakeholders who need an in-depth understanding of the business. Pitch documents are targeted at potential investors, partners, or customers who need a quick and compelling introduction to the business.
 - **Format:** Business plans are written documents with detailed sections, charts, and appendices. Pitch documents are visual presentations with slides that highlight key points and data.
 - **Focus:** Business plans cover the business's long-term vision, operational plans, and financial details. Pitch documents focus on the problem, solution, market opportunity, and the ask (e.g., investment or partnership).

Startup Journey: Turning a Hobby into a Business

Ayesha, a young and enterprising individual, has successfully transformed her passion for baking into a thriving business. Her journey exemplifies the power of digital marketing and sustainable practices in modern entrepreneurship. Ayesha recognized the potential of the digital age and employed several strategies to grow her business:

Social Media Mastery:

She consistently shared visually appealing posts of her baked goods on Instagram and Facebook, using relevant hashtags to reach a wider audience. Ayesha ran contests and giveaways to encourage user engagement and generate buzz. She collaborated with local food bloggers and influencers to promote her products to their followers.

E-commerce Platform:

Ayesha created an online store to sell her products directly to customers, offering a convenient shopping experience. She integrated secure payment gateways to facilitate online transactions. She partnered with a reliable delivery service to ensure timely delivery of orders.

Marketing:

Ayesha optimized her website and social media content with relevant keywords to improve search engine visibility. She started a blog to share baking tips, recipes, and behind-the-scenes stories, attracting organic traffic.

Ayesha's commitment to sustainability has further enhanced her brand image:

- She prioritized sourcing ingredients from local farmers and suppliers to support the community and reduce carbon footprint.
- She used eco-friendly packaging materials, such as biodegradable containers and recyclable paper bags.
- Ayesha implemented strategies to minimize food waste, including composting and donating excess products to local charities.

Despite her success, Ayesha faced challenges:

- The bakery industry is competitive, but Ayesha differentiated herself by offering unique flavors and personalized services.
- She ensured consistent quality while scaling the business required careful planning and efficient operations.
- Ayesha learned to prioritize tasks, delegate responsibilities, and maintain a healthy work-life balance.

Unit Summary

- **Research:** A systematic process to discover, interpret, or revise facts. It includes identifying a problem, gathering data, analyzing it, and drawing conclusions.
- **Qualitative Research:** Research expressed in words to understand concepts or experiences. Uses interviews, observations, and literature reviews.
- **Quantitative Research:** Research based on numbers, using statistical analysis. Methods include surveys, experiments, and observations.
- **Data Collection Methods:** Various methods, such as surveys and interviews, collect data as numbers (quantitative) or words (qualitative).
- **Closed-Ended Questions:** Questions offering fixed responses, useful for collecting categorical or numerical data.
- **Open-Ended Questions:** Questions allowing broader answers, useful for understanding opinions but requiring more effort to analyze.
- **Analyzing Quantitative Data:** Uses statistical tools to find patterns and report results with graphs or tables.
- **Analyzing Qualitative Data:** Involves identifying themes in text or visual data. Methods include content or discourse analysis.
- **Market Validation:** A process to test a product's market need by collecting feedback or conducting surveys.
- **Business Pitch:** A brief presentation showcasing a business idea, including its problem, solution, market, and financial model.
- **Effective Communication Skills:** Clarity, active listening, and positive body language are essential for delivering a successful business pitch.
- **Research bias:** Systematic errors that can distort findings, such as information bias, sampling bias, or omitted variable bias.
- **Survey:** A research tool involving questions distributed to a sample to collect quantitative or qualitative data.
- **Sampling bias:** A type of bias where the sample does not represent the population being studied.
- **Ethnography:** A qualitative research method where researchers immerse themselves in a community to observe behaviors and culture.
- **Open-ended questions:** Questions that allow respondents to provide detailed, unrestricted answers.
- **Closed-ended questions:** Questions that offer a fixed set of responses for participants to choose from.

- **Likert scale:** A survey tool where participants rate their level of agreement or satisfaction on a scale.
- **Market validation:** The process of evaluating a product's feasibility and demand in the target market.
- **Nominal variable:** A categorical variable without a specific order, such as ethnicity or gender.
- **Ordinal variable:** A categorical variable with a clear order, like rankings (e.g., "satisfied" to "dissatisfied").
- **Quantitative analysis:** Analyzing numerical data to identify patterns, correlations, or causations.
- **Qualitative content analysis:** A method to identify themes or patterns in textual or visual data.
- **Discourse analysis:** Study of communication within social contexts to understand meanings and relationships.
- **Customer profiling:** Analyzing customer characteristics such as demographics, behavior, and preferences to understand their needs better.
- **Business pitch:** A concise presentation that outlines a business idea, problem, solution, and market opportunity.
- **Financial projections:** Estimated future financial performance, such as revenue or profit, used to assess business viability.
- **Active listening:** The practice of attentively listening to others to understand and respond effectively.
- **Body language:** Non-verbal communication through gestures, posture, and expressions to convey confidence and clarity.

Exercise

Q1. Select the best answer for the following MCQs.

1. What is the primary goal of quantitative research?
 - a) To understand concepts and experiences
 - b) To test or confirm theories and assumptions
 - c) To explore cultural and behavioral patterns
 - d) To gather in-depth insights on subjective topics
2. Which of the following is a common method in qualitative research?
 - a) Statistical analysis
 - b) Surveys with closed-ended questions
 - c) Thematic analysis
 - d) Experiments
3. In quantitative research, what type of data is typically used for statistical analysis?
 - a) Textual descriptions
 - b) Words and meanings
 - c) Numerical values
 - d) Visual images
4. Which method would you use if you want to understand how people feel about a new product?
 - a) A survey with Likert scale questions
 - b) A series of in-depth interviews
 - c) An experimental study
 - d) Observational data analysis
5. Which type of question is best suited for collecting detailed feedback and open-ended responses?
 - a) Closed-ended question
 - b) Likert scale question
 - c) Open-ended question
 - d) Binary question
6. What is a common problem with self-administered questionnaires?
 - a) High cost
 - b) High response rates
 - c) Nonresponse bias
 - d) Experimenter bias
7. Which method is typically used to ensure that the results of a questionnaire are not influenced by how questions are framed?
 - a) Using leading questions
 - b) Using double negatives
 - c) Balanced framing
 - d) Avoiding jargon

-
8. Which step in market validation involves estimating the potential market size and share for your product?
- a) Conducting customer validation interviews
 - b) Writing down goals, assumptions, and hypotheses
 - c) Testing your product or service
 - d) Assessing market size and share
9. What type of data is useful for researching the search volume of related terms?
- a) Qualitative feedback from interviews
 - b) Secondary data from market reports
 - c) Monthly search volume data from search engines
 - d) Customer demographic data
10. What information is typically included in a customer profile?
- a) Financial statements of the business
 - b) Demographics, behaviors, and pain points of customers
 - c) Market trends and competitive analysis
 - d) Internal company processes
11. What is one benefit of creating customer profiles?
- a) Reduces the need for market research
 - b) Decreases customer acquisition costs
 - c) Eliminates the need for customer service
 - d) Increases product complexity
12. What is the primary purpose of a business pitch?
- a) To provide a comprehensive analysis of the business strategy.
 - b) To persuade investors or stakeholders of the business's potential and value.
 - c) To detail the day-to-day operations of the business.
 - d) To outline the long-term financial projections and market analysis.
13. Which component of a business pitch addresses how your business will make money?
- a) Problem Statement
 - b) Solution
 - c) Business Model
 - d) Market Opportunity

14. In an elevator pitch, what is the primary purpose of the “hook”?

- a) To introduce the team members.
- b) To provide detailed financial projections.
- c) To grab the audience’s attention and spark interest.
- d) To explain the competitive analysis.

15. What is the main difference between a business plan and a pitch document?

- a) A business plan is more concise and visually appealing than a pitch document.
- b) A pitch document includes detailed market research and financial projections.
- c) A business plan is used for internal planning and detailed investor reviews, while a pitch document is designed for a quick, compelling introduction.
- d) A business plan is shorter and less detailed than a pitch document.

16. Which of the following is NOT a key component of a successful elevator pitch?

- a) Unique Selling Proposition
- b) Detailed Financial Projections
- c) Brief Introduction
- d) Call to Action

17. What should be the focus of a pitch document?

- a) Long-term operational plans
- b) Detailed market research
- c) High-impact information and key points to spark interest
- d) Extensive financial data and projections

18. Which of the following best describes the term “Market Opportunity” in a business pitch?

- a) The financial model of the business
- b) The potential market size and growth prospects for the business
- c) The competitors in the industry
- d) The unique features of the business’s product or service

19. What role does "Active Listening" play in pitching a business idea?

- a) It helps to provide detailed financial data.
- b) It allows for better adaptation based on audience feedback.
- c) It focuses on presenting a detailed operational plan.
- d) It ensures that the pitch remains under 10 minutes.

20. Which of the following is an example of a call to action in an elevator pitch?

- a) "Our team has extensive experience in finance."
- b) "We project a revenue of \$500,000 in the first year."
- c) "Can we schedule a meeting to discuss potential investment opportunities?"
- d) "Our solution is unique compared to others."

Q2. Write answers of the following short response questions.

1. Explain how a mixed-methods approach combines qualitative and quantitative research.
2. List two potential biases in quantitative research and briefly describe their impact.
3. Identify the main difference between open-ended and closed-ended questions in a questionnaire?
4. Describe one advantage and one disadvantage of researcher-administered questionnaires.
5. Explain why alpha and beta testing are important in the product validation process.
6. How can customer validation interviews contribute to market validation?
7. What role do customer profiles play in marketing strategies?
8. Discuss how customer profiling can reduce customer churn.

Q3. Write answers of the following extended response questions.

1. What is research? Discuss the differences between quantitative and qualitative research.
2. What is market validation. Discuss how market validation is determined.
3. Discuss how customer profiles are created.
4. What is business pitching. Discuss the components of a successful business pitch.
5. Discuss the difference between a business plan and a pitch document.



Activity 3

Do research for your target market? For products similar to yours, research sales data, the number and share of current manufacturers, and what percentage of the total market your segment holds. Determine where your product fits into the market and assess how much of it your business could own.



Activity 4: Pitch Practice Session

Objective: To practice delivering a business pitch effectively.

Instructions:

Preparation: Choose a business idea or use a provided scenario. Prepare a pitch using the components discussed (Problem Statement, Solution, Market Opportunity, etc.).

Delivery: Deliver your pitch to a group of peers or mentors. Focus on clarity, confidence, and engagement.

Feedback: After the pitch, receive feedback from your audience on what worked well and what could be improved.

Revision: Revise your pitch based on the feedback and practice delivering it again.



Activity 5: Elevator Pitch Writing

Objective: To develop a concise and engaging elevator pitch.

Instructions:

Scenario: Imagine you have 60 seconds in an elevator with a potential investor. Write an elevator pitch that includes a hook, brief introduction, unique selling proposition, and call to action.

Peer Review: Share your pitch with a classmate or group for feedback on its effectiveness and clarity.

Refinement: Refine your pitch based on feedback and practice delivering it.



Activity 6: Comparative Analysis

Objective: To understand the differences between a business plan and a pitch document.

Instructions:

Research: Find examples of both a business plan and a pitch document online.

Comparison: Create a comparison table highlighting key differences in purpose, length, detail, audience, format, and focus.

Presentation: Present your findings to the class, explaining how each document serves its intended purpose.





Activity 7: Competitive Analysis Exercise

Objective: To identify and analyze competitors and define a unique selling proposition.

Instructions:

Research: Identify at least three competitors in a chosen industry or field.

Analysis: Analyze their strengths, weaknesses, and market positioning.

Unique Selling Proposition: Define what makes your business different and better than these competitors.

Presentation: Create a brief report or presentation summarizing your competitive analysis and unique selling proposition.



Activity 8: Financial Projection Workshop

Objective: To create basic financial projections for a business.

Instructions:

Scenario: Use a fictional business scenario or a real business idea you are familiar with.

Projection: Develop basic financial projections including expected revenue, expenses, and profitability for the first year.

Review: Compare your projections with classmates or a mentor to evaluate their realism and accuracy.



Activity 9: Storytelling Practice

Objective: To use storytelling to make a pitch more engaging.

Instructions:

Personal Story: Choose a personal story related to your business idea or a success story from your industry.

Integration: Integrate this story into your pitch to illustrate a key point or emotional connection.

Presentation: Share your pitch with the integrated story and receive feedback on how it impacted the overall message.



Activity 10: Problem Identification Brainstorming Session

Objective: To help students identify real-world problems that can be addressed through innovative business solutions.

Materials Needed:

Whiteboard or flip chart

Markers

Sticky notes

Timer

Instructions:

1. **Introduction (10 minutes):** Briefly explain the importance of identifying problems in the business world. Discuss examples of successful businesses that solved specific problems.
2. **Brainstorming (15 minutes):** Divide students into small groups. Give each group a set of sticky notes. Set a timer for 10 minutes and ask them to write down as many problems they can think of in their community or school (one problem per sticky note).
3. **Group Sharing (15 minutes):** After time is up, each group takes turns sharing their problems. Write the problems on the whiteboard, categorizing them (e.g., environmental issues, education gaps, health concerns).
4. **Reflection (10 minutes):** As a class, discuss which problems resonate most with them and why. Encourage students to think about potential business solutions for these problems.



Activity 11: Create a Business Pitch

Objective: To teach students how to structure and deliver a business pitch.

Materials Needed:

Pitch template handouts (including sections like Problem, Solution, Market Opportunity, etc.)

Access to research tools (books, internet, etc.)

Presentation tools (poster boards, markers, or digital presentation software)

Instructions:

1. **Introduction (10 minutes):** Explain the components of a successful business pitch, using examples from the provided material.
2. **Team Formation (5 minutes):** Divide students into small groups of 3-4.
3. **Pitch Development (30 minutes):** Each group selects one problem from the previous activity and creates a business pitch using the provided template. They should clearly define their problem, solution, market opportunity, business model, and marketing strategy.
4. **Presentation (20 minutes):** Each group presents their pitch to the class, aiming for 3-5 minutes each. Encourage students to use engaging storytelling techniques and positive body language.
5. **Feedback Session (10 minutes):** After each presentation, allow time for questions and constructive feedback from peers.



Activity 12: Elevator Pitch Challenge

Objective: To practice delivering a concise and impactful elevator pitch.

Materials Needed:

Timer

Evaluation criteria handouts (clarity, engagement, uniqueness, call to action)

Prize (optional, for motivation)

Instructions:

1. **Introduction (10 minutes):** Explain what an elevator pitch is and its importance in the business world. Share tips for creating an effective pitch.
2. **Pitch Preparation (15 minutes):** Each student chooses a business idea (either their own or one from the previous activities) and prepares a 30-second elevator pitch.
3. **Pitching Round (20 minutes):** Students take turns delivering their elevator pitches in front of the class. Use a timer to keep each pitch to 30 seconds.
4. **Peer Evaluation (10 minutes):** After all pitches are delivered, students use the evaluation criteria to provide feedback on their peers' pitches.
5. **Reflection and Discussion (10 minutes):** Conclude with a discussion on what makes a pitch effective and how students can improve. Optionally, recognize the best pitch with a small prize to encourage participation.

Annexure 1

ASCII Non-Printing Control Codes Chart

Decimal	Hex	Oct	Abbr.	Description	Decimal	Hex	Oct	Abbr.	Description
0	0	000	NUL	null	16	10	020	DLE	data link escape
1	1	001	SOH	start of heading	17	11	021	DC1	device control 1
2	2	002	STX	start of text	18	12	022	DC2	device control 2
3	3	003	ETX	end of text	19	13	023	DC3	device control 3
4	4	004	EOT	end of transmission	20	14	024	DC4	device control 4
5	5	005	ENQ	inquiry	21	15	025	NAK	negative acknowledge
6	6	006	ACK	acknowledge	22	16	026	SYN	synchronous idle
7	7	007	BEL	bell	23	17	027	ETB	end of transmission block
8	8	010	BS	backspace	24	18	030	CAN	cancel
9	9	011	TAB	horizontal tab	25	19	031	EM	end of medium
10	A	012	LF	line feed/new line	26	1A	032	SUB	substitute
11	B	013	VT	vertical tab	27	1B	033	ESC	escape
12	C	014	FF	form feed/new page	28	1C	034	FS	file separator
13	D	015	CR	carriage return	29	1D	035	GS	group separator
14	E	016	SO	shift out	30	1E	036	RS	record separator
15	F	017	SI	shift in	31	1F	037	US	unit separator

Annexure 2

Extended ASCII Printing Characters Chart (character codes 128-255)

This has many variations - below is the Microsoft variation and is called ANSI or Windows-

Decimal	Character	Decimal	Character	Decimal	Character	Decimal	Character
128	€	160	ı	192	À	224	à
129		161	İ	193	Á	225	á
130	,	162	¢	194	Â	226	â
131	f	163	£	195	Ã	227	ã
132	"	164	¤	196	Ä	228	ä
133	...	165	¥	197	Å	229	å
134	†	166	¦	198	Æ	230	æ
135	‡	167	§	199	Ç	231	ç
136	ˆ	168	"	200	È	232	è
137	‰	169	©	201	É	233	é
138	Š	170	ª	202	Ê	234	ê
139	‹	171	«	203	Ë	235	ë
140	Œ	172	¬	204	Ì	236	ì
141		173	-	205	Í	237	í
142	Ž	174	®	206	Î	238	î
143		175	¯	207	Ï	239	ï
144		176	°	208	Ð	240	ð
145	´	177	±	209	Ñ	241	ñ
146	´	178	²	210	Ò	242	ò
147	"	179	³	211	Ó	243	ó
148	"	180	´	212	Ô	244	ô
149	•	181	µ	213	Õ	245	õ
150	—	182	¶	214	Ö	246	ö
151	—	183	·	215	×	247	+
152	~	184	˙	216	Ø	248	ø
153	™	185	ı	217	Ù	249	ù
154	Š	186	°	218	Ú	250	ú
155	›	187	»	219	Û	251	û
156	œ	188	¼	220	Ü	252	ü
157		189	½	221	Ý	253	ý
158	ž	190	¾	222	Þ	254	þ
159	ÿ	191	¿	223	ß	255	ÿ

Annexure 3

ASCII Printing Characters Chart

Decimal	Hex	Oct	Character	Decimal	Hex	Oct	Character	Decimal	Hex	Oct	Character
32	20	040	space	64	40	100	@	96	60	140	`
33	21	041	!	65	41	101	A	97	61	141	a
34	22	042	"	66	42	102	B	98	62	142	b
35	23	043	#	67	43	103	C	99	63	143	c
36	24	044	\$	68	44	104	D	100	64	144	d
37	25	045	%	69	45	105	E	101	65	145	e
38	26	046	&	70	46	106	F	102	66	146	f
39	27	047	'	71	47	107	G	103	67	147	g
40	28	050	(	72	48	110	H	104	68	150	h
41	29	051	)	73	49	111	I	105	69	151	i
42	2A	052	*	74	4A	112	J	106	6A	152	j
43	2B	053	+	75	4B	113	K	107	6B	153	k
44	2C	054	,	76	4C	114	L	108	6C	154	l
45	2D	055	-	77	4D	115	M	109	6D	155	m
46	2E	056	.	78	4E	116	N	110	6E	156	n
47	2F	057	/	79	4F	117	O	111	6F	157	o
48	30	060	0	80	50	120	P	112	70	160	p
49	31	061	1	81	51	121	Q	113	71	161	q
50	32	062	2	82	52	122	R	114	72	162	r
51	33	063	3	83	53	123	S	115	73	163	s
52	34	064	4	84	54	124	T	116	74	164	t
53	35	065	5	85	55	125	U	117	75	165	u
54	36	066	6	86	56	126	V	118	76	166	v
55	37	067	7	87	57	127	W	119	77	167	w
56	38	070	8	88	58	130	X	120	78	170	x
57	39	071	9	89	59	131	Y	121	79	171	y
58	3A	072	:	90	5A	132	Z	122	7A	172	z
59	3B	073	;	91	5B	133	[	123	7B	173	{
60	3C	074	<	92	5C	134	\	124	7C	174	
61	3D	075	=	93	5D	135	]	125	7D	175	}
62	3E	076	>	94	5E	136	^	126	7E	176	~
63	3F	077	?	95	5F	137	_	127	7F	177	DEL

Annexure 4

256: Å	512: Ä	768: ˆ	1024: E	1280: d	1536: 𐑖	1792: 𐑚
257: å	513: ä	769: ˆ	1025: É	1281: ɖ	1537: 𐑖	:1793
258: Å	514: Ä	770: ˆ	1026: Ɔ	1282: ɖ	1538: 𐑖	:1794
259: å	515: ä	771: ˆ	1027: Ɔ	1283: ɖ	1539: 𐑖	:1795
260: A	516: Ê	772: ˆ	1028: Ê	1284: ɖ	1540: 𐑖	:1796
261: a	517: ê	773: ˆ	1029: S	1285: ɖ	𐑖:1541	:1797
262: C	518: Ê	774: ˆ	1030: I	1286: ɖ	𐑖:1542	:1798
263: c	519: ê	775: ˆ	1031: Ĩ	1287: ɖ	𐑖:1543	:1799
264: Ć	520: Ĩ	776: ˆ	1032: J	1288: 𐑚	𐑖:1544	:1800
265: ċ	521: ĩ	777: ˆ	1033: Ь	1289: 𐑚	𐑖:1545	:1801
266: Ć	522: Ĩ	778: ˆ	1034: Ь	1290: 𐑚	𐑖:1546	:1802
267: ċ	523: ĩ	779: ˆ	1035: Ɔ	1291: 𐑚	𐑖:1547	:1803
268: Ć	524: Ō	780: ˆ	1036: K	1292: G	:1548	:1804
269: ċ	525: ō	781: ˆ	1037: Ɔ	1293: c	𐑖:1549	:1805
270: Đ	526: Ō	782: ˆ	1038: Ÿ	1294: 𐑚	𐑖:1550	:1806
271: đ	527: ô	783: ˆ	1039: Ț	1295: 𐑚	𐑖:1551	:1807
272: Đ	528: Ŗ	784: ˆ	1040: A	1296: É	𐑖:1552	:1808
273: d	529: ř	785: ˆ	1041: B	1297: É	𐑖:1553	:1809
274: Ê	530: Ŗ	786: ˆ	1042: B	1298: Ț	𐑖:1554	:1810
275: ê	531: ř	787: ˆ	1043: Ɔ	1299: Ț	𐑖:1555	:1811
276: Ê	532: Ū	788: ˆ	1044: Д	1300: ƆX	𐑖:1556	:1812
277: ê	533: ū	789: ˆ	1045: E	1301: ƆX	:1557	:1813
278: Ê	534: Ū	790: ˆ	1046: Ж	1302: ƆX	𐑖:1558	:1814
279: e	535: ū	791: ˆ	1047: 3	1303: ƆX	𐑖:1559	:1815
280: E	536: \$	792: ˆ	1048: Ɔ	1304: ƆE	𐑖:1560	:1816
281: q	537: \$	793: ˆ	1049: Ɔ	1305: ƆE	𐑖:1561	:1817
282: Ê	538: Ț	794: ˆ	1050: K	1306: Q	𐑖:1562	:1818
283: ê	539: Ț	795: ˆ	1051: Л	1307: q	:1563	:1819
284: Ĝ	540: 3	796: ˆ	1052: M	1308: W	𐑖:1564	:1820
285: ĝ	541: 3	797: ˆ	1053: H	1309: w	𐑖:1565	:1821
286: Ĝ	542: Ĥ	798: ˆ	1054: O	1310: K	𐑖:1566	:1822
287: ĝ	543: ĥ	799: ˆ	1055: П	1311: κ	𐑖:1567	:1823
288: G	544: Ț	800: ˆ	1056: P	1312: Ț	𐑖:1568	:1824
289: g	545: Ț	801: ˆ	1057: C	1313: Ț	:1569	
290: G	546: 8	802: ˆ	1058: T	1314: Ț	:1570	

Glossary

Access Control	Policies and mechanisms that restrict access to resources based on user roles and permissions.
Algorithm	A well-defined, step-by-step procedure or set of rules for solving a specific problem or performing a task.
Binary Arithmetic	Computers perform addition, subtraction, multiplication, and division in binary.
Blockchain	A digital ledger or database of transactions that continuously grows. It is created, maintained and shared by network users.
Churn Prediction	The technique to find out the possibility of a customer, to stop taking the services or products of a certain company. It is used in the fields of business and marketing.
Cloud computing	The delivery of computing services such as servers, storage, database, networking and application software over the cloud (Internet).
Collaboration	The use of digital devices involves networking and collaboration with other people across distances.
Combination	A selection of items from a set where the order of selection does not matter.
Computer vision	It is a specialized branch of AI that teaches computers to draw meaningful results from digital images, videos and other visuals.
Computing problem	In computer science is one that is solved step-by-step through computation.
Computational Thinking	A way of solving problems by using ideas from computer science.
Cookies	Small text files stored on a user's device to track online activity, which can raise privacy concerns.
Cybersecurity	The practice of protecting computer systems, networks, and data from unauthorized access, cyberattacks, and other malicious activities.
Cryptocurrency	A digital (or virtual) currency that facilitates direct payment without the involvement of intermediaries such as bank.
Cyberbullying	Online harassment or bullying that can cause emotional distress and has significant negative impacts on individuals.
Database	A collection of related data stored in the form of tables.

Data Cleaning	Is about fixing the data to make sure it's ready for analysis.
Data Encryption	The process of converting data into a coded format to prevent unauthorized access.
Data Modeling	A structure that represents the data and how different parts relate to each other.
Debugging	IDEs provide tools for finding and fixing bugs by stepping through code.
Digital literacy	It is the ability to create information in a digital environment.
Digital Search/Information Literacy	It is the ability to collect, understand and evaluate information from various sources.
IoT	An infrastructure that consists of network of servers that provides connectivity between multiple devices and facilitates man to machine and machine to machine interaction.
Natural Language Processing (NLP)	A branch of Artificial Intelligence which gives computers the ability to understand text and spoken words the same way humans do.
Permutation	An arrangement of all the members of a set into a specific sequence or order.
Podcast	It is a series of audio or video files that are released on a regular schedule.
Robotics	A combination of artificial intelligence and engineering which involves designing, creation and operation of automated machine programmed to perform tasks like humans.
Searching	The process of finding a particular item within a set.
Sorting	The process of arranging items in a specific order.
Spam	Unwanted and often malicious emails that compromise user privacy and security.
Spyware	Malicious software that secretly monitors and collects personal information from users.
VPN (Virtual Private Network)	A service that encrypts internet connections, enhancing privacy and security.

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