

UNIT - II

Problem and Customer Identification

1. Introduction

Successful innovation begins with understanding the problem before developing the solution. Entrepreneurs should not begin with “What product can I make?” They should first ask: “What problem are customers facing, and why is the existing solution not satisfactory?”

Problem and customer identification focuses on customer needs, pain points, unmet needs, market gaps, and difficulties experienced by users. This process helps entrepreneurs develop products and services that create real value.

2. Meaning of Problem Identification

Problem identification is the process of discovering, defining, and clearly understanding a specific difficulty, need, or dissatisfaction faced by customers.

A useful opportunity often follows this sequence:

Customer Problem → Existing Solution Is Inadequate → Opportunity for Innovation

Example: Small retailers may struggle to maintain daily sales and inventory records manually. This can create an opportunity for a simple mobile-based inventory and billing application.

3. Identification of Market Gaps

A gap is the difference between what customers need or expect and what the market currently provides.

Customer Expectation – Existing Market Offering = Market Gap

Finding gaps helps entrepreneurs identify opportunities for new products, improved services, or better business models.

Example: Customers in some small towns may want affordable online grocery delivery, while major platforms may not serve every locality. The gap is limited local availability, creating an opportunity for a hyperlocal delivery service.

4. Types of Market Gaps

4.1 Product Gap

An existing product does not adequately satisfy customer requirements.

Example: An affordable smartphone may offer good performance but poor battery life. An opportunity may exist for an affordable phone with longer battery life.

4.2 Service Gap

Customers may be dissatisfied with service quality, speed, convenience, or availability.

Example: Customers in smaller towns may struggle to obtain quick home-appliance repairs, creating an opportunity for an organized local home-service platform.

4.3 Price Gap

Customers want a product or service but existing alternatives are too expensive.

Example: A low-cost regional-language learning platform can address students who cannot afford premium online learning services.

4.4 Accessibility Gap

A useful product or service is not easily available to a particular group or location.

Example: Farmers in remote villages may have limited access to agricultural advisory services, creating an opportunity for local-language mobile advisory services.

4.5 Quality Gap

Customers expect better quality than what is currently available.

Example: Customers seeking hygienic and standardized street-food delivery may create an opportunity for organized preparation and packaging.

4.6 Convenience Gap

Customers spend excessive time, effort, or resources completing a task.

Example: Mobile banking and UPI reduce the need to visit banks for many basic services.

4.7 Information Gap

Customers cannot easily obtain reliable information needed for decisions.

Example: A course-comparison platform can bring together fees, eligibility, reviews, placement information, and other decision-support information.

5. Customer Identification

Customer identification is the process of determining who experiences the problem, who uses the solution, and who is willing to pay for it.

Entrepreneurs should not assume that everyone is their customer. Three questions are especially important:

- Who has the problem?
- Who will use the solution?
- Who will pay for the solution?

These roles can be different. For example, a student may use an educational application, parents may pay for it, and a college may influence the purchase decision.

6. Customer Segmentation

Customer segmentation divides customers into groups with common characteristics.

Basis	Examples
Age	Students, working professionals, senior citizens

Income	Low-income, middle-income, high-income
Location	Rural, urban, semi-urban
Occupation	Farmers, employees, business owners
Behaviour	Frequent users, occasional users
Needs	Budget customers, premium customers

Example: A food-delivery business may segment customers into students, working professionals, families, and office employees. Students may value low price, employees may value speed, and families may value quantity and variety.

7. Customer Pain Points

A pain point is a specific problem or difficulty that causes inconvenience, dissatisfaction, expense, or frustration.

- High price
- Poor quality
- Long waiting time
- Lack of availability
- Difficult processes
- Poor customer service
- Limited choices
- Lack of transparency
- Transportation problems
- Technical difficulties

Example: If food delivery takes too long, the pain point is long delivery time. Possible innovations include better route optimization and local delivery hubs.

8. Methods of Identifying Problems

8.1 Customer Interviews

Entrepreneurs directly talk to customers about their experiences, difficulties, and expectations.

8.2 Surveys

Surveys collect information from a large number of potential customers and help identify recurring problems.

8.3 Observation

Observation involves watching customers perform real activities. For example, long queues at a service centre may reveal an opportunity for an online appointment and token system.

8.4 Customer Feedback

Complaints, reviews, suggestions, and feedback can reveal recurring service or product problems.

8.5 Social Media Analysis

Customer comments and discussions can reveal unmet needs, such as repeated complaints about delivery delays, packaging, or quality.

8.6 Competitor Analysis

Comparing competitors helps identify what they do not provide. If competitors offer similar products but none provides customization, customization may represent a market gap.

9. Illustrative Indian Business Examples

UPI

Problem: Customers wanted faster and easier payments. Gap: Need for simple, low-cost digital payments. Innovation: Mobile-based payments using digital interfaces and QR codes. Learning: Everyday problems can become sources of innovation.

Quick-Commerce

Problem: Customers wanted groceries and daily essentials quickly. Gap: Traditional shopping involved travel and waiting. Opportunity: Fast local delivery. Learning: Time-saving and convenience can be strong sources of innovation.

Urban Company

Problem: Customers often found it difficult to locate reliable home-service professionals. Gap: Lack of organized and trusted providers. Opportunity: A platform connecting customers with service professionals.

Amul

Problem: Milk producers faced difficulties related to fair prices, market access, and organized distribution. Gap: Need for an organized producer-to-consumer system. Solution: A cooperative model. Learning: Innovation can be based on business-model design, not only technology.

10. Problem Identification Process

Entrepreneurs can follow a structured process:

Observe → Listen → Define the Problem → Identify the Gap → Identify the Customer
→ Validate → Develop the Opportunity

- Observe: Identify difficulties faced by people.
- Listen: Talk to customers and understand their experiences.
- Define: State clearly what is wrong.
- Identify the Gap: Compare expectations with existing solutions.

- Identify the Customer: Determine who experiences and values the problem.
- Validate: Check whether the problem is genuine and important.
- Develop the Opportunity: Create possible solutions.

11. Writing a Strong Problem Statement

A problem statement is a clear description of the customer problem that needs to be solved.

Weak: "Students need a better education system." This is too broad.

Strong: "College students in semi-urban areas face difficulty accessing affordable, reliable placement-preparation resources in regional languages."

A strong problem statement identifies the customer, location or context, problem, need, and any important special requirement.

12. Problem-Customer Fit

A good business opportunity has a strong connection between the problem and the customer.

Problem: Small retailers struggle with inventory management.
 Customer: Small retail shop owners.
 Need: Easy inventory tracking.
 Solution: Mobile inventory application.
 Value: Saves time and reduces stock-related errors.

This alignment is called Problem-Customer Fit.

13. Classroom Application: Find the Problem Around You

Students work in small groups and identify one problem they experience in everyday life.

Step	Student Activity
1	Identify a problem
2	Identify the affected customer
3	Find the existing solution
4	Identify the gap
5	Suggest an innovative solution

Example: Students wait in long canteen queues. Customer: students. Existing solution: physical ordering. Gap: no advance ordering. Innovation: a canteen pre-ordering system. Value: saves time and reduces queues.

14. Core Teaching Tools for Innovation and Entrepreneurship

Innovation and Entrepreneurship is best learned through active participation. Classroom activities, innovation games, Generative AI, field-based activities, MVP testing, and venture activities help students move from theory to practice.

14.1 Classroom Activities

These exercises encourage students to observe, think, discuss, create, and present. Objectives include creativity, teamwork, problem-solving, communication, application of concepts, and confidence.

14.2 Innovation Auction

Give each group imaginary money and present several business ideas. Students decide where to invest and justify their decisions based on customer problem, value, willingness to pay, and competitive advantage. The activity teaches that a good idea must create value.

14.3 Problem-to-Opportunity Game

Give a common problem and ask teams to identify the customer, root cause, gap, solution, and business model within a short time.

Problem → Customer → Root Cause → Gap → Solution → Business Model

15. Generative AI as a Teaching Tool

Generative AI can create text, images, ideas, business concepts, presentations, marketing content, prototypes, and research summaries. In entrepreneurship education, it can act as a thinking partner, but students must verify important outputs.

Idea Generation

Students can use AI to generate alternative business ideas and then evaluate them against real customer needs.

Customer Persona

AI can create a preliminary persona containing age, education, goals, problems, buying behaviour, and communication preferences. Students should validate these assumptions with real customers.

Problem and Competitor Analysis

AI can help organize possible causes, stakeholders, existing solutions, and competitor comparisons. Current competitor information must be independently verified.

SCAMPER

Students can apply Substitute, Combine, Adapt, Modify, Put to Another Use, Eliminate, and Rearrange to improve an existing product or service.

Business Model Development

AI can support preliminary work on value proposition, customer segments, revenue model, channels, key activities, and cost structure. These assumptions must be tested with actual customers.

AI generates possibilities; customers provide evidence.

16. Get Out of the Building

The Get Out of the Building activity takes students beyond the classroom to interact with real customers, users, businesses, and stakeholders. Its central principle is: do not build a business based only on assumptions; learn from real people.

Students learn to observe problems, interview customers, understand behaviour, identify pain points, validate assumptions, discover market gaps, and collect evidence.

Field Activity Process

- Select a problem.
- Identify customers and stakeholders.
- Visit the market or workplace with permission.
- Interview users with short, respectful questions.
- Observe actual operations.
- Record evidence, customer, existing solution, and gap.
- Return to class and present findings.

Example: Kirana-store example: An initial assumption may be that shops mainly need billing software. Field interviews may instead reveal bigger problems such as credit tracking, stock shortages, supplier coordination, and cash-flow tracking. The validated problem can therefore be reframed around integrated credit and inventory tracking.

Fieldwork Rules

- Take permission before interviewing.
- Introduce yourself and explain the purpose.
- Ask short, respectful questions.
- Listen more than you speak.
- Protect confidential information.
- Record observations accurately.
- Do not promise products or services that do not yet exist.

17. Venture Activity

A venture activity is a practical entrepreneurial exercise in which students develop an idea into a small business concept and test whether it creates customer value.

Problem Identification → Customer Discovery → Idea Generation → Validation → Business Model → Pitch

Step 1: Identify a Problem

Example: College students cannot easily find affordable healthy snacks during breaks.

Step 2: Identify the Customer

Target customers: college students.

Step 3: Validate

Interview potential customers about current choices, difficulties, spending, preferences, and purchase frequency.

Step 4: Generate Solutions

Possible solutions include healthy snack boxes, pre-ordering, subscriptions, protein snacks, and fruit boxes.

Step 5: Select the Best Solution

Customer Value + Feasibility + Cost + Demand

Step 6: Develop an MVP

An MVP, or Minimum Viable Product, is the simplest version that can test the core customer need. Instead of building a complete food-delivery application, students might test a WhatsApp order process, simple menu, QR payment, and scheduled pickup.

18. Simple Venture Business Model

Component	Example
Problem	Students lack healthy snack options
Customer	College students
Solution	Affordable healthy snack boxes
Value	Convenient and healthier option
Channel	College campus / digital ordering
Revenue	Sale of snack boxes
Cost	Ingredients and packaging
Key Resources	Suppliers and packaging
Competition	Canteen and nearby shops

19. Venture Experiment and Validation

Students should conduct a small experiment rather than immediately launching a full business.

Example: Prepare 20 sample snack boxes and offer them to potential customers. Record interest, actual purchases, preferred products, acceptable price, feedback, and repeat-purchase interest.

Interest is not the same as purchase.

A customer saying "Nice idea" does not prove demand. Actual behaviour provides stronger evidence.

20. Venture Pitch

Each team can present its venture in approximately three minutes.

- Problem – What problem are you solving?
- Customer – Who faces it?
- Evidence – How did you validate it?
- Solution – What are you offering?
- Value Proposition – Why is it better?
- Competition – Who else solves it?
- Business Model – How will you earn revenue?
- MVP – What did you test?
- Results – What did customers say or do?
- Next Step – What will you improve?

21. Integrated Innovation Challenge

The following sequence combines the major teaching tools into one complete classroom exercise:

Classroom Problem Hunt → Innovation Game → Generative AI → Field Research → Customer Validation → MVP/Venture Test → Pitch

This sequence helps students move from assumptions to evidence and from ideas to tested solutions.

22. Assessment Rubric

Criteria	Marks
Problem Identification	10
Customer Understanding	10
Field Research	10
Idea Generation	10
Innovation	10
Customer Validation	15
MVP / Prototype	15
Business Model	10
Presentation	10
Total	100

23. Key Learning and Revision

Traditional learning often follows Teacher → Explanation → Student → Examination.
Innovation-based learning follows Problem → Explore → Discuss → Create → Test → Learn → Improve.

Teaching Tool	Main Purpose
Classroom Activities	Learning by doing
Innovation Games	Participation and decision-making
Generative AI	Generate and refine ideas
Get Out of the Building	Learn from real customers
Customer Interviews	Validate problems
MVP	Test an idea quickly
Venture Activity	Experience entrepreneurship
Venture Pitch	Communicate the opportunity

Observe → Identify Problem → Identify Customer → Find Gap → Validate → Create Solution

Entrepreneurs should understand the customer before becoming attached to an idea. Strong opportunities usually emerge from real problems, clear customer needs, identifiable market gaps, and solutions that are useful, affordable, accessible, convenient, and testable.