UNIT 3 IDENTIFYING AND DEFINING RESEARCH PROBLEMS

Learning Outcomes

After studying this unit, you should be able to:

- differentiate between a decision problem and a research problem
- appreciate the way in which a decision problem is defined in marketing research.
- demonstrate the different ways in which a decision problem is converted into a research problem.
- apply the process of developing a new concept to identify the information needs for a research study.

Structure

3.1 Introduction

3.2 Decision Area

3.3 Research Problem

3.4 Converting a Decision Area to Research Objectives

3.5 Summary

3.6 Key Words

3.7 Self-Assessment Questions

3.8 Project Question

3.9 Further Readings

3.1 INTRODUCTION

We have discussed in Unit 1 that the research process begins with the defining of a problem. For example, a fruit and vegetable merchant would be curious as to why sales of organic fruits and vegetables are really not in line with expectations. He was curious as to why he might not have received the anticipated return. What options need to be considered while making a decision? These decision-making-related problems need to be translated into research problems in order to identify the causes and offer potential solutions from which the decision-maker, in this case, the fruit and vegetable retailer, may choose the best course of action. The questions that could be used to define the research problem are

Are customers aware of the benefits of buying organic fruits and vegetables?

How might consumers be encouraged to spend more money on organic fruits and vegetables?

Which customer segments should be targeted?

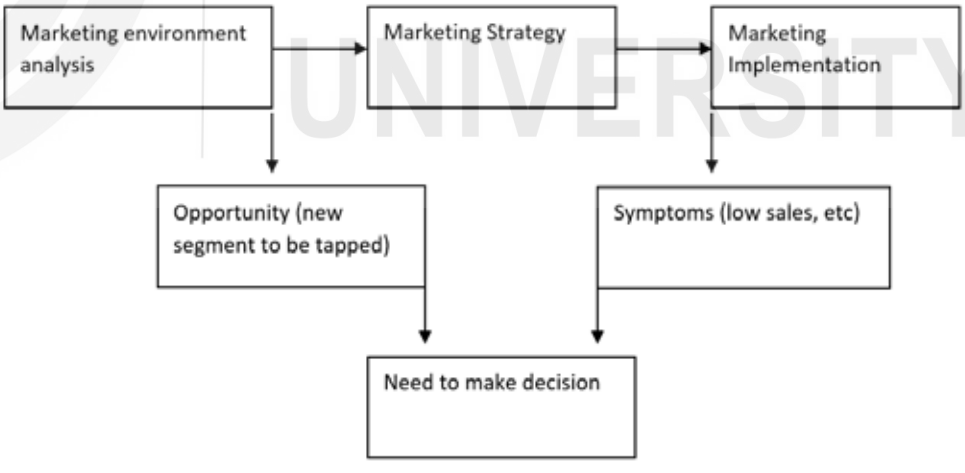
What kind of promotion strategy would be most effective?

Finding answers to these types of research questions through various steps of the research process would finally help the fruit and vegetable retailer make a decision. In this unit, we will discuss the process of identifying and defining research problems.

3.2 DECISION AREA

As we have seen, the problem definition phase is essential to the success of the research process since "a problem well defined is a problem half-solved." The probability of gathering the data needed to address the research problem increases if the problem can be properly identified. This necessitates a very precise alignment between the research problem and the problem facing the decision-maker. The major problem for marketing managers while making decisions may be what to do in a specific situation. For example, how can a decline in market share be stopped? Here, the declining market share is a symptom. There could be several reasons why market share is declining. The other situation would be when opportunities in a new market segment are found while doing a marketing environment analysis. This needs to be further explored from the perspective of marketing decision-making. These circumstances would call for decision-making, which is why they are known as decision areas. (Figure 3.1). Finding these underlying causes and establishing an opportunity is regarded as the problem of marketing research. In order to make the best possible decision, it involves identifying the causes and obtaining the information that is required. The first stage of the research process would therefore be to transform the decision-making process into the research process by identifying the information that the decision maker needs. This stage is known as problem definition stage.

Figure 3.1: Decision Area



Pingali, 2010

Activity 1

Talk to the marketing manager of your organisation or any other organisation that you are familiar with and identify any two decision areas that need to be addressed.

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3.3 RESEARCH PROBLEM

The process of defining research problems begins with the formulation of the research objectives. Research objectives are a general definition of the information needed for marketing research studies (e.g., understanding the effectiveness of advertisement). At the beginning of the research process, it might not be feasible to state the problem clearly because, at that point often only the symptoms of the problem are visible. In order to define the problem situation, some exploratory research may be done prior to formulating a more detailed problem statement. Since marketing research is an expensive process in terms of both time and money, a clear problem definition is essential. By paying close attention to how the problem is defined, the researcher can establish appropriate study objectives, which in turn make it easier to collect useful and affordable data. Surveys of secondary data, experience surveys, or pilot studies are the methods that are most commonly used.

According to FAO (1997), a marketing researcher must convert the problem of the decision-maker into research objectives that are "clear, concise, attainable, measurable, and quantifiable."

These research objectives are divided into a wide range of research questions that would yield the precise information required to deal with the decision area. For example, the research questions for a study to prepare an action plan to ensure citizens follow Covid Protocol would be.

1. Who are following, not following?
    i. Vaccinated
        a. No. of doses
    ii. Infected
    iii. Demographic profile
2 What
    i. What guidelines are they following, not following?
        a. Gaps
    ii. What are the consequences of not following?
    iii. What do they think about the rules?
3. When are they following?
    i. Occasions
4. How do they get the information?

5. Why are they following?
    i. Fear
    ii. Following as there is no option
        a. Livelihood
        b. Job requirement
        c. Peer pressure
        d. Compulsion
    iii. Not Following
        a. Vaccinated
        b. Infected
        c. Frustrated
        d. Nothing will happen
        e. Problem is over

Despite its importance, many marketing research studies lack a clear definition of the problem. There is an assumption that marketing issues are well-known, simple to define, and obvious. For instance, a decline in sales is merely an effect; it is not a problem. The true problem may lie in how well the brand is accepted as well as in the pricing, promotion, availability, and so on. In order to obtain relevant information to fix the problems, it becomes necessary to discover the true nature of the problem. As stated by Chapman (1989),

(a) Often, the decision maker does not know what the precise problem is. There may only be a feeling that something is wrong, or perhaps a sense that marketing research "would be a good."

(b) Problems are usually "buried under a heap of symptoms." Problem-definition may involve probing into the symptoms to identify the problem.

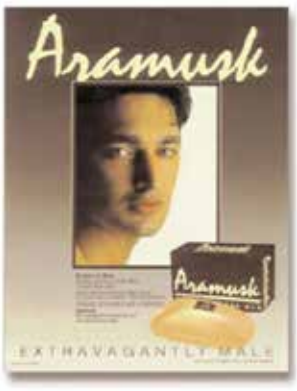
As a result, the process of transforming the decision problem into a research problem is very important.

3.4 CONVERTING A DECISION AREA TO RESEARCH OBJECTIVES

The way the decision maker defines the decision problem is termed as the research brief.

For example, if Wipro Consumer Care and Lighting Ltd, wants to study the success of Aramusk's relaunch (Exhibit 3.1). The research brief could be:

Exhibit 3.1

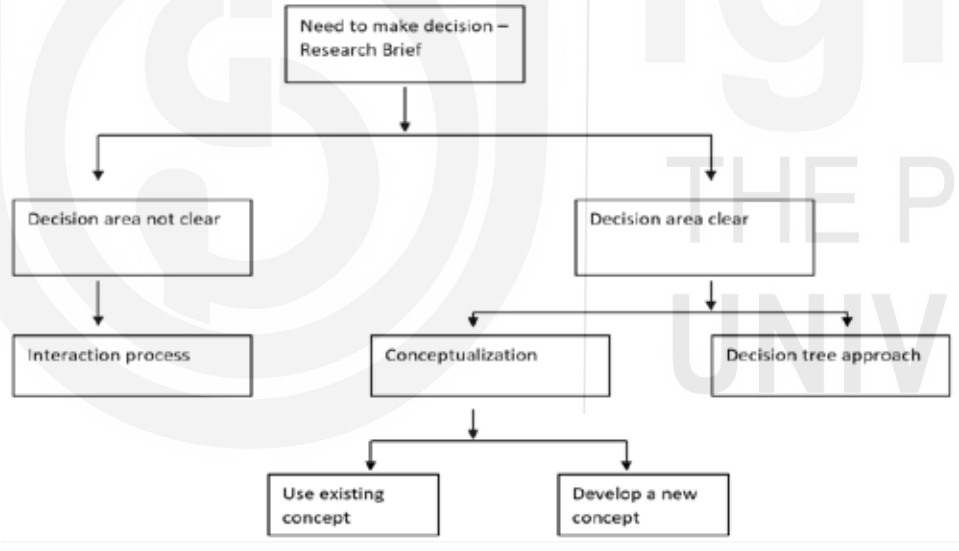


Shaw Wallace first launched Aramusk soap nearly four decades ago. Though the positioning was unique and predicted to be a success, the brand failed.

The country's oldest deodorant men's soap, Aramusk, is back on the shelves. Aramusk is now headed for a nationwide roll-out as an umbrella, premium men's grooming brand with Bollywood film star Shahid Kapoor as the brand ambassador by Wipro Consumer Care and Lighting Ltd. Would the relaunch be successful?

By using the research brief, the decision-maker and the researcher should work together to identify the study problems. Figure 3.2 illustrates the various methods for identifying the research problem from the decision problem.

Figure 3.2: Process of developing Research problem



The different ways of converting a decision problem to a research problem area:

a. Interaction method:

b. Decision tree approach

c. Conceptualization:

   i. Using existing concept

   ii. Developing a new concept

3.4.1 Interactive method

The interactive approach should be used if a decision maker is unable to state the problem clearly. The researcher can formulate a preliminary

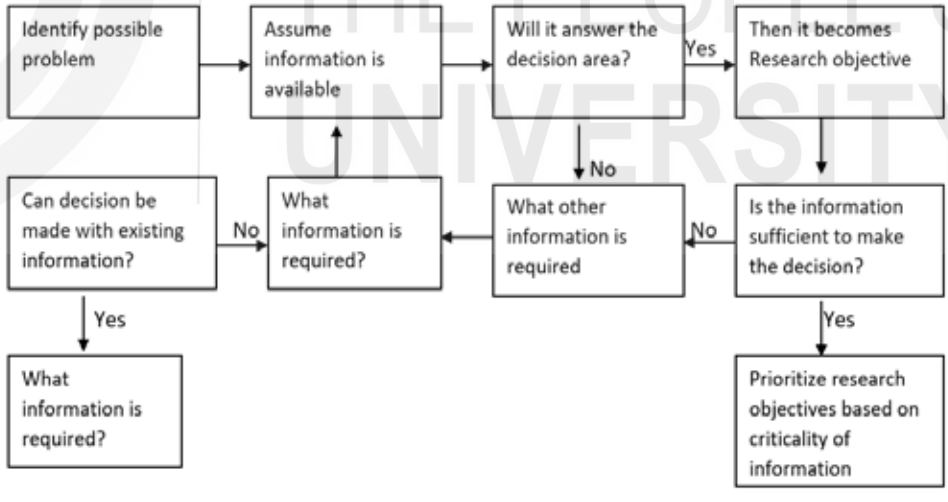
problem statement by asking general questions such as "Why do you feel the need for research?" and "What do you (don't) know about the situation?" (Chapman 1989).

Starting with the preliminary formulated problem statement, the researcher should then move on to more in-depth questions for the decision maker. The following are examples of such questions:

1. Why carry out marketing research when you might just make your decision based on existing knowledge?
2. What information will make a difference in the decisions to be made?
3. Does the decision maker really need to know this?
4. What decisions can be made with the information? If the discussion suggests that the decision is not possible with this information, then the information may not useful (then go to 2). If the information is relevant, then it becomes a research objective (then go to 5).
5. Would the research objective provide sufficient information to address the decision area? If yes go to 6. If not go to 4.
6. If there are many research objectives, they must be prioritised according to how important the information is that is needed.

In order to explain the decision area and the information needed for the decision, this interaction procedure would also act as a "dummy test" (Figure 3.3).

Figure 3.3: Dummy test: The process



The dummy test will help:

a) Identify the research objectives

b) Prioritize them (in case there is a budget constraint, then it could help in deciding how the budget should be spent across the different research objectives).

It can help the decision maker to re-look at the decision area and allow modification of the decision area.

Case: Tata Steel introduces two new brands of coated products

Tata Steel has introduced a new brand of coated products, named GalvaRoS to address the unmet requirements of the emerging corporate accounts (ECAs). This product has been created to meet the evolving needs of the micro-segments, while strengthening the pillars of sustainability - economical sustainability & social sustainability, critical to growth and development. Chief of Marketing & Sales (Branded Products & Retail), Tata Steel, said: "These new product brands are the pillars of future growth and are not only eco-friendly but also eco-effective. It will create a green, healthy and productive ecosystem of stakeholders that produces eco-friendly products to meet customer needs of today and tomorrow." The overarching requirement in today's context, is to re-align, re-boot and recharge the manufacturing ecosystem, to build a resilient and future-ready MSME sector, Tata Steel said. With the launch of these innovative and environment-friendly products, the company added it reaffirms its commitment to create a sustainable ecosystem for stakeholders.

Design a marketing research study to understand the need of GalvaRos for MSME buyers.

Decision Area:

Develop a marketing plan to create a green, healthy and productive ecosystem of stakeholders that produces eco-friendly products to meet customer needs of today and tomorrow. Re-align, re-boot and recharge the manufacturing ecosystem, to build a resilient and future ready MSME sector.

The Big picture

GalvaRoS offers a host of unbeatable advantages that reduces wastage and delivers greater value. A high-quality coated steel offering that ensures a better return on investment, thereby fulfilling the need for economic sustainability to sustain businesses for tomorrow. The product is available in various grades with strict tolerance maintained.

There is a need to build a Marketing Orientation (4Cs) for the unmet needs for the emerging corporate accounts.

- Satisfy the needs of the customers,
- Better than the competitors,
- At the lowest cost,
- In the given context.

Research Objectives to be confirmed by interaction:

- Market potential (emerging corporate segments)
- Competitive advantage of Galvaros for different emerging segments
- Buying process of emerging segments of MSMEs (and variations)
- Role of influencers

Research Questions (an interactive process would help identify the gaps in information for making the decision).

What is the offer?

- Need gaps: Catering to unmet needs of emerging segments (economical sustainability & Social sustainability)
- How to define the Marketing product: Economic or environmentally friendly.
- Who should want it? (Marketing Universe- Potential/ demand)
- MSME Segments- what is the requirements currently for friendly offerings.
    - Ducting
    - HVAC
    - Cable Tray
    - Appliances
    - General Engineering
    - PEB structures
    - Artefacts

Why? (Competitive advantage)

- Benefits- how are the existing offerings on these dimensions.
    - Better yield
    - Environment friendly: 100% RoHS compliant
    - Superior corrosion resistance: Salt Spray test
    - Superior flatness guaranteed
    - Uniform coating thickness: Uniform Zinc coating adhesion
    - Strict tolerance in maintained
    - Better return on investment: By offering customised product
    - Wide range: various grades availability
    - Customization: Processed and customised material available
    - Current practices
- Why is this better than the current offerings? (Positioning)
- Differentiators for different segments
- Current need or need has to be created

How?

- Channel Information
    - Where are the MSMEs getting their current requirements?

- Does Tata Steel have a reach to supply to this channel?
- Does Tata Steel have a bargaining power with these channel partners?

- Communication Information
  - What are the communication routes available to reach them?
  - Does Tata Steel have access to these channels.
- Influencing Buying process.
  - Create Awareness
    - § Awareness about Galvoros
    - § Extent of awareness on Environment requirements
    - § Extent of awareness about Legal requirements
  - How to create Interest
    - § Credibility of sources of information
    - § Influencers and their role
  - How to create Desire
    - § Economic benefit
    - § Sustainable benefit
    - § Marketability to MSMEs consumers
  - Ensure Action
    - § Purchase intention
    - § Service requirements

Since Tata Steel would be dealing with some of these segments, their current understanding obtained through the interactive process would define the scope of the study.

3.4.2 Decision tree approach

A decision tree is defined as a model where the extracted information is sorted hierarchically by the use of connected nodes. That is, a decision tree is essentially a diagram that represents, the main events that introduce uncertainty, as well as possible outcomes of all those decisions and events. A decision tree is one of the most systematic tools of decision-making theory and practice. Such trees are particularly helpful in situations of complex multistage decision problems.

The decision tree should start with the basic questions and then break it down in to specifics. This is explained using the case of Garage Butler.

Case: Garage Butler

The Garage Butler is a device that will automatically close your garage door when you forget. You can NOW have peace of mind knowing that you NEVER have to worry about leaving it open ever again.

We all hear of reports of homes being vandalized because the garage door was left open. Everyone, at one time or another, has inadvertently left their garage door open. The investment of this add-on called the Garage Butler is a small price to pay for peace of mind. This patented device will attach to any garage door mechanism that has a working opener/closer button and will not interfere with the opener's normal operation, nor will it interfere with any infrared safety circuit.

The garage door will close after a time delay of 3-10-20-30-45 or 60 minutes. Usually the shorter time is ideal, however in the wintertime when one would like to start the car and let it warm up, a longer time is preferred to prevent the build-up of deadly exhaust fumes.

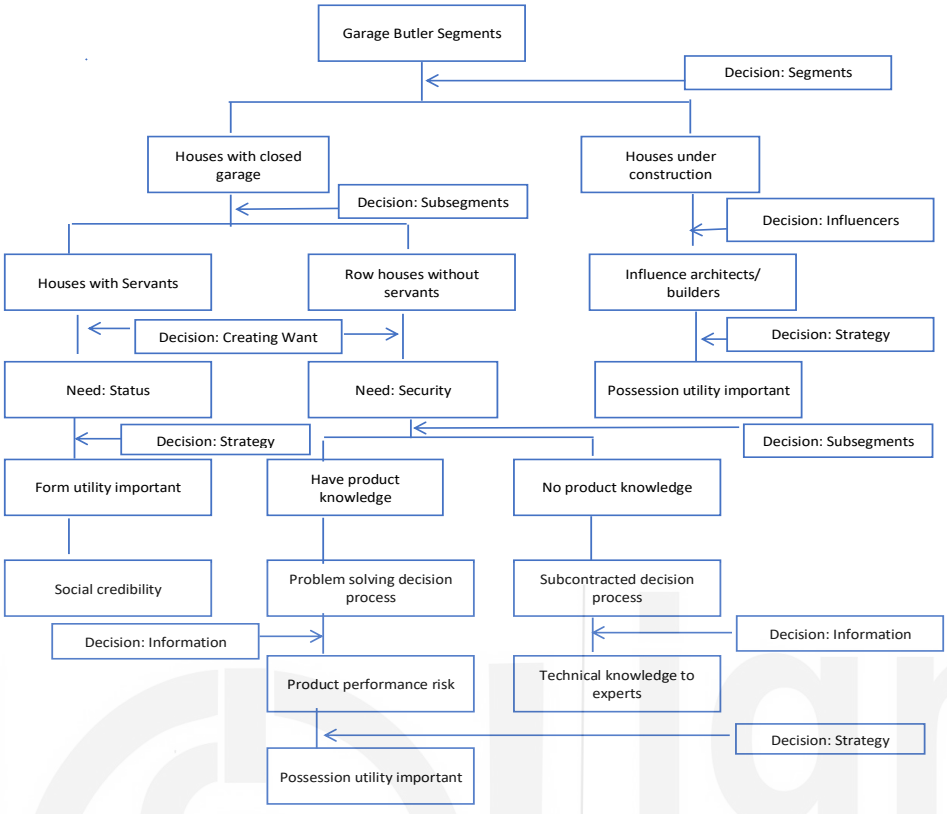
The door may be programmed to stay open, to clean out the garage, have a garage sale, etc. If you forget to close the door, the door will be closed when it gets dark - thus preventing the door from being left open all night. Or you can turn the switch to the 'off' position and you can leave your garage door open for an unlimited period of time.

- Works with all current opener safety features.
- Easy installation, attaches to your current opener button.
- Timer, 3-10-20-30-45 or 60 minutes then it will close your garage door.
- Light sensor, closes the garage door when it gets dark.
- Hold button, when pressed the butler will not close after 3-10-20-30-45 or 60 minutes.
- Beeper, after the chosen period of time it will beep for 30 seconds alerting you to the fact that it is about to close the garage door.
- On / Off button giving you complete control.
- Status indicator light.
- Manual open/close button.
- Double sided mounting tape, NO holes to drill.
- Patented lowest cost product on the market.

The Garage Butler was created as a security device to easily attach to your current garage door opener. According to statistics, half of all burglaries occur from a garage door being left open. The Garage Butler will eliminate the possibility from this happening to you. You can NOW have peace of mind and never have to worry about your garage door ever again!

Design research to study the need for Garage Butler.

Figure 3.4 Decision tree for Garage Butler.



The decision tree (figure 3.4) starts by defining the segments, then understanding the different stages of the buying process. Each stage may require an intervention before the buyer moves to the next stage.

3.4.3 Conceptualization

Conceptualization is a process where an issue is understood by breaking down the concept into variables such that the relationship between them is identified.

In order to obtain relevant information, Chapman (1989) highlights the importance of conceptual thinking at the initial stage of marketing research. Conceptualization may take two different forms:

i. Applying an existing concept, or

ii. Developing a new concept

Conceptualization by applying an existing concept and developing a new concept are discussed through two case studies.

Case: Environment consciousness

"Given the generally deteriorating state of the environment, both locally and globally, the question of the extent of popular concern about environmental problems in India has been of considerable importance.

Government leaders often assume that the public is unaware of environmental problems and little concerned with their solution. Environmental NGOs, on the other hand, often assert that common people are deeply concerned

about the state of their environment, reflecting traditional beliefs that people should live in harmony with nature.

Since no empirical information about environmental consciousness is available

The government needs to know what the level of environmental consciousness present in India".

Several concepts exist which could be applied to different problem situations. The above research brief of Environmental Consciousness is broken down into information needs using an existing concept of "hierarchy of effects". In hierarchy-of-effect models, AIDA is a well-accepted marketing model which aims to obtain the 'attention, interest, desire and action' stages an individual goes through before changing his/ her behaviour. Each stage is broken down into specific data points. The relevant information for the environment conscious problem using the existing concept of AIDA is given below:

1. Awareness
    a. What is the meaning of Environment?
        i. Immediate surroundings
        ii. National level
        iii. Global level
    b. What causes damage to the environment
        i. Plastic
        ii. Pollution
        iii. Aerosols
        iv. Cutting of trees
    c. What is the extent of damage?
        i. Water pollution
        ii. Air pollution
        iii. Tsunami
        iv. Floods
        v. Global warming
    d. Who damages?
        i. Industries
        ii. Individuals
        iii. Developed nations
2. Interest
    a. Possible actions

i. Avoid plastics
ii. Car pooling
iii. Wastage of water, electricity etc

b. Why protect
i. For present
ii. For future

3. Desire
a. Attitudes and motives towards protecting environment
b. Corrective actions- - who can do
i. Industry
ii. Individual
iii. Government
iv. Non-governmental organizations

4. Action
a. What are you doing?
i. Avoid plastics
ii. Car pooling
iii. Reducing wastage of water, electricity etc

Case of Online versus Offline MBA education

March 2020 saw the beginning of online mode of education for residential and non-residential MBA programmes. While online education has been there for several year, the pandemic necessitated all educational institutions to opt for online teaching mode for the two-year MBA programmes. Ever since there has been a considerable debate whether an institute can grant the same two-year MBA programme degree by having online and offline sections simultaneously.

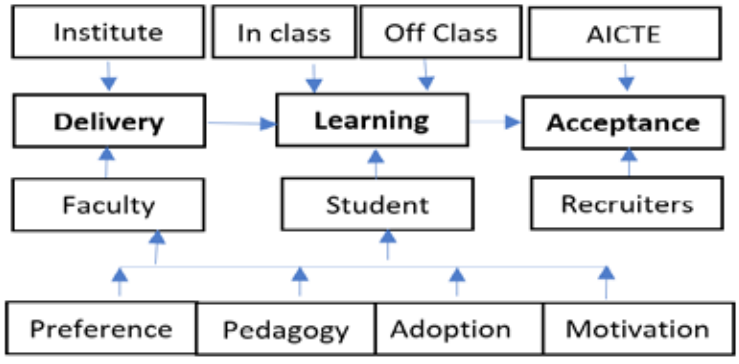
Decision Area

• Can the institute parallelly have online and offline sections for the two-year MBA programmes

Conceptualization

• Would the "delivery, learning and acceptance (DLA)" be the same if an institute parallelly runs online and offline sections for the same programme. The conceptual model is given in figure 3.5.

Figure 3.5 DLA framework



Based on the conceptual model, the following information needs can be identified.

- Institute
  - Facilitates
  - Resources
  - Culture
  - Image
- Faculty
  - Comfort
  - Preference
  - Willingness
    - § Full time faculty (FTF)
    - § Visiting Faculty (VF)
  - Differences in pedagogy
  - Differences in courses
  - Adaptability
  - Motivation
  - Evaluation
- Students
  - Connectivity
  - Comfort
  - Preference
  - Motivation
  - In class versus off class learning
  - Group work/ projects/ assignments

- Faculty student interaction
  - Interaction
    - § In class
    - § Off class
  - Feedback
- Recruiters
  - Perceptions by type of industry
- AICTE
  - Degree granting

Once the information needs are generated, then the research design needs to be identified. This would be discussed in unit 4.

Activity 2

Describe the steps for converting the decision areas that were identified in Activity 1 into research objectives.

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3.5 SUMMARY

The probability of gathering the data needed to address the research problem increases if the problem can be properly identified. The problem definition phase is essential to the success of the research process since "a problem well defined is a problem half-solved." In this unit, we discussed the decision area, the research problem, and converting a decision area to research objectives with the help of illustrative case examples. Three methods of converting a decision problem into a research problem area—the interaction method, the decision tree approach, and the conceptualization method—were also explained with relevant case examples.

3.6 KEY WORDS

Conceptualization: Conceptualization is a process where an issue is understood by breaking down the concept into variables such that the relationship between them is identified.

Decision Tree Approach: A decision tree is defined as a model where the extracted information is sorted hierarchically by the use of connected nodes.

Interactive Method: The interactive approach should be used if a decision maker is unable to state the problem clearly.

3.7 SELF-ASSESSMENT QUESTIONS

1. Differentiate between a decision area and a research problem.
2. What are the methods of converting a decision area to a research problem?
3. Describe a research brief and how should it be converted into a research problem?

3.8 PROJECT QUESTION

The problem with plastic is that most of it isn't biodegradable. It doesn't rot, like paper or food, so instead it can hang around in the environment for hundreds of years. Each year, 400 million tonnes of plastic is produced and 40% of that is single-use - plastic we'll only use once before it's binned, causing environmental damage. Correcting the plastic waste problem requires a fundamental change in thinking about how they are used and discarded.

Suggest a Decision Area linked to Plastic use and discarding. Convert this Decision Area to a Research problem. Research problem should identify the information required to address the decision area.

3.9 FURTHER READINGS

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