

DIFFUSION AND ADOPTION OF INNOVATION

DIFFUSION

Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. It is a process by which innovations are spread to the members of social system. In this process new ideas are spread from its source of invention or creation to its ultimate users or adopters. Diffusion is a special type of communication. It is concern with new ideas or messages, whereas communication includes all type of message or ideas.

INNOVATION

Innovation is an idea, practice, or object perceived as new by an individual. If the idea seems new to the individual, it is an innovation. Newness of an innovation may be expressed in terms of knowledge, persuasion or a decision to adopt. The technologies, practices developed through research are innovations.

ADOPTION

Adoption is a decision to make full use of an innovation as the best course of action available. Adoption is the use of new idea continuously on a full scale. Adoption is essentially a decision making process. Decision making is a process which may be divided into a sequence of stages with a distinct type of activity occurring during each stage. Similarly, the way in which individual adopts an innovation is viewed by most researchers as a process, a series of related events in a time sequence.

STAGES IN ADOPTION PROCESS

Five stages of adoption identified by the North Central Rural Sociology Sub Committee for the study of Diffusion of Farm practices (1955) are widely accepted and received worldwide attention. The five stages of adoption process are:

(1) Awareness (2) Interest (3) Evaluation (4) Trial (5) Adoption

1. Awareness Stage

This is the starting stage wherein the farmer comes to know the existence of the new idea but he doesn't have full information about the idea. At this stage farmer is aware of the idea, but lacks detailed information about it. For instance, the farmers may know SRI cultivation in Rice only the name and may not know what (SRI) is, what it will do and how it will work.

2. Interest Stage

The farmer develops interest in the innovation and seeks additional information about it either from extension officer or from fellow farmers or from any source, which he feels credible. That means the farmer at the interest stage acquires more information about an innovation or idea. Farmer wants to know, what the innovation/idea is, how it works and what its potentialities are.

3. Evaluation Stage

The farmer here makes mental application of the new idea in the present and anticipated future situations and decides whether or not to try it. The farmer at this stage judges the utility of the innovation. He/she makes an assessment whether the idea is applicable to own situation and if applied what would be the result. For instance, the farmer after hearing to SRI (System of Rice Intensification) cultivation in Rice and acquiring more information at the interest stage what are the components and how they improve yield and save water, he/she mentally judge whether SRI cultivation improves rice yields if adopted.

4. Trial Stage

You are aware that at the first instance, the farmers may not take up any new idea & an innovation right away on a large scale because he/she doesn't want to take risk even though the potential of the idea has been proved. The farmer actually applies the new idea on a small scale in order to determine its utility or feasibility & applicability in own situation. Even though, the farmer takes a decision to try the idea by virtue of its plus points or merits, generally the effectiveness of the idea is tested taking this as small scale trials in their own field standards, even though farmers has thought about it for long time and gathered information concerning it.

5. Adoption Stage

Being satisfied with the performance of the new idea tested on small scale in his own situation, the farmer uses the new idea continuously on a full scale. Trial may be considered as the practical evaluation of an innovation. The innovation becomes a part of his normal farming activity. It provides the advantage of the innovation and hence the farmer takes final decision and applies the innovation in a scale appropriate to own situation on a continued basis.

INNOVATION-DECISION PROCESS

The Innovation - Decision process is the process through an individual (or other decision making unit) passes (1) from first knowledge of an innovation, (2) to forming an attitude toward the innovation, (3) to a decision to adopt or reject, (4) to implementation of the new idea, and (5) to confirmation of this decision.

This process consists of series of actions and choices over time through which an individual or an organization evaluates a new idea and decides whether or not to incorporate the new idea into the ongoing practice. The innovation-decision is a special type of decision-making; it has certain characteristics not found in other kinds of decision-making situations. In the case of the adoption of an innovation, an individual must choose a new alternative over those previously in existence.

Stages in Innovation-Decision process

1. Knowledge Stage

Innovation-decision process begins with knowledge stage, which commences when the farmer is exposed to the innovation's existence and gains some understanding of how it functions.

The innovation-decision process is essentially an information-seeking and information – processing activity in which the individual is motivated to reduce uncertainty about the

advantages and disadvantages of an innovation. The individual wishes to understand the innovation, and give meaning to it. A need can motivate an individual to seek information about an innovation and the knowledge of an innovation may develop the need.

2. Persuasion Stage

At the persuasion stage in the innovation-decision process, the individual forms a favourable or unfavourable attitude towards the innovation.

Whereas the mental activity at the knowledge stage was mainly cognitive (or knowing), the main type of thinking at the persuasion stage is affecting (or feeling). Until the individual knows about a new idea, of course, he cannot begin to form an attitude toward it.

At the persuasion stage the individual becomes more psychologically involved with the innovation. Now he actively seeks information about the idea. His personality as well as the norms of his social system may affect where he seeks information, what messages he receives, and how he interprets the information he received. Thus, selective perception is important in determining the receiver's communication behaviour at the attitude formation stage. For it is at the persuasion stage that a general perception of the innovation is developed. Such perceived attributes of an innovation as its relative advantage, compatibility, and complexity are especially important at this stage.

In developing a favourable or unfavourable attitude toward the innovation, the individual may mentally apply the new idea to his present or anticipated future situation before deciding whether or not to try it. This might be thought of as a vicarious trial.

3. Decision Stage

At the decision stage in innovation-decision process, the individual engages in activities which lead to a choice to adopt or reject the innovation.

The individual puts the innovation to a small scale trial in own situation. Considering the relative advantage, risk involved and many factors like availability of market, need for the family etc. the individual takes a decision to adopt or reject the innovation.

Adoption is a decision to make full use of innovation as the best course of action available.

Rejection is a decision not to adopt an innovation.

rapidly. Most farmers who try an innovation then move to an adoption decision, if the innovation has a certain degree of relative advantage.

4. Implementation Stage

Implementation occurs when an individual (or other decision making unit) puts an innovation into use.

Until the implementation stage, the innovation-decision process has been a strictly mental exercise. But implementation involves overt behaviour change, as the new idea is actually put into practice.

At this stage the individual is generally concerned with where to get the innovation, how to use it and what operational problems will be faced and how these could be solved. Implementation may involve changes in management of the enterprise and/or modification in the innovation, to suit more closely to the specific needs of the particular person who adopts it.

5. Confirmation Stage

At the confirmation stage the individual (or some decision making unit) seeks reinforcement of the innovation-decision already made or reverse a previous decision to adopt or reject the innovation if exposed to conflicting message about the innovation.

Most of the researchers indicated that a decision to adopt or reject is not the terminal stage in the innovation-decision process. Human mind is in a dynamic state and an individual constantly evaluates the situation. If the individual perceives that the innovation is consistently giving satisfactory or unsatisfactory results the person may continue to adopt or reject the innovation as the case may be. At the confirmation function the individual seeks reinforcement for the innovation-decision he has made, but he may reverse his previous decision if exposed to conflicting message about the innovation. The confirmation stage continues after the decision to adopt or reject for an indefinite period in time. Throughout the confirmation function the individual seeks to avoid a state of internal disequilibrium or dissonance or to reduce it if it occurs.

Farmer seeks to accomplish it by changing his knowledge, attitude or actions.

Rejection is decision not to adopt an innovation. This may be of two types, active rejection and passive rejection. When a farmer rejects after adopting the innovation including even its trial is called Active Rejection and simply non- adoption is called Passive Rejection.

ADOPTER CATEGORIES

There are different categories of farmers. According to Rogers (1971), the farmers based on their innovativeness can be classified as

1. Innovators (Venturesome)
2. Early adopters (Respectable)
3. Early majority (Deliberate)
4. Late majority (Skeptical)
5. Laggards (Traditional)

All individuals in a social system do not adopt an innovation at the same time. Rather, they adopt in an ordered time sequence, and they may be classified into adopter categories on the basis of when they first begin using a new idea. In technology transfer programme, it is of great practical utility for the extension workers to identify the individuals who are likely to adopt innovations early and who may lag behind. The adoption of an innovation over time follows a normal, bell-shaped curve when plotted over time on frequency basis.

Characteristics of adopter categories

The detailed information on the characteristics of adopter categories is presented below

1. Innovators: (Venturesome)

- a) Have larger farms.
- b) High net worth and risk capital.
- c) Willing to take risks.
- d) Usually not past middle age
- e) Generally well educated
- f) Have respect and prestige in progressive communities but not in conservative type of communities.

- g) Mentally alert and actively seeking new ideas.
- h) They have many formal and informal contacts outside the immediate locality.
- i) They often by-pass the local extension worker in getting information from the originating sources, and may learn about new things even before he does. They sometimes manage to get samples of seeds or chemicals even before they are released for public use.
- j) They subscribe to many farm magazines and specialised publications.
- k) Other farmers may watch the innovators and know what they are doing but the innovators are not generally named by other farmers as “neighbours and friends” to whom they go for information.

2. Early Adopter: (Respectable)

- a) Younger than those who have a slower adoption rate, but not necessarily younger than the innovators
- b) They are quickest to use tried ideas in their own situations.
- c) Have large farms.
- d) Higher education than those who adopt more slowly.
- e) High income.
- f) They participate more in the social activities of the community.
- g) They also participate more in government programmes.
- h) This group usually furnishes a disproportionate amount of the formal leadership (elected positions) in the community.
- i) They read papers and farm journals and receive more bulletins than people who adopt later.
- j) They may be regarded as community adoption leaders.

Early Majority: (Deliberate)

- a) Slightly above average in age, education and farming experience.
- b) They take a few more farm journals and bulletins than the average.
- c) They have medium high social and economic status.
- d) Less active in formal groups than early adopters, but more active than those adopting later.
- e) In many cases, they are not formal leaders in the association
- f) They also attend extension meetings and farm demonstrations.
- g) They are most likely to be informal resources than early adopters and innovators, and so cannot afford to make hasty or poor decisions.
- h) They associate mainly with people of their own community.
- i) They value highly the opinions their neighbours and friends hold about them; for this is their main source of status and prestige.
- j) They are mostly mentioned as “neighbours and friends”
- k) Limited resources

4. Late Majority: (Skeptical)

- a) Adopt new ideas just after the average members.
- b) Those in this group have less education and are older than the early majority.
- c) They participate less in formal groups.
- d) They take fewer leadership roles than the earlier adopters.

- e) They take and read fewer papers, magazines and bulletins, than the early majority.
- f) They do not participate in as many activities outside the community as do people that adopt earlier.

5. Laggards: (Traditional)

- a) Least education.
- b) Oldest.
- c) Participate least in formal organisations, cooperatives and government programmes.
- d) They hardly read farm magazines and bulletins.
- e) Most localite.
- f) Do not have opinion leadership.
- g) Resource-poor people.
- h) Little land holding.
- i) Live in disadvantaged area and having least urban influence.