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M. B. Salwen and D. W. Stacks (Eds.), *An Integrated Approach to Communication Theory and Research, 1st ed.* Mahwah, NJ: Lawrence Erlbaum. pp. 409–420.

This theory started during World War II, long before communication became a subject in schools. Diffusion is how innovation is communicated through certain channels over time among the members of a social system. An Innovation is an idea, practice, or object perceived as new by an individual or other unit of adoption. This theory involves mainly both mass media and interpersonal communication channels. In diffusion of innovation, individuals perceive innovation as new. This theory focuses on the awareness-knowledge, attitude change, decision making, and implementation of innovation.

The beginning of diffusion innovation can be traced to Bryce Ryan and Neal C. Gross's classic 1943 study of the diffusion of hybrid seed corn among low farmers. Ryan was a Graduate Faculty member at Iowa State University, an agricultural college. He was interested in the question of non-economic influences on economic behavior; he decided to investigate mainly the diffusion of hybrid seed corn. This innovation will lead to a corn yield of about 20 acres. As Ryan was conducting this research, his graduate assistant Gross came joined him. The major research method of diffusion is the quantitative analysis of data gathered by survey interview methods from large samples. Ryan and Gross thought they had found the answers, adoption of this innovation should be easy and fast for the farmers, but the reverse was the case. While trying to make the farmers adopt this innovation, they realized there are essential elements of diffusion of innovation. One of them is Innovativeness, which is the degree to which an individual or other unit is relatively earlier

to adopt than others. It is divided into innovators, early adopters, early majority, late majority, and laggards. During the innovation-decision process, the Iowa farmers channels of communication changed repeatedly. The mass media is more important at the awareness-knowledge stage and with interpersonal communication, especially from peers critical at the persuasion stage.

The data for this study were collected through qualitative and quantitative research. It is narrative and statistical methods like graphs were used to explain the concept of the S-curve in this theory. This further helped explained the concepts and made understanding clear.

One limitation this theory has is its predictive power: relating this highly to the growth of technology. The adoption rate is now highly dependent on the degree of innovativeness and degree of imitation among adopters. A good example is predicting a trend and knowing if a particular product will cause more. Therefore, the Bass model explains that the number of adopters is almost identical to the number of sales throughout most of the diffusion process. Thus, the Bass model has been revised and implemented in forecasting innovation diffusion in multiple fields (Hsia-Ching, 2010).

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One of the most popular theories is the Diffusion of Innovation by Rogers. This theory is used to explain how individuals accept or reject innovation. According to Rogers, technology is a design for instrumental action that reduces the uncertainty in the cause-effect relationships involved in achieving the desired outcome. On the other hand, diffusion is how innovation is communicated through specific channels over time among the members of a social system. There are four key elements to note from this definition: Innovation, communication channels, time, and social system.

Innovation is anything perceived as new to an individual. It can be an idea, practice, or project seen as new by an individual. Communication is also known, and localite channels and cosmopolite channels are the elements that help individuals share information. In this case, we have the innovation, the two or more individuals, and a communication channel (mass media or interpersonal communication). Time is one factor that can either make or mar diffusion research, looking at the innovation-diffusion process, adopter categorization, and adoptions rate. Time influences these and the behavior of individuals towards adopting an innovation. The social system, which is the last element that affects individuals in the social structure. The social elements consist of different individuals who come together to achieve a common goal.

The innovation-decision, also known as uncertainty reduction, is when an individual seeks information about an innovation and decides where to adopt or reject it. It includes five steps: knowledge, persuasion, decision, implementation, and confirmation. All these elements are the stages an individual goes through before adopting or rejecting the innovation.

Every innovation has five characteristics: relative advantage, compatibility, complexity, trialability, and observability. All these characteristics will influence the rate of adoption by individuals. The rate of adoption is the number of individuals who adopt innovation for a certain period. The innovation-decision type (optional, collective, or authority), communication channels (mass media or interpersonal channels), social system (norms or network interconnectedness), and change agents have a great influence on the rate of adoption.

Adopter categories include how members of the society are classified according to their rate of innovativeness. They can be categorized into innovators, early adopters, early majority, late majority, and laggards. However, it is essential to note that incomplete adoption or non-adoption don't fall under these categories.

This paper used both Qualitative & Quantitative research to gather data. Qualitative research was shown by how narrative the piece is, and the statistical (graphs) data used to understand Roger's concept shows the quantitative data. These concepts were clearly explained and understood.

Many researchers have used the diffusion of innovation theory to research technological innovations and other related fields of research in communications.