

Diffusion of Innovations

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Why is the Diffusion of Innovations Model Important?

- **The Knowledge-Practice Gap:** “The failure to use available research findings is both costly and harmful to society” – (Institute of Medicine, 2001)
- The DOI model has been used to understand the steps and processes required to achieve widespread dissemination and diffusion of public health innovations

What is an Innovation?

- An idea, practice, or object that is perceived as new by an individual or other unit of adoption
- The spread of an innovation can be conceptualized on a continuum:

passive diffusion \longleftrightarrow active dissemination

Diffusion vs. Dissemination

- **Diffusion:** The overall spread of an innovation, the process by which an innovation is communicated through certain channels over time among the members of a social system
- **Communication Channels:** Means by which messages are spread, including mass media, interpersonal channels, and electronic communications

- **Social System:** Set of interrelated units that are engaged in joint problem solving to accomplish a common goal. Social systems have structure, including norms and leadership.
- **Dissemination:** The planned systematic efforts designed to make a program or innovation more widely available. Diffusion is the direct or indirect outcome of these efforts.

3 General Pathways to Active Dissemination

1. Direct to practice distribution of materials and tools
2. Enactment and implementation of policies, legislation or regulations
3. A systematic, sustained and long-term approach that uses multiple strategies and methods

7 Steps of the Diffusion Process

Step	Definition
1. Innovation Development	All the decisions and activities that occur from the early stage of an idea to its development and production
2. Dissemination	The planned, systematic efforts designed to make a program or innovation more widely available
3. Adoption	Uptake of the program or innovation by the target audience
4. Implementation	The active, planned efforts to implement an innovation within a defined setting
5. Maintenance	The ongoing use of an innovation over time
6. Sustainability	The degree to which an innovation or program of change is continued after initial resources are expended
7. Institutionalization	Incorporation of the program into the routines of an organization or broader policy and legislation

Important Factors in the Diffusion Process

Three variables are used to explain different outcomes for diffusion of innovations:

1. Characteristics of the innovation
2. Characteristics of adopters
3. Features of the setting/environmental context

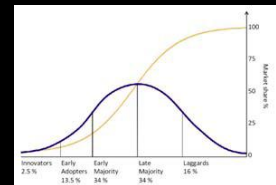
Characteristics of the innovation

Table 14.2 Characteristics of Innovations That Affect Diffusion

Attribute	Key Question
Relative Advantage	Is the innovation better than what was there before?
Compatibility	Does the innovation fit with the intended audience?
Complexity	Is the innovation easy to use?
Trialability	Can the innovation be tried before making a decision to adopt?
Observability	Are the results of the innovation visible and easily measurable?

Characteristics of individuals

1. Innovators
2. Early adopters
3. Early majority adopters
4. Late majority adopters
5. Laggards



Rogers, 1983

Features of the Setting

Multiple features of settings/organizations can influence the diffusion process:

1. Geographical settings
2. Societal culture
3. Political conditions
4. Globalization and uniformity

E.g. Needle exchange program

Example 1: GOAL Program

- Diabetes prevention program developed in Finland (2006)
- Based on Social Cognitive Theory, Health Action Process Approach and self-regulation theories
- Multiple program partners and stakeholders (ecological model)

Example 1: GOAL Program

- Focused on 5 main lifestyle changes
- Intervention included
 - Group discussion
 - Self-monitoring
 - Goal settings
 - Planning for behaviour change and maintenance
 - Printed material for facilitators and participants
- Reached those with low education levels, retired or unemployed



Example 1: DPP Program

- Diabetes Prevention Program in Australia adapted from GOAL
- Used similar program materials, but they required language and cultural translation
- Similar structure to GOAL program, with better results
- Larger *Life! Program* now implemented in Australia

Example 1: GOAL and DPP Programs

- DOI occurred after the GOAL program was refined and modified in Finland
- Adopted in other countries, new versions improved “fit” between innovation, adopters and implementation environments
- Quick transfer and adoption due to interaction between researchers and program leaders in countries

Example 2: “The Tipping Point”

- The Law of the Few
 - Connectors (people who bring the world together)
 - Mavens (information brokers)
 - Salesmen (people with the gift of persuasion)
- The Stickiness Factor
 - Is the product/idea memorable?
- The Power of Context
 - Environmental/situational/social

Limitations of DOI

- Pro-Innovation bias
- Individual blame bias
- Balancing complexity, specificity and feasibility
- Development of determinants of success or failure
- Ensuring comparability
- Lack of research into new communication technologies

Summary of DOI



- Diffusion of Innovations Theory maps the process of how new ideas or innovations become adopted
- Successful diffusion depends on:
 - Qualities of innovation
 - Adopters
 - Environmental context