

AGRICULTURAL EXTENSION & COMMUNICATION

FACE-TO-FACE REVIEW SUMMARY NOTES

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Overview of Agricultural Extension

Historical Antecedents

University Extension Movement

- 19th Century England
- INDUSTRIALIZATION
- A lot of workers in urban areas
- Poor working and living conditions
- Urbanization
 - What does this mean for Agriculture?
 - Reduced rural labor
 - Introduction of technologies/ Practices
- Because of this changing society and the increasing needs of the urban population, universities in England started to think of solutions.
- The term university extension was first used to describe **Adult Education Programs.**
- The first practical steps were taken by **James Stuart**, Fellow of Trinity College at Cambridge
- He gave lectures to **women's associations and men's clubs in Northern England**
- He is often considered the "**Father of University Extension**"
- Timeline of adoption of university extension:
Cambridge → London → Oxford
- The university extended its use beyond campus, making extension a more institutionalized function of universities.

Modern Agricultural Extension Service in Europe

- The birth of modern agricultural extension service in Europe can be traced back to **Britain and Ireland.**
- In Britain, the Royal Agricultural Improvement Society was founded in 1841.
- It was created to foster the creation of local agricultural societies and to act as a central organization for them.
- Over a hundred local societies existed whose membership consisted largely of big landowners, few scientists, and government officials.
- By 1845, an outbreak of a disease called **late potato blight** struck Ireland (*Phytophthora infestans*).
- Its effects were severely felt by smallholder farmers and landless peasant families who formed the vast majority of the Irish rural population, as they relied on potatoes as their staple food.
- In 1847, the newly appointed British viceroy to Ireland, the Earl of Clarendon, urged RAIS to appoint itinerant lecturers to travel around the distressed districts to inform and show small farmers how to improve cultivation and grow nutritious crops.
- 10 "travelling instructors" in husbandry were appointed and were at work in most poorer areas.
- The scheme proved to serve a real need, had an impact on impoverished communities, and was financially viable.
- The first agricultural extension service of a modern kind came into existence as a result of:
 - a crisis
 - the initiative of high authority

Modern Agricultural Extension Service in the US

- The birth of modern agricultural extension service in the US was brought about by various legislations and developments.
- Farmers' institutes were organized by the Massachusetts State Board of

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Agriculture to supply the needs of agricultural education.

- The State Board of Agriculture organized one or two-day meetings, discussions or series of lectures on a variety of subjects on agriculture for farmers by leading agriculturists.
- The Morrill Act of 1862 signed by then US President Abraham Lincoln led to the creation of land-grant colleges and universities.
 - What are land-grant colleges and universities?
 - They are institutions built on federal land granted by the government, focused on practical education (including agriculture).
 - What was the special function mandated to the land-grant colleges and universities?
 - The **trilogy function: instruction, research, and extension.**
- The Hatch Act of 1887 established a cooperative bond between the US Department of Agriculture and the land-grant colleges/universities to set up agricultural experiment stations across the country.
 - This strengthened the research function of the LGCUs
- The Second Morrill Act of 1890 further expanded the establishment of land-grant colleges and universities to other states in the country.
- By 1890, farmers' institute movements became institutionalized and formally recognized by the federal government, receiving federal support and supervision.
- Farmers' movements were boosted and stimulated by the experimental work being done at LGCUs.
- In 1914, the Smith-Lever Act was passed.
- This law served as the final piece of the puzzle and laid the foundation upon

which the entire cooperative extension system in the US was built.

- The cooperative extension service/system is a tripartite cooperation of federal, state, and local county governments, with the state college as the extension agency.
- This law effectively institutionalized the extension function of land-grant colleges and universities, completing their trilogy function.

Agricultural Extension in the Local Context

Spanish Period

- Model farms or granjas modelos were established, marking the 'formal' start of extension work in the Philippines
- These farms served as experimental stations and demonstration centers for farmers
- Main crops include rice, corn, and tobacco in large encomiendas
- Regulatory functions were included in extension work towards the end of the 18th century, particularly on the production of tobacco and the grading of tobacco leaves for export

American Period

- Start of a more serious attempt at Extension; however, no definite plan was followed
- Bureau of Agriculture was established under the Department of Interior
- The Demonstration and Extension Division was created under the Bureau of Agriculture: the 1st formally organized government department implementing Research and Extension Programs
- Experiment Stations and Demonstration Farms were also set up in strategic places in the country
- The name Demonstration and Extension Division was changed to Agricultural Extension Service
- Maria Y. Orosa founded the home extension service starting as a unit

- under the Organic Chemistry Division of the Bureau of Science
- Home Extension work in the Division of Organic Chemistry was mainly on food preservation and preparation, home management, and demonstration work

Japanese Period

- Extension work was paralyzed

Post-Independence Period

- The Home Extension Unit under BPI was fused with the Agricultural Extension Unit of the Bureau of Agriculture
- Then Pres. Elpidio Quirino requested the President of the USA to recommend measures to help the Philippines, torn by WWII, become self-sufficient
- An Economic Survey Mission, the Bell Survey Mission, was sent to the Philippines (named after Daniel W. Bell, the Chief of Mission)
 - Recommendation of the BSM:
 - Consolidation of the Scattered Extension Services in the different bureaus into One Bureau that would adequately extend information to farm families for improved farming, homemaking, and rural organization
- In response to the recommendation of the BSM, Congress enacted Republic Act No. 680, which established the Bureau of Agricultural Extension (BAEx)
- BAEx was tasked with consolidating, coordinating, and expanding the agricultural extension services previously carried out by various agencies

Martial Law Years

- A WORLD BANK MISSION appraised the Philippines' agricultural extension service upon request of the Philippine government

- As a Result, the Philippines adopted the Training and Visit System (T&V) as a development strategy designed to improve the quality of life of farm families

Post-Martial Law Years: Cory Aquino

Administration

- Executive Order No. 116 (Section 20):
- Bureau of Agricultural Extension + Philippine Agricultural Training Council + Philippine Training Center for Rural Development (PTCRD) =
- AGRICULTURAL TRAINING INSTITUTE
- The 'birth' of the ATI meant the 'death' of the BAEx

Local Policies and Mandates

Agriculture and Fisheries Modernization Act of 1997 (RA 8435)

- It is a policy instrument defining measures to modernize Philippine agriculture for the country to compete in the global market.
- Objectives of AFMA:
- To transform the agriculture and fisheries sectors to technology-based, advanced and competitive industry;
- To ensure that the small farmers and fisherfolk have equal access to assets, resources and services;
- To guarantee food security;
- To encourage farmer and fisherfolk groups to bond together for more bargaining power;
- To strengthen people's organizations, cooperatives and nongovernment organizations by enhancing their participation in decision-making;
- To pursue an aggressive market-driven approach to make the products more competitive in the market;
- To stimulate further processing of agricultural products and make it more marketable; and

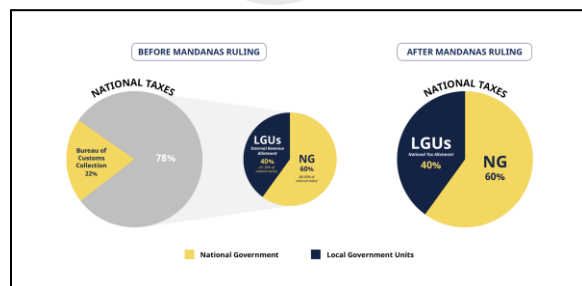
- To implement policies that will invite more investors to establish business in the country.
- Major concerns:
 - Food security
 - Poverty alleviation and social equity
 - Income enhancement and profitability
 - Global competitiveness
 - Sustainability

Local Government Code of 1991 (RA 7160)

- Enabled the devolution of the delivery of basic services including extension
 - Devolution is the decentralization or the transfer or delegation of power to a lower level
- To attain the LGUs' fullest development as self-reliant communities and make them more effective partners in the attainment of national goals

Mandanas-Garcia SC Ruling

- The Mandanas Ruling (also called as the Mandanas-Garcia Ruling) is a Supreme Court decision in 2018 which ruled that the 'just share' of LGUs from the national taxes is not limited to "national internal revenue taxes" collected by the Bureau of Internal Revenue but includes collections (customs duties) of the Bureau of Customs, and other tax collecting agencies. The SC Ruling became final and executory on April 10, 2019, and was implemented starting in 2022.



Source:

<https://galingpook.org/mandanas-ruling/mandanas-ruling-about/>

Executive Order No. 138 s. 2021

- released by then President Duterte on June 1, 2021, mandating the full devolution of basic services from the national government agencies (NGAs) to local government units (LGUs)
- Salient features of EO 138
 - Delineation of national and local government roles
 - full devolution by end of FY 2024
 - Creation of the Committee on Devolution (ComDev)
 - Preparation of Devolution Transition Plans (DTPs)
 - Capacity building

Theoretical and Practical Frameworks of Agricultural Extension

Extension Approaches

- Its style of action, and embodies the philosophy of the system
- Characteristics of an extension approach:
 - The problems the approach is assumed to solve
 - The purpose it is designed to achieve
 - The management of the system
 - The nature of the field staff
 - The required resources
 - The techniques used for its implementation
 - The measures for evaluation

General Agricultural Extension Approach

- Assumption
 - Technology and information exists, but is not available to the farmer. If communicated to the farmer, the production will increase.
- Purpose
 - Help farmers increase their production

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- Management
 - Controlled by government, and decisions are usually made at national level, with some freedom for local adaptation
- Field Staff
 - large in number
- Required resources
 - High, and governments bearing the cost
- Implementation
 - Through a large governmental field staff
- Evaluation
 - Success is measured in terms of rate of adoption

- The basic assumption is that the extension staff is poorly trained, lacks supervision and logical support, and has too little contact with the farmers.

- Purpose
 - Increased production of certain crops
- Management
 - Centrally controlled, with rigid planning
- Field staff
 - Large in number
- Required resources
 - Because of the large number of staff and the logistic support the costs are high
- Implementation
 - Rigid pattern of visits and dissemination of standard packages
- Evaluation
 - Success is measured in production increase, and in some cases in the number of visits and training

Commodity Specialized Approach

- Assumption
 - The increase in production of a certain crop is realised through an approach that covers all aspects, including extension, credit, marketing, input supply etc.
- Purpose
 - Increased production of a certain crop
- Management
 - Controlled by a commodity organisation
- Field staff
 - Supplied by the organisation
- Required resources
 - Supplied by the commodity organisation, which considers agriculture a good investment
- Implementation
 - The organisation often targets specific farmers and areas with high potential of adoption
- Evaluation
 - Success is measured in the increase of production of a certain crop

Agricultural Extension Participatory Approach

- Assumption
 - Farmers have much knowledge regarding agriculture, and this information combined with outside information will increase production. Effective extension can not be conducted without active participation of the rural population
- Purpose
 - To enhance the living standards of rural people, often through increased on farm production
- Management
 - Controlled locally, often by farmers associations
- Field staff
 - Locally recruited, with appropriate knowledge of the local situation
- Required resources

Training and Visit Approach

- Assumption

- Tends to be less than with other approaches, and a high proportion may be provided locally
- Implementation
 - Through group meetings, and local sharing of information
- Evaluation
 - By participation of farmers, and continuity of local extension organisations

Project Approach

- Assumption
 - Rapid change is necessary and not likely with general extension approach. A project in a specific location for a short period may provide better results.
- Purpose
 - Demonstrated what could be done in a short period
- Management
 - Central Government often with donor assistance
- Field staff
 - Extra staff for the project area, and increased support for implementation
- Required resources
 - High, considering the area and time frame
- Implementation
 - With extra outside assistance and financing
- Evaluation
 - Short term changes is the measure of success

Farming Systems Development Approach

- Assumption
 - The technology which fits the needs of the farmers is not available and needs to be generated locally.
- Purpose
 - Provided extension staff with research results tailored to meet

the needs and interests of local farming systems conditions

- Management
 - Evolves slowly as results become available
- Field staff
 - Highly specialised, and relatively expensive
- Required resources
 - Carries out field trials in farmers fields and homes, that form the basis of extension message
- Implementation
 - Research and extension staff together
- Evaluation
 - Adoption of the technology developed by the Programme, and its continued use

Cost-Sharing Approach

- Assumption
 - Programme is more likely to fit the local situation and serve the people if part of the costs is paid locally.
- Purpose
 - Helping farmers to learn techniques for improvement.
- Management
 - Shared by various levels, responsive to local interests.
- Field staff
 - Locally recruited
- Required resources
 - Limited
- Evaluation
 - Success is measured by farmers willingness and ability to provide some share of the cost

Educational Institution Approach

- Assumption
 - Agricultural colleges have technical knowledge relevant for rural people
- Purpose
 - Help rural people to learn about scientific agriculture

- Management
 - Controlled by those who determined the curriculum of the education institutions
- Field staff
 - Both extension and education staff
- Required resources
 - Considerable, but since they are shared between education programmes and extension, the approach can be cost effective
- Implementation
 - Through non formal instruction in groups, to individuals, or through agricultural extension personnel
- Evaluation
 - Attendance and extend of farmers' participation

- Personal letters
- Informal contacts

Group Methods

- When effectively arranged and conducted, group methods take full advantage the external and internal forces of group dynamics
- People react to the EW and to ideas expressed by other members of the group
- Properly stimulated and directed, these forces can lead to changes in practice by large numbers of people
 - Meetings
 - One of the oldest and most important methods of extension teaching
 - Rank high in ratio of practices adopted in relation to cost as compared with other methods
 - Success depends largely on how the meeting is viewed by the audience

Extension Methods and Techniques

- Classification of extension methods according to number of clientele:
 - Individual
 - Deals with farmers on a one-to-one basis
 - Group
 - Brings farmers together in one form or another
 - Mass
 - Use of communication channels

5 general types of meetings:

- Organizational
- Planning
- Training
- Special interest
- Community

Individual Methods

- Learning is an individual process
- Personal influence is a vital force in securing cooperation and participation in extension activities and hence adoption
- Integrity of the EW is indispensable
- Builds confidence between EW and farmer
- Sometimes called "face-to-face"
- Most universally used extension method
- Atmosphere is usually informal and relaxed
- Farm-and-Home Visits
- Office calls
- Telephone calls

Demonstrations

- Showing how to do a new job or showing how to do an old job better
 - 2 types:
 - Methods
 - Results

Method demonstration

- Oldest form of teaching.
- Showing how to do a job step by step.
- Actual materials, equipment and people are best visuals to use.
- Paves the way for the results demonstration.

Results demonstration

- One which shows after a period of time what happened after a practice has been adopted
- Comparison is an essential ingredient
- Results are there for all to see and judge

Tours and field trips

- Appeal to man's desire to "go places and see things"
- Offers farmers the opportunity to see for themselves concrete evidence of the value of improved practices

Group Discussion

- Process by which two or more persons pool their knowledge and through mutual agreement clarify issues under consideration

Extension Schools

- Designed to give the participants knowledge and skill in some specific line of subject matter
- Involve intensive training over a specific period of time

Mass Methods

- Important for making a large group of people aware of innovations and for stimulating interest
- Can accelerate existing change processes but not bring changes in behavior by themselves

Examples:

- Print media:
 - leaflets,
 - bulletins,
 - Newspapers, etc.
- Broadcast-based
 - radio
 - TV
- Indigenous folk media
- Modern information technology

Practice of Agricultural Extension

Purposes of Extension

- Informative
 - Helps people make well-considered choices among alternatives provided by extension for the individual to achieve his/her goals
 - An extension worker distributes leaflets and holds a community forum to inform farmers about the upcoming rollout of a government fertilizer subsidy program—explaining the eligibility, timeline, and how to apply.
- Emancipatory
 - An instrument to uplift the poor
 - A series of participatory rural appraisal (PRA) sessions is conducted in a marginalized upland community, encouraging farmers—especially women—to identify their own problems (e.g., water access) and propose solutions, leading them to organize a cooperative to lobby for infrastructure support.
- Formative
 - An instrument for developing, "forming" an individual or enhancing his/her capabilities to make decisions, to learn, to manage, to communicate, to organize, etc.
 - A hands-on training is held for young farmers on organic composting, including guided practice and mentoring, to instill sustainable soil management values and improve composting techniques.
- Persuasive
 - A policy instrument to induce preventive behavior with respect to societal concerns
 - An extension campaign uses success stories, radio

broadcasts, and field demonstrations to convince hesitant rice farmers to switch to a certified high-yielding variety, showing comparative yields and income benefits.

function in the transfer of technology.

- Income
 - Extension is aimed at increased income through increased production and productivity.
- Management
 - Extension aims to function according to sound management principles.

Dimensions of Extension

- Altruistic
 - Extension aimed at helping farmers. This is a basic premise of extension that must be observed by practitioners.
- Educational
 - Extension is a non-formal method of adult education. As such, extension professionals must be imbued with knowledge on how adults learn.
- Communication
 - Extension is a communication intervention. Knowledge of basic communication process and its dynamics must be adequately understood.
- Behavioral
 - Extension is aimed at inducing behavioral changes among farmers. Behavioral change is the end goal of extension.
- Technology
 - Extension helps in the transfer of technology. Extension should be able to help identify technologies appropriate to clientele. The need for more alternative approaches and methods for diagnosing technical problems should be recognized.
- Research
 - Extension aims at linking research with the farm. Ways to foster closer links between the farmers and the researchers need further understanding.
- Input
 - The provision of technical inputs plays an important linking

Basic Principles of Extension

- Principle of Interest and Need
 - Extension work must be based on the needs and interests of the people. These needs & interests differ from individual to individual, from village to village, from block to block, & from state to state &, therefore, there cannot be one programmed for all people.
- Principle of Cultural Difference
 - Extension work is based on the cultural background of the people with whom the work is done. Improvement can only begin from the level of the people where they are. This means that the extension worker has to know the level of the knowledge, & the skills of the people, methods & tools used by them, their customs, traditions, beliefs, values, etc. before starting the extension program.
- Principle of Participation
 - Extension helps people to help themselves. Good extension work is directed towards assisting rural families to work out their own problems rather than giving them ready-made solutions. Actual participation & experience of people in these programs creates self-confidence in them.
- Principle of Adaptability

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- People differ from each other, one group differs from another group & conditions also differ from place to place. An extension program should be flexible, so that necessary changes can be made whenever needed, to meet the varying conditions.
- Principle of Grassroots Organization
 - A group of rural people in local community should sponsor extension work. The program should fit in with the local conditions. The aim of organizing the local group is to demonstrate the value of the new practices or programs so that more & more people would participate.
- Principle of Leadership
 - Extension work is based on the full utilization of local leadership. The selection & training of local leaders to enable them to help to carry out extension work is essential to the success of the program. People have more faith in local leaders & they should be used to put across a new idea so that it is accepted with the least resistance.
- Principle of Whole-Family
 - Extension work will have a better chance of success if the extension workers have a whole-family approach instead of piecemeal approach or separate & unintegrated approach. Extension work is, therefore, for the whole family, i.e. for men, women, & the youth.
- Principle of Cooperation
 - Extension is a cooperative venture. It is a joint democratic enterprise in which rural people cooperate with their village,
- block & state officials to pursue a common cause.
- Principle of Satisfaction
 - The end-product of the effort of extension teaching is the satisfaction that comes to the farmer, his wife or youngsters as the result of solving a problem, meeting a need, acquiring a new skill or some other changes in behavior. Satisfaction is the key to success in extension work.
- Principle of Evaluation
 - The effectiveness of extension work is measured in terms of the changes brought about in the knowledge, skills, attitudes, and adoption behavior of the people, not merely in terms of achievement of physical targets.

Guiding Principles of Extension

- Communication and education
 - Extension agent's role is as communicator and educator
 - As communicator, they pass on useful information or technology to people who need them
 - As educator, they help rural people acquire the knowledge, skills, and attitudes that will help them effectively utilize the information or technology
- Extension is essentially an educational process and is dependent on the voluntary participation of people with whom extension works
- Extension teaches people new knowledge and skills in relation to their current interests and needs
- Works with people
 - Extension practitioners work with the people, not for them
 - People must participate and make decisions that will benefit them while the extension agent

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- assists them by providing all the information needed and possible alternative solutions to clientele problems
- Extension starts with what people know, what they have, and what they understand
- Accountability to clients
 - Extension agents must justify to the organization whatever action they take and be accountable and responsible to the clientele on whatever advice or information is given to them
 - The clientele are the ones to pass judgment on the success or failure of the extension programs
 - Extension conducts regular evaluation and assessment of its work
- Two-way process linkage
 - Disseminate information and technology to clientele and receive feedback from clientele so that their needs can be better fulfilled
 - Learn from the clientele's wealth of experiences
 - Extension employs a wide variety of extension communication strategies
- Cooperate with other agencies
 - Extension is only one aspect of the many activities that hope to produce change for the betterment of the rural masses
 - Extension should therefore cooperate and collaborate with both GOs and NGOs
 - Extension cannot be effective on its own as its activities must be interdependent on other related activities
 - Extension links and establishes cooperative and collaborative relationships with people and organizations whose purpose is devoted to rural development
- Works with different target groups
 - Extension clientele are made up of various target groups with different needs, social statuses, and cultural and economic backgrounds
 - Extension therefore cannot offer a package of technology for all due to this heterogeneity
 - There must be targeting of extension
 - Extension identifies and works accordingly with target categories in the community
 - Extension works with local leaders and encourages the spirit of self-help

Attributes of Technology

Modern Agricultural Technology

- does not just focus on one aspect or technology but utilizes a **scientific** and **data-driven** approach
- Biotechnology
 - The manipulation of **genetic material** to enhance crop traits like yield and resistance
 - currently at the forefront of controversy and allows for the creation of genetically modified organisms (GMOs) such as Bt Corn, Bt Talong, and Golden Rice
- Precision Agriculture
 - part of Agriculture 3.0 ([EOS, 2025](#))
 - One breakthrough technology during this period is the GPS or the Global Positioning Satellite system
 - Characterized by the use of **satellite data** and **sensors** to **optimize input use** based on **field variability**
- Information and Communication Technology (ICT)

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- Part of the Agriculture 4.0 movement, also known as connected farming
- The use of drones, autonomous machines, robots, and IoT (Internet of Things) all belong to this era
- Allows for unparalleled decision-making because of the access to real-time data and information

Sustainable Agriculture Framework

- Economically viable
- Ecologically sound
- Socially just and humane
- Culturally appropriate
- Grounded on holistic science

Communication in Extension

- Communication is the transmission of a message between two people.
- Communication is the process by which an idea is transferred from a source to a receiver with the purpose of changing their behavior
- Communication is concerned with eliciting specific behavioral changes:
 - What they know (knowledge)
 - What they feel (attitude)
 - What they do (practice)

Field of Experience

- The sum total of an individual's experiences which influences his/her ability to communicate
- Key principle
 - Communication can take place between people ONLY to the extent that they SHARE a COMMON field of experience or similar experiences
 - Wide vs narrow common field of experience

Attributes of Communication as a Process

- Dynamic
 - Communication has an ever-changing character

- It fluctuates constantly, is never fixed, has no clear beginnings and endings
- Systemic
 - Communication should be recognized as a system that consists of a group of elements which interact with each other and the system as a whole
- Interaction through symbols
 - The language or symbol we select and the way in which we organize them affect how others will interpret our messages
- Meaning is personally constructed
 - No two people construct the same meaning even if they hear or see the same thing
 - Interpretation is bounded by our experiences, thoughts, feelings, needs, expectations, self-concept, knowledge, etc.
 - Each of us is unique so we interpret in unique ways

Basic Elements of the Communication Process

Source

- the person/s sending out the idea
- where ideas come from
- the sender

Receiver

- the person/s for whom the idea is intended
- the targets of communication

Source/Receiver characteristics that may determine communication success

- Communication skills
- Attitude
 - towards receiver/source
 - towards subject matter
 - towards themselves
- Knowledge
 - subject matter
 - audience
 - communication process

Source characteristics that determine communication success

- Credibility
 - A receiver's perception of the believability of the source in a particular situation
 - Character
 - When a source is perceived as honest, trustworthy, friendly, reliable, pleasant, warm, etc., their credibility is based on the character dimension
 - Competence
 - When a source is perceived as well-trained, competent, intelligent, experienced, witty, bright, etc., their credibility is based on the competency dimension
 - Composure
 - When a source is perceived in terms of self-confidence, poise, dignity, level-headedness, etc., their credibility is based on the composure dimension
 - Dynamism
 - When a source is perceived in terms of being bold, aggressive, extrovert, etc., their credibility is based on the dynamism dimension
- Homophily
 - The degree to which a receiver perceives the source as similar to them in certain attributes such as age, sex, language, regional background, beliefs, values, etc.

Factors salient to a receiver's persuasibility

- Perception
 - the process of assigning meaning to a message
 - Receivers tend to "notice" or assign meaning only to messages that
 - Serve some immediate purpose
 - Reinforce their mood
 - Fits their cognitive structure
 - Are meaningful for them
 - Therefore, perception is influenced by:
 - Past experiences
 - Needs and motivations
 - Mental set
 - Interests

Message

- the information that is communicated or shared between two or more persons
- A set of symbols arranged deliberately in certain ways in order to communicate information or meaning
- Symbol
 - Any object, mode of conduct, or word towards which humans act as if it were something else
 - Anything that has meaning
 - Used to represent or stand for whatever it is that people agree they should stand for

Factors that determine the message

- Code
 - symbols or language used in communicating; both sender and receiver should understand in order to communicate
- Purpose
 - The specific outcome desired from the message
 - Change in behavior, knowledge, skills, or attitude
- Content
 - the idea or substance (technology, innovation, etc.)

- selected to express the purpose of the source for communicating
- What you want to communicate or share to the receiver
- Treatment
 - the manner by which the materials are presented, organized in order to be meaningful to the receiver

Message meaning

- "Meanings are in people... not in words" -Berlo
- The meaning that we attach to a certain object or event is the result of our past learnings or experiences
- Meanings result from
 - factors in the individual, as related to
 - factors in the physical world around us
- People can only have similar meanings to the extent that they have had similar experiences
- Meanings are never fixed
- Meanings change

Channel

- the medium or means by which a message travels between a source and a receiver
- Dimensions of channels
 - Mode of communication may be classified as
 - Visual
 - Spoken
 - Written
 - Message vehicles in the form of:
 - Interpersonal channels
 - Mediated channels
 - Mass media channels
 - Folk media channels

Effect

- the outcome of the communication process
- the changes that take place in the behavior of the respondent or receiver

of communication as a result of exposure to stimulus

- In extension, what is usually the desired effect?
 - Adoption of an innovation

Feedback

- information that is sent or fed back by the receiver intentionally or unintentionally to the source
- the link that connects the source and the receiver
- the receiver's response to the communication messages as perceived by the source of the message

Use of feedback

- serves a corrective function by preventing communication breakdown
- helps determine whether or not a message was perceived as intended
 - If not, adaptations and modifications can be made

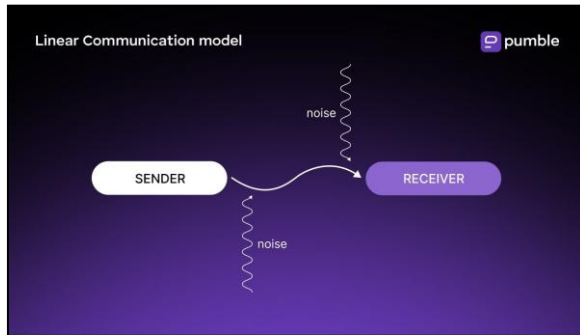
Effective feedback mechanisms

- Provide an appropriate avenue for the audience or receivers to share their insights to the source
- Group meetings/forums
- PRA tools
- Evaluation forms
- Mobile surveys
- Follow-up farm visits
- Etc.

Models of Communication

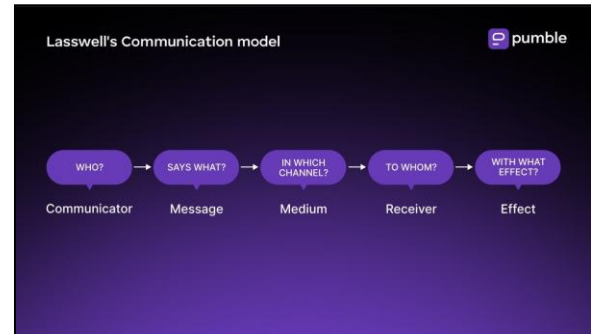
Linear Models

- One-way communication
- Communication takes place only in one direction
- What are some examples of linear models?



Source:

<https://pumble.com/learn/communication/communication-models/>

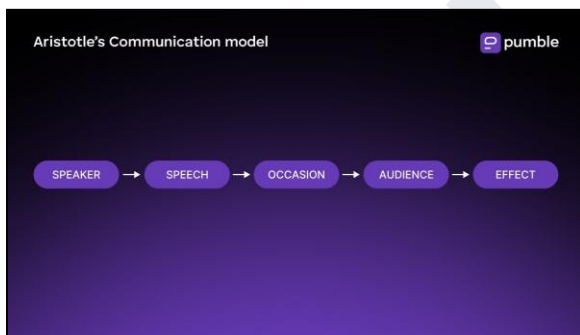


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Aristotle's Model

- Primarily focuses on the sender (public speaker, professor, etc.) who passes on their message to the receiver (the audience)
- Sender is also the only active member in this model, whereas the audience is passive
- Applicable for public speaking, lectures, and seminars

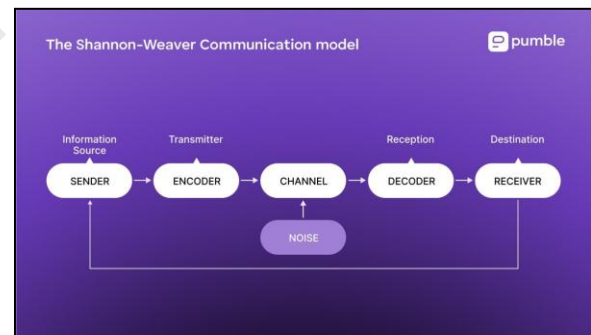


Source:

<https://pumble.com/learn/communication/communication-models/>

Shannon-Weaver Model

- A mathematical communication concept that proposes that communication is a linear, one-way process that can be broken down into 5 key concepts
- The first to introduce the role of noise in the communication process
 - Anything that is added to the signal between its transmission and reception that is not intended by the source
- Applicable for mass media, radio, tech-based communication



Source:

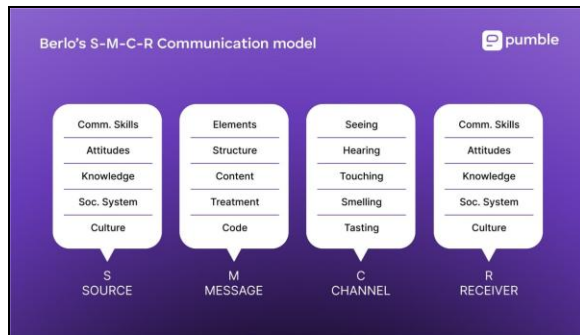
<https://pumble.com/learn/communication/communication-models/>

Lasswell's Model

- Views communication as the transmission of a message with the effect as the result
- The effect in this case is the measurable and obvious change in the receiver of the message that is caused by the elements of communication
- Applicable for campaign planning, mass media strategies, commercials/ads

Berlo's SMCR Model

- gives a detailed account of the key elements in each step
- Useful for tailoring communication to audience characteristics



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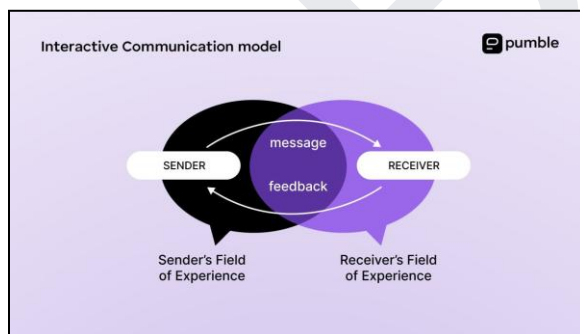
<https://pumble.com/learn/communication/communication-models/>

Hypodermic Needle Model

- Believed that the media 'injected' its content into the audience's lives directly, subsequently influencing their behavior
- Views the audience as passive, homogeneous, and impressionable
- Suggests that media messages are immediately received and fully accepted by the audience

Interactive Models of Communication

- Refer to two-way communication with feedback
- Feedback is not simultaneous, but rather slow and indirect
- Also introduces the field of experience



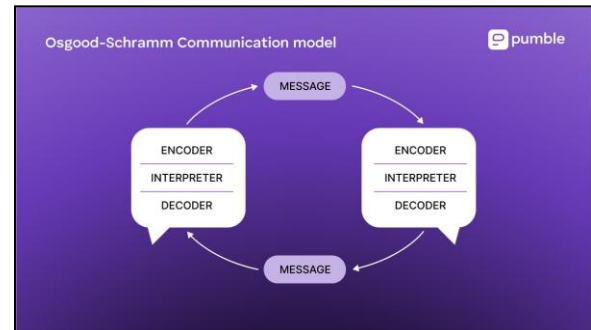
Source:

<https://pumble.com/learn/communication/communication-models/>

Osgood-Schramm Model

- Circular model of communication, in which messages go in two directions between encoding and decoding

- There is no difference between a sender and a receiver
- Information is of no use until it is put into words and conveyed to other people
 - Requires interpretation

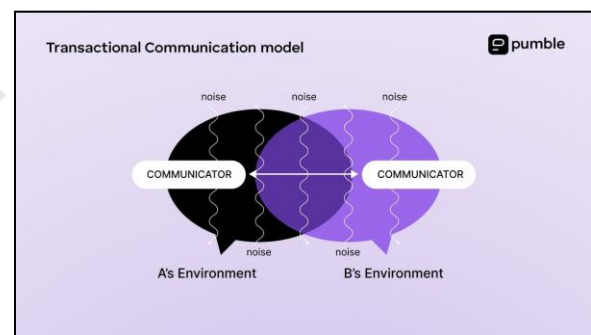


Source:

<https://pumble.com/learn/communication/communication-models/>

Transactional Models

- View communication as a transaction
 - A cooperative process in which communicators co-create the process of communication
- Communicators create shared meaning in a dynamic process



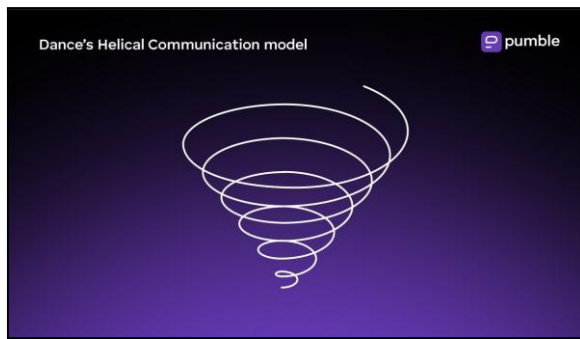
Source:

<https://pumble.com/learn/communication/communication-models/>

Dance's Helical Model

- With every cycle of communication, we expand our circle
- Each communication encounter is different from the previous one because communication never repeats itself
- Views communication as a circular process that gets more and more complex as communication progresses

NOTE: This material is to be used as a supplement to the SBRTC F2F Comprehensive/Intensive 2025 LEA Review



Source:
<https://pumble.com/learn/communication/communication-models/>

Methods of Influencing Behavior

Compulsion or coercion

- Power is exerted by an authority, forcing somebody to do something
- The person applying the power is responsible for the behavior of the person he is trying to change
- Extension is essential to make the sanctions known
- Examples: government regulations related to public health, traffic control, environmental upkeep, etc.
- A local ordinance mandates that all farms near rivers must implement soil erosion control measures, or face fines or land-use restrictions.

Exchange

- Goods or services are exchanged between two individuals or groups
- Each party considers the transaction to be in their favor
- Each has the goods/services desired by the other
- A farmer receives a free starter kit of high-yield vegetable seeds in exchange for attending a complete training series on organic farming.

Advice

- Advice is given on which solution to choose for a certain problem
- Applicable if:

- The farmer agrees about the nature of his problem and the criteria for choosing a “correct” solution
- We know enough of the farmers situation and have adequate information to solve his problem in a way that has been tested scientifically or in practice
- An extensionist advises a rice farmer to adjust planting schedules based on upcoming climate forecasts but does not enforce it.

Openly influencing farmer's knowledge and attitudes

- Applicable when:
 - We think the farmer can solve their own problems if they have more knowledge or have changed their attitudes
 - The farmer trusts our expertise and motives and is prepared to cooperate with us in changing their knowledge and/or attitudes
 - An extension seminar uses demonstration plots to show the yield difference between mono-cropping and intercropping, encouraging farmers to re-evaluate their current practices.

Manipulation

- Influencing farmer's knowledge level and attitudes without the farmer being aware of it
- Possible if:
 - We believe it necessary and desirable for farmer to change their behavior in a certain direction
 - We think it unnecessary/undesirable for farmer to make independent decisions

- A project claims farmers will receive direct cash incentives, but in reality, the funds are only accessible if farmers attend multiple promotional sessions for a private company's product.
- Forming farmer cooperatives to give members better access to markets, input suppliers, and government programs, thereby changing how they engage in farming and decision-making.

Providing means

- The farmer is trying to achieve certain goals which we consider appropriate
- The farmer does not have the means available to achieve these goals, or he does not wish to risk using these means
- We have these means and are prepared to make them available to the farmer on a temporary or permanent basis
- Providing farmers with access to low-interest loans or subsidized irrigation systems, so they can begin using more water-efficient technologies.

Providing service

- May involve taking over certain tasks from the farmers
- Possible when:
 - We have knowledge and/or means available to perform the task better or more economically than farmers
 - We agree with farmer that it is useful to perform these tasks
- A mobile veterinary service visits remote barangays to provide free vaccinations, encouraging livestock farmers to adopt better animal health practices.

Changing farmers' socio-economic structure

- Possible when:
- We agree with the farmer about his optimal behavior
- The farmer is not in the position to behave in this way because of barriers in the economic and/or social structure
- We consider changes in these structures desirable
- We have the freedom to work towards these changes
- We are in a position to do this, either through power or by conviction

Technology Diffusion and Adoption Process

Diffusion

- The spread of an idea, a practice, or a technology from a source to its intended or unintended receivers or users

Adoption

- The process by which a particular client is exposed to, considers, and finally rejects or practices a particular innovation

Innovation

- An idea, or practice, or technology perceived as new by an individual
- Examples:
 - New methods to assist management decisions
 - New farming systems
 - New social organizations

Characteristics of Innovation

- Relative advantage
 - Degree to which farmers recognize an innovation as better than the idea or practice it is intended to replace
 - Farmers usually express this in terms of economic gains
- Compatibility
 - Degree to which the farmer perceives the innovation to be consistent with his socio-cultural values and beliefs, and with previously introduced ideas and felt needs
- Complexity
 - Degree to which farmers can understand and follow an innovation

- Trialability
 - Degree to which an innovation can be experimented or tried on a small scale
- Observability
 - Degree to which results of an innovation are easily visible or observable to farmers

considers her farm's soil, water availability, and market preferences. She's unsure if the investment is worth it, and asks her neighbors if they've tried it.

Stages in the Adoption Process

- Awareness
 - A farmer first hears about the innovation but he lacks adequate information about it
 - Done through mass media campaigns
 - A rice farmer named Aling Rosa hears for the first time on the community radio about a new drought-resistant rice variety called Binhi 88. She now knows it exists, but has no idea how it works, where to get it, or if it suits her farm.
- Interest
 - Farmer seeks additional information about it
 - Done through testimonials, small group meetings, demonstrations
 - After hearing the radio ad, Aling Rosa asks her local agricultural technician about Binhi 88. She also visits the municipal agriculture office to get a brochure, and attends a barangay seminar where an extensionist explains the new variety in more detail.
- Evaluation
 - They weigh up the advantages and disadvantages of using the innovation
 - Done through individual consultations, farmer-to-farmer visits, cost-benefit analysis
 - Aling Rosa compares Binhi 88 with her usual variety. She

- Trial
 - Farmer tests the innovation on a small scale for herself
 - Done through step-by-step guides, demo inputs, monitoring visits
 - Aling Rosa tries planting Binhi 88 on just one-fourth of her hectare. She wants to see if it survives better during dry spells and whether it yields as promised. She monitors it closely and compares the performance with her usual crop.
- Adoption
 - The farmer applies the innovation on a large scale in preference to the old method(s)
 - Satisfied with the results, Aling Rosa decides to plant Binhi 88 on her entire field in the next cropping season. She even teaches others how to use it and saves some seeds for future planting.

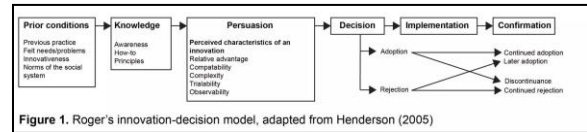
Rogers' Innovation-Decision Model

- Knowledge
 - Stage when the individual learns of the existence of the innovation and gains some understanding of its function
 - Mang Tonyo, a corn farmer, hears from a visiting extension worker about a new organic pest control spray made from neem extract. He learns that it reduces the use of synthetic pesticides, but he doesn't yet know how to apply it or if it really works.
- Persuasion

NOTE: This material is to be used as a supplement to the SBRTC F2F Comprehensive/Intensive 2025 LEA Review

- Individual forms a favorable or unfavorable opinion of the innovation
- After attending a field demonstration and hearing testimonials from fellow farmers, Mang Tonyo starts to believe that the neem spray is not only effective but also safer for his health and the environment. He becomes more open to the idea of trying it.
- **Decision**
 - Individual engages in activities that lead to a choice between adoption and rejection of the innovation
 - Mang Tonyo decides to try the neem extract on a small portion of his field during the current planting season. He purchases a trial pack from the agri-supply store instead of a full set, just to test its claims.
- **Innovation**
 - Individual puts an innovation into use
 - Mang Tonyo applies the neem spray weekly as advised by the extensionist. However, he adjusts the dosage slightly to suit his specific pest conditions. He still consults the extension worker whenever issues arise.
- **Confirmation**
 - Individual seeks further reinforcement of his decision or reverses his decision if he found conflicting messages about the innovation
 - After seeing reduced pest damage and improved crop health, Mang Tonyo becomes convinced that neem spray is a beneficial innovation. He shares his experience with his farmer's group and encourages them to try it too. He fully adopts it and

plans to stop buying chemical pesticides.



Source:

https://ascnhighered.org/ASCN/change_theories/collection/innovation_decision.html

Adopter Categories

- **Innovators**
 - The first persons in a locality to adopt an innovation
 - Have larger than average landholdings, greater wealth, better education, and a venturesome spirit
 - Highly cosmopolite
 - High risk takers
 - Willing to experiment
 - Not necessarily the respected members of the locality
- **Early Adopters**
 - Follow the innovators
 - Quick to see the value of a new practice in his community and will try it if he feels it has a fair chance of success
 - Respected by peers and are labeled as "the man to check with" before using a new idea
 - Usually younger than average, has higher education, is socially active, and reads more than the early majority
- **Early Majority**
 - Adopts practice without much delay, after they are convinced of its value as observed from early adopters
 - Of average age, experience, and education
- **Late Majority**
 - Makes up a large block of farmers in the community
 - Are skeptical about new ideas

- Are reluctant to abandon the techniques learned previously
- Adopts a practice only when it is generally accepted by the community and has received pressure from peers
- Greatest motivating factor for adoption is to see the overwhelming evidence from neighbors' farms
- Laggards
 - The traditional group because they are the last to adopt an innovation
 - Suspicious of the innovations, the innovators, and the change agent
 - Highly conservative, older age, less education, less wealthy
 - Seldom takes risks
 - Takes refuge in superstitious arguments when criticized by fellow farmers
 - Decision to adopt depends on their past experiences
- Requires skill and ability on the part of planners
- Is built around content
- Is a social action process
- Is a collaborative effort
- Is a system
- Has an extension program as its end-product

Monitoring

- A systematic process of assessing progress and change in achieving planned targets or outputs
- A process of timely recording and feedback of activities being carried out and problems being encountered while conducting an activity over a period of time using pre-determined indicators

Objectives of Monitoring

- To critically review the progress of planned activities
- To determine whether activities are conducted on schedule
- To regularly review actual outputs towards planned outputs

Examples of Monitoring Activities

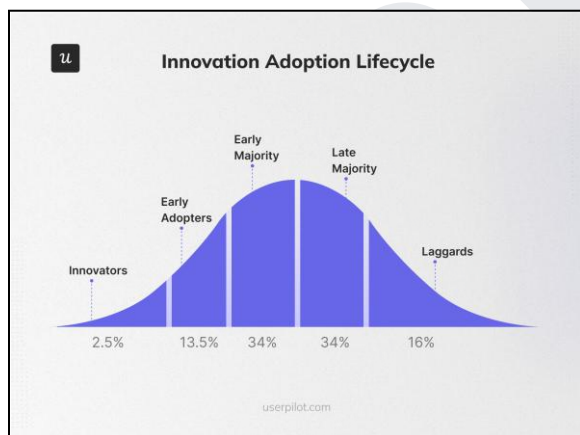
- Data collection
- Quarterly progress reports
- Regular field visits
- Interim reviews

Evaluation

- An assessment of whether overall objectives were met or not over a given time
- It measures performance over standards
- A process of determining overall longer term value of the outcome as to efficiency, effectiveness, equitability of impact, sustainability, and other parameters

Why Evaluate?

- To assess whether objectives were achieved



Source:

<https://userpilot.com/blog/categories-of-adopters/>

Program Planning, Monitoring, and Evaluation

Program Planning

- Is a process
- Is a decision-making process
- Requires advance thinking

NOTE: This material is to be used as a supplement to the SBRTC F2F Comprehensive/Intensive 2025 LEA Review

- To assess project outcomes and make informed decisions
- To improve a situation

How to Evaluate?

- Determine if objectives were met within the planned scope, time frame and budget
- Systematically review project objectives and determine what, why, and how an activity was implemented in order to serve as basis for decisions to:
 - Continue
 - Terminate
 - Change
 - Re-plan
 - Disseminate
- Identify positive and negative outcomes and impacts of an activity

Examples of Evaluation Activities

- Mid-term evaluation
- Year-end evaluation
- Impact assessment

Adult Teaching and Learning

ANDRAGOGY THEORY AND PRINCIPLES

Adult Learner Characteristics

- Characteristics on which to differentiate an adult from a young learner:
 - SELF-CONCEPT
 - As a person matures, his self-concept moves from one of being a dependent personality toward one of being a self-directed human being.
 - EXPERIENCE
 - As a person matures, he accumulates a growing reservoir of experience that becomes an increasing resource for learning.
 - READINESS TO LEARN
 - As a person matures, his readiness to learn

becomes oriented increasingly to the developmental tasks of his social roles.

- ORIENTATION TO LEARNING

- As a person matures, his time perspective changes from one of postponed application of knowledge to immediacy of application, and accordingly his orientation toward learning shifts from one of subject-centeredness to one of problem centeredness.

Principles of Adult Teaching and Learning

- Self-activity or active response
 - If we are to effectively change the behavior of people, we should make them actively participate in doing what is to be learned.
 - Quality of learning depends on what the learners do, not on what the trainer does. Thus, learners should not be passive listeners.
- Practice of repetition
 - A learning activity experienced many times tends to be remembered longer and to be recalled easier.
 - Provide TIME and STRUCTURE in the training for practice of new knowledge and skills.
 - Practice helps BUILD CONFIDENCE and provides opportunities for learners to HELP EACH OTHER LEARN.
- Timing

- Learning takes place more readily when a fact or skill is taught at the time or just before the time when it can be used in some serviceable way
 - The concerns of the adults are the 'here' and the 'now' therefore learning materials should specifically target these concerns
 - Association
 - Experiences that happen together tend to recur together hence we learn once by associating it with the other
 - Satisfaction
 - Anything that is satisfying will promote learning
 - Reward
 - Reward promotes learning
 - Motivation
 - The ease of learning varies directly with the meaningfulness of the materials presented
 - Apperception
 - Learners perceive the new in terms of the old
 - Relate unfamiliar concepts with what they already know
 - Organic fertilizer and compost
 - Crop life cycles and pest life cycles
 - Transfer
 - A person learns through transfer to the extent that the abilities acquired in one situation help in the other
 - Readiness
 - The more fully a person is in readiness to act in a certain way, the more satisfying it will be for him to act in that way and the more annoying it will be if prevented
 - Mind set
 - Past experiences keep individuals from using objects in different ways
 - "Old habits die hard"
 - Use and disuse
 - When something is learned and used, it is remembered but when it is not used, it is forgotten
 - Individual differences
 - No two people are exactly alike
 - People vary in their ability to benefit from one teaching method or technique
 - Contrast
 - We tend to remember those things which are in sharp contrast to one another
 - Organic vs synthetic
 - Old vs new
 - Dry vs wet
 - Light vs dark
 - Recency
 - The more recent an experience, the more readily it can be recalled
- When do adults learn best?
- When they have a **strong desire** to learn
 - When they **put forth an effort** to learn
 - When they have **clear goals**
 - When they receive **satisfaction**
- Pedagogy
- "leading the young" refers mainly to developing habits of thinking and acting
- Differences Between Pedagogy and Andragogy
- Dependence
- Andragogy
 - Adults are **independent** and desire to be self-directed and empowered in their learning
 - Pedagogy
 - Children are **dependent** on the teacher to facilitate and structure their learning
- Learning Reasons
- Andragogy

NOTE: This material is to be used as a supplement to the SBRTC F2F Comprehensive/Intensive 2025 LEA Review

- Teaching adults centers learning on the necessary skills or knowledge to further **personal and professional development**
- Pedagogy
 - Teaching children centers learning on the **essential stages** that a child must accomplish before being able to move on to the next stage
- Pedagogy
 - Acts more as an **expert**, bestowing knowledge, skill, and structure to learners

Learning Resources

- Andragogy
 - Adults use their own **experiences** and the experiences of others to gain a better understanding of the curriculum at hand
- Pedagogy
 - Children are **dependent** on the teacher for all learning resources

Learning Focus

- Andragogy
 - Adult learning is often **problem-centered**, making the impact more focused on current events or real life
- Pedagogy
 - Child learning is a **subject-focused** model with prescriptive curriculum

Motivation

- Andragogy
 - Adults gain motivation from **internal, self-motivated sources**
- Pedagogy
 - Children gain motivation from **external sources**

Teacher's Role

- Andragogy
 - Acts more as a **facilitator**, encouraging collaboration, mutual respect, and openness with learners

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